

INFORMATION SHEET

PRESIDING: Chairman Finley and Commissioners Brown-Bland, Dockham, Patterson, Gray, Clodfelter and Mitchell

PLACE: Dobbs Building, Room 2115, Raleigh, NC

DATE: September 18, 2018

TIME: 9:30 a.m. – 9:40 a.m.

DOCKET NO.: E-2, Sub 1173

COMPANY: Duke Energy Progress, LLC

DESCRIPTION: Application Pursuant to G.S. 62-133.2 and Commission Rule R8-55 Regarding Fuel and Fuel-Related Cost Adjustments for Electric Utilities.

VOLUME:

APPEARANCES

DUKE ENERGY PROGRESS, LLC:

Robert W. Kaylor, Esq.

Dwight Allen, Esq.

FOR CAROLINA INDUSTRIAL GROUP FOR FAIR UTILITY RATES II:

Warren Hicks, Esq.

FOR CAROLINA UTILITY CUSTOMERS ASSOCIATION, INC.:

Robert F. Page, Esq.

FOR NORTH CAROLINA SUSTAINABLE ENERGY ASSOCIATION:

Benjamin Smith, Esq.

FOR THE USING AND CONSUMING PUBLIC:

Robert B. Josey, Jr., Esq., Public Staff

WITNESSES

See Attached.

EXHIBITS

See Attached.

TRANSCRIPT ORDERED BY: Smith and Josey

OFFICIAL CONFIDENTIAL EXHIBITS ORDERED BY: Fentress, Smith and Dodge

REPORTED BY: Kim Mitchell

TRANSCRIPT PAGES: 89

TRANSCRIBED BY: Kim Mitchell

PREFILED PAGES: 69

DATE TRANSCRIBED: October 2, 2018

TOTAL PAGES: 20

FILED

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Clerk's Office
N.C. Utilities Commission

1 PLACE: Dobbs Building, Raleigh, North Carolina
2 DATE: Tuesday, September 18, 2018
3 TIME: 9:30 a.m. - 9:40 a.m.
4 DOCKET NO: E-2, Sub 1173
5 BEFORE: Chairman Edward S. Finley, Jr., Presiding
6 Commissioner ToNola D. Brown-Bland
7 Commissioner Jerry C. Dockham
8 Commissioner James G. Patterson
9 Commissioner Lyons Gray
10 Commissioner Daniel G. Clodfelter
11 Commissioner Charlotte A. Mitchell
12

13 IN THE MATTER OF:

14 Application of Duke Energy Progress, LLC,
15 Pursuant to G.S. 62-133.2 and Commission Rule R8-55
16 Relating to Fuel and Fuel-Related Cost Adjustments
17 for Electric Utilities.
18
19
20
21
22
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24

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

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24 Raleigh, North Carolina 27609

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11 North Carolina Utilities Commission

12 4326 Mail Service Center

13 Raleigh, North Carolina 27699-4300

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

KENDRA A. WARD
Prefiled Direct Testimony..... 10

ERIC S. GRANT
Prefiled Direct Testimony..... 28

JOSEPH A. MILLER
Prefiled Direct Testimony..... 37

KENNETH D. CHURCH
Prefiled Direct Testimony..... 50

KELVIN HENDERSON
Prefiled Direct Testimony..... 60

DUSTIN R. METZ
Prefiled Affidavit and Appendix A..... 74

JENNY X. LI
Prefiled Affidavit and Appendix A..... 80

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E X H I B I T S

Identified / Admitted

Application of Duke Energy Progress, LLC..... /10

Confidential Fuel Cost Adjustment Rider

(See Confidential Grant Exhibit 3)

(Filed under seal)

Ward Exhibits 1 - 8..... /27

Ward Workpapers 1 - 14..... /28

Grant Exhibits 1 and 2..... /37

Confidential Grant Exhibit 3..... /37

(Filed under seal)

Church Exhibits 1 and 2..... /60

NORTH CAROLINA UTILITIES COMMISSION
APPEARANCE SLIP

DATE Sept 18, 2018
DOCKET #: E-2, Sub 1173, 1175
NAME OF ATTORNEY Robert W. Kayler
TITLE Attorney
FIRM NAME Robert W. Kayler, P.A.
ADDRESS 353 E. Six Forks Rd., STE 2100
CITY Raleigh NC 27
ZIP 27609

APPEARING FOR: Duke Energy Progress, LLC

APPLICANT COMPLAINTANT _____ INTERVENOR R _____
PROTESTANT _____ RESPONDENT _____ DEFENDANT _____

PLEASE NOTE: Electronic Copies of the regular transcript can be obtained from the NCUC website at [HTTP://NCUC.commerce.state.nc.us/docksrch.html](http://NCUC.commerce.state.nc.us/docksrch.html) under the respective docket number.

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NORTH CAROLINA UTILITIES COMMISSION
APPEARANCE SLIP

DATE 9-18-18
DOCKET #: E-2 Sub 1173
NAME OF ATTORNEY Dwight Allen
TITLE Attorney
FIRM NAME Allen Law Offices, PLLC
ADDRESS 1514 Glenwood Ave, Suite 200
CITY Raleigh, NC
ZIP 27608

APPEARING FOR: _____

APPLICANT COMPLAINANT _____ INTERVENOR
PROTESTANT _____ RESPONDENT _____ DEFENDANT _____

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NORTH CAROLINA UTILITIES COMMISSION
APPEARANCE SLIP

DATE 9/18/18
DOCKET #: E-2, Sub 1173 ; E-2, Sub 1174 ; E-2, Sub 1176
NAME OF ATTORNEY Warren Hicks
TITLE Attorney
FIRM NAME Bailey & Dixon
ADDRESS PO Box 1351
CITY Raleigh
ZIP 27602

APPEARING FOR: Carolina Industrial Group for
Jai Utility Rates II

APPLICANT _____ COMPLAINANT _____ INTERVENOR
PROTESTANT _____ RESPONDENT _____ DEFENDANT _____

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NORTH CAROLINA UTILITIES COMMISSION
APPEARANCE SLIP

DATE September 18, 2018
DOCKET #: E-2, Sub 1173, E-2, Sub 1174, E-2, Sub 1175
NAME OF ATTORNEY Benjamin Smith
TITLE Regulatory Counsel for NCSEA
FIRM NAME _____
ADDRESS 4800 Six Forks Road, Suite 300
CITY Raleigh
ZIP 27609

APPEARING FOR: North Carolina Sustainable Energy Association

APPLICANT _____ COMPLAINANT _____ INTERVENOR
PROTESTANT _____ RESPONDENT _____ DEFENDANT _____

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NORTH CAROLINA UTILITIES COMMISSION
APPEARANCE SLIP

DATE 09/18/18 DOCKET #: E-2, Sub 1173
NAME AND TITLE OF ATTORNEY Robert F. Page
FIRM NAME Crisp & Page, PLLC
ADDRESS 4010 Barrett Dr., Suite 205
CITY Raleigh ZIP 27609

APPEARING FOR: Carolina Utility Customers Association, Inc.

APPLICANT _____ COMPLAINANT _____ INTERVENER
PROTESTANT _____ RESPONDENT _____ DEFENDANT _____

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Signature: _____

NORTH CAROLINA UTILITIES COMMISSION
PUBLIC STAFF - APPEARANCE SLIP

DATE September 18, 2018 DOCKET #: E-2, Sub 1173

PUBLIC STAFF MEMBER Robert B. Josey, Jr.

ORDER FOR TRANSCRIPT OF TESTIMONY TO BE **EMAILED** TO THE
PUBLIC STAFF - PLEASE INDICATE YOUR DIVISION AS WELL AS
YOUR EMAIL ADDRESS BELOW:

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WATER _____

COMMUNICATIONS _____

ELECTRIC _____

GAS _____

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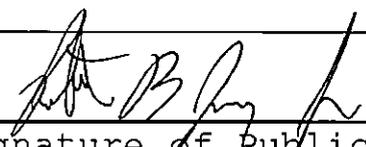
LEGAL robert.josey@psncuc.nc.gov

CONSUMER SERVICES _____

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Signature of Public Staff Member

A

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1173

In the Matter of)	
Application of Duke Energy Progress, LLC)	DUKE ENERGY PROGRESS
R8-55 Relating to Fuel and Fuel-Related)	LLC'S APPLICATION
Charge Adjustments for Electric Utilities)	

Duke Energy Progress, LLC ("DEP," "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 410 South Wilmington Street, Raleigh, North Carolina, and its mailing address is:

Duke Energy Progress, LLC
P. O. Box 1551
Raleigh, North Carolina 27602

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

Dwight W. Allen
Allen Law Offices, PLLC
1514 Glenwood Avenue, Suite 200
Raleigh, North Carolina 27608
Tel: (919) 838-0529
dallen@theallenlawoffices.com

Robert W. Kaylor
Law Office of Robert W. Kaylor, P.A.
353 Six Forks Road, Suite 260
Raleigh, North Carolina 27609
Tel: (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 DEP and requires that the Company use a test period of 12 months ended March 31. Therefore, the test period used in this Application for these proceedings is April 1, 2017 – March 31, 2018 (“test period”).

4. In Docket No. E-2, Sub 1146, DEP’s last fuel case, the Commission approved the following fuel and fuel-related costs factors (excluding the Experience Modification Factor (“EMF”) and regulatory fee):

Residential	2.179¢ per kWh
Small General Service	2.121¢ per kWh
Medium General Service	2.356¢ per kWh
Large General Service	2.417¢ per kWh
Lighting	1.657¢ per kWh

5. In this Application, DEP proposes fuel and fuel-related costs factors (excluding EMF and regulatory fee) of:

Residential	2.311¢ per kWh
Small General Service	2.556¢ per kWh
Medium General Service	2.477¢ per kWh
Large General Service	1.757¢ per kWh
Lighting	2.251¢ per kWh

In addition, these factors should be adjusted for the EMF by an increment/(decrement) (excluding regulatory fee) of:

Residential	0.575¢ per kWh
Small General Service	0.363¢ per kWh
Medium General Service	0.343¢ per kWh
Large General Service	1.038¢ per kWh
Lighting	0.885¢ per kWh

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

Residential	2.886¢ per kWh
Small General Service	2.919¢ per kWh
Medium General Service	2.820¢ per kWh
Large General Service	2.795¢ per kWh
Lighting	3.136¢ per kWh

The new fuel factors should become effective for service on or after December 1, 2018.

6. In this Application, DEP proposes the following rates (excluding regulatory fee) to recover a revenue deficiency related to a fuel EMF that expired and was removed from billed rates on November 30, 2017, but was inadvertently included in the calculation of the compliance rates filed effective March 16, 2018. These rates are not included in the fuel factors shown above.

Residential	0.022¢ per kWh
Small General Service	0.052¢ per kWh
Medium General Service	0.068¢ per kWh
Large General Service	0.002¢ per kWh
Lighting	(0.046)¢ per kWh

7. The information and data required to be filed by NCUC Rule R8-55 is contained in the testimony and exhibits of Eric Grant, Joseph A. Miller, Jr., Kelvin Henderson, Kenneth D. Church, and the testimony, exhibits, and workpapers of Kendra A. Ward, which are being filed simultaneously with this Application and incorporated herein by reference.

8. 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 average

nuclear capacity factor (90.0%) using projected sales, and based on projected nuclear capacity factors and normalized test period sales. These base fuel and fuel-related costs factors are:

	<u>NERC Average</u>	<u>Normalized Sales</u>
Residential	2.951¢ per kWh	2.896¢ per kWh
Small General Service	2.993¢ per kWh	2.873¢ per kWh
Medium General Service	2.871¢ per kWh	2.781¢ per kWh
Large General Service	2.829¢ per kWh	2.829¢ per kWh
Lighting	3.271¢ per kWh	3.198¢ per kWh

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

Residential	2.886¢ per kWh
Small General Service	2.919¢ per kWh
Medium General Service	2.820¢ per kWh
Large General Service	2.795¢ per kWh
Lighting	3.136¢ per kWh

Respectfully submitted this 20th day of June, 2018.

By: /s/ Dwight W. Allen
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ATTORNEYS FOR DUKE ENERGY PROGRESS, LLC

A

Duke Energy Progress, LLC.
 North Carolina Annual Fuel and Fuel Related Expense
 Summary Comparison of Fuel and Fuel Related Cost Factors
 Test Period Twelve Months Ended March 31, 2018
 Billing Period December 1, 2018 - November 30, 2019
 Docket E-2, Sub 1173

Ward Exhibit 1

Line No.	Description	Reference	Residential cents/kWh	Small General Service cents/KWh	Medium General Service cents/KWh	Large General Service cents/KWh	Lighting cents/KWh
<u>Current Fuel and Fuel Related Cost Factors (Approved Fuel Rider Docket No. E-2, Sub 1146)</u>							
1	Approved Fuel and Fuel Related Costs Factors	Input	2.179	2.121	2.356	2.417	1.657
2	EMF Increment / (Decrement)	Input	-	-	(0.084)	-	-
3	EMF Interest Decrement cents/kWh	Input	-	-	(0.014)	-	-
4	Approved Net Fuel and Fuel Related Costs Factors	Sum	2.179	2.121	2.258	2.417	1.657
<u>Fuel and Fuel Related Cost Factors</u>							
5	NERC Capacity Factor of 90.0% with Projected Sales	Exh 2 Sch 3 pg 3	2.951	2.993	2.871	2.829	3.271
6	Proposed Nuclear Capacity Factor of 94.1% and Normalized Test Period Sales	Exh 2 Sch 2 pg 3	2.896	2.873	2.781	2.829	3.198
<u>Proposed Fuel and Fuel Related Cost Factors using Proposed Nuclear Capacity Factor of 94.1%</u>							
7	Fuel and Fuel Related Costs excluding Purchased Capacity cents/kWh	Exh 2 Sch 1 pg 2	2.179	2.397	2.355	1.682	2.250
8	Renewable, Cogeneration, and Qualifying Facilities Purchased Power - Capacity cents/kWh	Exh 2 Sch 1 pg 2	0.132	0.159	0.122	0.075	0.001
9	Total adjusted Fuel and Fuel Related Costs cents/kWh	Sum	2.311	2.556	2.477	1.757	2.251
10	EMF Increment/(Decrement) cents/kWh	Exh 2 Sch 1 pg 2	0.575	0.363	0.343	1.038	0.885
11	EMF Interest Decrement cents/kWh	Exh 2 Sch 1 pg 2	-	-	-	-	-
12	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 1 pg 2	2.886	2.919	2.820	2.795	3.136
<u>Proposed Fuel EMF Deficiency Rider</u>							
13	Correction of December 2016 Fuel EMF in Compliance Rates Increment / (Decrement) cents/kWh	Exh 6	0.022	0.052	0.068	0.002	(0.046)

1A

Duke Energy Progress, LLC.
 North Carolina Annual Fuel and Fuel Related Expense
 Calculation of Fuel and Fuel Related Cost Factors Using:
 Proposed Nuclear Capacity Factor of 94.1%
 Twelve Months December 2018 - November 2019
 Docket E-2, Sub 1173

Ward Exhibit 2
 Schedule 1
 Page 1 of 3

Line No.	Unit	Reference	Generation (MWH)	Unit Cost (cents/KWh)	Fuel Cost (\$)
			A	C/A/10=B	C
1	Total Nuclear	Workpaper 3-4	29,210,311	0.6724 \$	196,401,382
2	Coal	Workpaper 3 - 4	5,721,568	3.3537	191,885,039
3	Gas - CT and CC	Workpaper 3 - 4	22,506,145	2.9036	653,485,803
4	Reagents & By Products	Workpaper 12	-		14,989,402
5	Total Fossil	Sum of Lines 2 - 4	28,227,713		860,360,244
6	Hydro	Workpaper 3	606,686		
7	Net Pumped Storage		-		
8	Total Hydro	Sum of Lines 6 - 7	606,686		
9	Utility Owned Solar Generation	Workpaper 3	304,154		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	58,348,864		1,056,761,626
11	Purchases	Workpaper 3 - 4	10,318,993		542,149,905
12	JDA Savings Shared	Workpaper 5	-		(12,766,851)
13	Total Purchases	Sum of Lines 11 - 12	10,318,993		529,383,055
14	Total Generation and Purchases	Line 10 + Line 13	68,667,857		1,586,144,681
15	Fuel expense recovered through intersystem sales	Workpaper 3 - 4	(4,650,587)		(105,350,249)
16	Line losses and Company use	Line 18 - Line 15 - Line 14	(1,883,902)		-
17	System Fuel Expense for Fuel Factor	Line 14 + Line 15 + Line 16			\$ 1,480,794,432
18	Projected System MWh Sales for Fuel Factor	Workpaper 3	62,133,368		62,133,368
19	Fuel and Fuel Related Costs cents/kWh	Line 17 /Line 18 / 10			2.383

Note: Rounding differences may occur
 Adjusted to include 100% ownership of all generating resources.

Duke Energy Progress, LLC.
 North Carolina Annual Fuel and Fuel Related Expense
 Calculation of Fuel and Fuel Related Cost Factors Using:
 Proposed Nuclear Capacity Factor of 94.1%
 Twelve Months December 2018 - November 2019
 Docket E-2, Sub 1173

Ward Exhibit 2
 Schedule 1
 Page 2 of 3

Line No.	Description		Residential cents/KWh	General Service Small cents/KWh	General Service Medium cents/KWh	General Service Large cents/KWh	Lighting cents/KWh	Total
1	NC Projected Billing Period MWH Sales	Workpaper 7	15,956,916	1,795,996	10,351,641	9,176,034	379,219	37,659,805
Calculation of Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity Rate by Class								Amount
2	Renewable Purchased Power - Capacity	Workpaper 4						\$ 38,515,117
3	Cogeneration Purchased Power - Capacity							-
4	Purchases from Qualifying Facilities (HB 589)	Workpaper 4						33,362,793
5	Total of Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity	Line 2 + Line 3 + Line 4						\$ 71,877,910
6	NC Portion - Jurisdictional % based on Production Plant Allocator	Input						60.52%
7	NC Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity	Line 5 * Line 6						\$ 43,500,511
8	Production Plant Allocation Factors	Input	48.581%	6.580%	28.950%	15.881%	0.008%	100.000%
9	Renewable, Cogeneration, and Qualifying Facilities Purchased Power - Capacity allocated on Production Plant %	Line 7 * Line 8	\$ 21,132,983	\$ 2,862,334	\$ 12,593,398	\$ 6,908,316	\$ 3,480	\$ 43,500,511
10	Renewable, Cogeneration, and Qualifying Facilities Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 9 / Line 1 / 10	0.132	0.159	0.122	0.075	0.001	0.116
Summary of Total Rate by Class								
11	Fuel and Fuel Related Costs excluding Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity cents/kWh	Line 16 - Line 12 - Line 14 - Line 15	2.179	2.397	2.355	1.682	2.250	
12	Renewable, Cogeneration, and Qualifying Facilities Purchased Power - Capacity cents/kWh	Line 10	0.132	0.159	0.122	0.075	0.001	
13	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 11 + Line 12	2.311	2.556	2.477	1.757	2.251	
14	EMF Increment/(Decrement) cents/kWh	Exh 3 pg 2, 3, 4, 5, 6	0.575	0.363	0.343	1.038	0.885	
15	EMF Interest Decrement cents/kWh	Exh 3 pg 2, 3, 4, 5, 6	-	-	-	-	-	
16	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 1 Page 3	2.886	2.919	2.820	2.795	3.136	

Note: Rounding differences may occur

Line No.	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) cents/kwh	Current Total Fuel Rate (Including renewables and EMF) E-2, Sub 1146 cents/kwh	Proposed Total Fuel Rate (Including renewables and EMF) cents/kwh
		A	B	C	D	E	F	G
		Exhibit 2, Schedule 1, page 2	Worksheet 5	Line 27 as a % of Column B	C / B	If D=0 then 0 If not then (C*100)/(A*1000)	Exhibit 1, Line 4	E + F = G
1	Residential	15,956,916	\$ 1,752,285,692	\$ 112,816,226	6.4%	0.707	2.179	2.885
2	Small General Service	1,795,996	\$ 222,700,739	\$ 14,337,991	6.4%	0.798	2.221	2.919
3	Medium General Service	10,351,641	\$ 903,433,492	\$ 58,165,148	6.4%	0.562	2.258	2.820
4	Large General Service	9,176,034	\$ 538,174,962	\$ 34,655,393	6.4%	0.378	2.417	2.795
5	Lighting	979,219	\$ 87,096,514	\$ 5,607,475	6.4%	1.479	1.657	3.196
6	NC Retail	37,659,805	\$ 3,503,791,399	\$ 215,582,234				
Total Proposed Composite Fuel Rate:								
7	Adjusted System Total Fuel Costs	Worksheet 7	\$ 1,481,478,720					
8	System Renewable, Cogeneration and Qualifying Facilities Purchased Power Capacity	Exhibit 2 Sch 1, Page 2	71,877,910					
9	Adjusted System Other Fuel Costs	Line 7 - Line 8	\$ 1,409,600,810					
10	NC Retail Allocation % - sales at generation	Worksheet 8	60.87%					
11	NC Retail Other Fuel Costs	Line 9 * Line 10	\$ 858,024,013					
12	NC Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity	Exhibit 2 Sch 1, Page 2	43,500,513					
13	NC Retail Total Fuel Costs before 2.5% Purchase Power Test	Line 11 + Line 12	\$ 901,524,524					
14	NC Retail Reduction due to 2.5% Purchase Power Test	Worksheet 14	\$ (57,234,383)					
15	NC Retail Total Fuel Costs	Line 13 + Line 14	\$ 844,290,141					
16	NC Projected Billing Period MWH Sales	Line 6, col A	37,659,805					
17	Calculated Fuel Rate cents/kWh	Line 15 / Line 16 / 10	2.242					
18	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	0.602					
19	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.000					
20	Total Proposed Composite Fuel Rate	Sum of Lines 17-19	2.844					
Total Current Composite Fuel Rate - Docket E-2 Sub 1146:								
21	Current composite Fuel Rate cents/kWh	Revised Ward Exhibit 2, Sch. 1, Pg 3	2.274					
22	Current composite EMF Rate cents/kWh	Revised Ward Exhibit 2, Sch. 1, Pg 3	(0.025)					
23	Current composite EMF Interest cents/kWh	Revised Ward Exhibit 2, Sch. 1, Pg 3	(0.004)					
24	Total Current Composite Fuel Rate	Sum of Lines 21-23	2.245					
25	Increase/(Decrease) In Composite Fuel rate cents/kWh	Line 20 - Line 24	0.599					
26	NC Projected Billing Period MWH Sales	Line 6, col A	37,659,805					
27	Increase/(Decrease) In Fuel Costs	Line 25 * Line 26 * 10	\$ 225,582,234					

Note: Rounding differences may occur

Includes 100% ownership of all generating resources

Duke Energy Progress, LLC.
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 94.1% and Normalized Test Period Sales
Billing Period December 1, 2018 - November 30, 2019
Docket E-2, Sub 1173

Ward Exhibit 2
Schedule 2
Page 1 of 3

Line No.	Unit	Reference	Generation (MWH)	Unit Cost (cents/kWh)	Fuel Cost (\$)
			A	C/A/10=B	C
1	Total Nuclear	Workpaper 3-4	29,210,311	0.6724	\$ 196,401,382
2	Coal	Calculated	5,450,720	3.3537	182,801,572
3	Gas - CT and CC	Workpaper 3-4	22,506,145	2.9036	653,485,803
4	Reagents & By Products	Workpaper 4	-		14,989,402
5	Total Fossil	Sum of Lines 2 - 4	27,956,865		851,276,777
6	Hydro	Workpaper 3	606,686		
7	Net Pumped Storage		-		
8	Total Hydro	Sum of Lines 6 - 7	606,686		
9	Utility Owned Solar Generation	Workpaper 3	304,154		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	58,078,016		1,047,678,159
11	Purchases	Workpaper 3 - 4	10,318,993		542,149,905
12	JDA Savings Shared	Workpaper 5	-		(12,766,851)
13	Total Purchases	Sum of Lines 11 - 12	10,318,993		529,383,055
14	Total Generation and Purchases	Line 10 + Line 13	68,397,009		1,577,061,214
15	Fuel expense recovered through intersystem sales	Workpaper 3 - 4	(4,650,587)		(105,350,249)
16	Line losses and Company use	Line 19 - Line 15 - Line 14	(1,875,431)		-
17	System Fuel Expense for Fuel Factor	Lines 14 + Line 15 + Line 16			\$ 1,471,710,965
18	Normalized Test Period MWh Sales for Fuel Factor	Exhibit 4	61,870,991		61,870,991
19	Fuel and Fuel Related Costs cents/kWh	Line 17 / Line 18 / 10			2.379

Note: Rounding differences may occur

Duke Energy Progress, LLC.
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
Proposed Nuclear Capacity Factor of 94.1% and Normalized Test Period Sales
Billing Period December 1, 2018 - November 30, 2019
Docket E-2, Sub 1173

Ward Exhibit 2
Schedule 2
Page 2 of 3

Line No.	Description	Residential cents/KWh	General Service Small cents/KWh	General Service Medium cents/KWh	General Service Large cents/KWh	Lighting cents/KWh	Total
1	NC Normalized Test Period MWH Sales Exhibit 4	15,621,843	1,891,451	11,038,646	8,346,128	361,235	37,259,304
Calculation of Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity Rate by Class							Amount
2	Renewable Purchased Power - Capacity Workpaper 4						\$ 38,515,117
3	Cogeneration Purchased Power - Capacity						-
4	Purchases from Qualifying Facilities (HB 589) Workpaper 4						33,352,793
5	Total of Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity Line 2 + Line 3 + Line 4						\$ 71,877,910
6	NC Portion - Jurisdictional % based on Production Plant Allocation Input						60.52%
7	NC Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity Line 5 * Line 6						\$ 43,500,511
8	Production Plant Allocation Factors Input	48.581%	6.580%	28.950%	15.881%	0.008%	100.000%
9	Renewable, Cogeneration, and Qualifying Facilities Purchased Power - Capacity allocated on Production Plant % Line 7 * Line 8	\$ 21,132,983	\$ 2,862,334	\$ 12,593,398	\$ 6,908,316	\$ 3,480	\$ 43,500,511
10	Renewable, Cogeneration, and Qualifying Facilities Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales Line 9 / Line 1 / 10	0.135	0.151	0.114	0.083	0.001	0.117
Summary of Total Rate by Class							
11	Fuel and Fuel Related Costs excluding Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity cents/kWh Line 16 - Line 12 - Line 14 - Line 15	2.186	2.359	2.324	1.708	2.312	
12	Renewable, Cogeneration, and Qualifying Facilities Purchased Power - Capacity cents/kWh Line 10	0.135	0.151	0.114	0.083	0.001	
13	Total adjusted Fuel and Fuel Related Costs cents/kWh Line 11 + Line 12	2.321	2.510	2.438	1.791	2.313	
14	EMF Increment/(Decrement) cents/kWh Exh 3 pg 2, 3, 4, 5, 6	0.575	0.363	0.343	1.038	0.885	
15	EMF Interest Decrement cents/kWh Exh 3 pg 2, 3, 4, 5, 6	-	-	-	-	-	
16	Net Fuel and Fuel Related Costs Factors cents/kWh Exh 2 Sch 2 Page 3	2.896	2.873	2.781	2.829	3.198	

Note: Rounding differences may occur

Line No.	Rate Class	Normalized 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) cents /kwh	Current Total Fuel Rate (Including renewables and EMF) E-2, Sub 1146 cents/kwh	Proposed Total Fuel Rate (Including renewables and EMF) cents /kwh
		A	B	C	D	E	F	G
		Exhibit 2, Schedule 2, page 2	Workpaper 9	Line 27 as a % of Column B	C / B	If D=0 then 0 If not then (C*100)/(A*1000)	Exhibit 2, Line 4	E + F = G
1	Residential	15,621,843	\$ 1,752,285,692	\$ 111,989,132	6.4%	0.717	2.179	2.896
2	Small General Service	1,891,451	\$ 212,700,739	\$ 14,232,875	6.4%	0.752	2.121	2.873
3	Medium General Service	11,038,646	\$ 903,433,492	\$ 57,738,720	6.4%	0.528	2.258	2.781
4	Large General Service	8,346,128	\$ 538,274,962	\$ 34,401,323	6.4%	0.412	2.417	2.829
5	Lighting	361,235	\$ 87,096,514	\$ 5,566,366	6.4%	1.541	1.657	3.198
6	NC Retail	37,259,304	\$ 3,503,791,359	\$ 223,928,416				
Total Proposed Composite Fuel Rate:								
7	Adjusted System Total Fuel Costs	Workpaper 7a	\$ 1,472,355,253					
8	System Renewable, Cogeneration and Qualifying Facilities Purchased Power Capacity	Exhibit 2 Sch 2, Page 2	71,877,910					
9	System Other Fuel Costs	Line 7 - Line 8	\$ 1,400,517,343					
10	NC Retail Allocation % - sales at generation	Workpaper 8	60.49%					
11	NC Retail Other Fuel Costs	Line 9 * Line 10	\$ 847,172,941					
12	NC Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity	Exhibit 2 Sch 2, Page 2	43,500,511					
13	NC Retail Total Fuel Costs	Line 11 + Line 12	\$ 890,673,452					
14	NC Retail Reduction due to 2.5% Purchased Power Test	Workpaper 14a	\$ (54,730,355)					
15	NC Retail Total Fuel Costs	Line 13 + Line 14	\$ 835,943,097					
16	Adjusted NC Normalized Period MWH Sales	Line 6, col A	37,259,304					
17	Calculated Fuel Rate cents/kWh	Line 15 / Line 16 /10	2.244					
18	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	0.602					
19	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.000					
20	Total Proposed Composite Fuel Rate	Sum of Lines 17-19	2.846					
Total Current Composite Fuel Rate - Docket E-2 Sub 1146:								
21	Current composite Fuel Rate cents/kWh	Revised Ward Exhibit 2, Sch. 1, Pg 3	2.274					
22	Current composite EMF Rate cents/kWh	Revised Ward Exhibit 2, Sch. 1, Pg 3	(0.025)					
23	Current composite EMF Interest cents/kWh	Revised Ward Exhibit 2, Sch. 1, Pg 3	(0.004)					
24	Total Current Composite Fuel Rate	Sum of Lines 21 - 23	2.245					
25	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 20 - Line 24	0.601					
26	Adjusted NC Normalized Period MWH Sales	Line 6, col A	37,259,304					
27	Increase/(Decrease) in Fuel Costs	Line 25 * Line 26 * 10	\$ 223,928,415					

Note: Rounding differences may occur

Duke Energy Progress, LLC.
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Fuel and Fuel Related Cost Factors Using:
NERC Capacity Factor of 90.0% with Projected Sales
Billing Period December 1, 2018 - November 30, 2019
Docket E-2, Sub 1173

Ward Exhibit 2
Schedule 3
Page 1 of 3

Line No.	Unit	Reference	Generation (MWH)	Unit Cost (cents/KWh)	Fuel Cost (\$)
			A	C/A/10=B	C
1	Total Nuclear	Workpaper 2	27,943,448	0.6724	\$ 187,883,372
2	Coal	Calculated	6,988,431	3.3537	234,372,000
3	Gas - CT and CC	Workpaper 3 - 4	22,506,145	2.9036	653,485,803
4	Reagents & By Products	Workpaper 4	-		14,989,402
5	Total Fossil	Sum of Lines 2 - 4	<u>29,494,576</u>		<u>902,847,205</u>
6	Hydro	Workpaper 3	606,686		
7	Net Pumped Storage		-		
8	Total Hydro	Sum of Lines 6 - 7	<u>606,686</u>		
9	Utility Owned Solar Generation	Workpaper 3	304,154		
10	Total Generation	Line 1 + Line 5 + Line 8 + Line 9	58,348,864		1,090,730,577
11	Purchases	Workpaper 3 - 4	10,318,993		542,149,905
12	JDA Savings Shared	Workpaper 5	-		<u>(12,766,851)</u>
13	Total Purchases	Sum of Lines 11- 12	<u>10,318,993</u>		<u>529,383,055</u>
14	Total Generation and Purchases	Line 10 + Line 13	68,667,857		1,620,113,631
15	Fuel expense recovered through intersystem sales	Workpaper 3 - 4	(4,650,587)		(105,350,249)
16	Line losses and Company use	Line 19 - Line 15 - Line 14	<u>(1,883,902)</u>		<u>-</u>
17	System Fuel Expense for Fuel Factor	Line 14 + Line 15 + Line 16			\$ 1,514,763,382
18	System MWh Sales for Fuel Factor	Workpaper 3	62,133,368		62,133,368
19	Fuel and Fuel Related Costs cents/kWh	Line 17 / Line 18 / 10			2.438

Note: Rounding differences may occur

Duke Energy Progress, LLC.
 North Carolina Annual Fuel and Fuel Related Expense
 Calculation of Fuel and Fuel Related Cost Factors Using:
 NERC Capacity Factor of 90.0% with Projected Sales
 Billing Period December 1, 2018 - November 30, 2019
 Docket E-2, Sub 1173

Ward Exhibit 2
 Schedule 3
 Page 2 of 3

Line No.	Description		Residential cents/kWh	General Service Small cents/kWh	General Service Medium cents/kWh	General Service Large cents/kWh	Lighting cents/kWh	Total
1	NC Projected Billing Period MWH Sales	Workpaper 7	15,956,916	1,795,996	10,351,641	9,176,034	379,219	37,659,805
Calculation of Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity Rate by Class								Amount
2	Renewable Purchased Power - Capacity	Workpaper 4						\$ 38,515,117
3	Cogeneration Purchased Power - Capacity							-
4	Purchases from Qualifying Facilities (HB 589)	Workpaper 4						33,362,793
5	Total of Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity	Line 2 + Line 3 + Line 4						\$ 71,877,910
6	NC Portion - Jurisdictional % based on Production Plant Allocation	Input						60.52%
7	NC Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity	Line 5 * Line 6						\$ 43,500,511
8	Production Plant Allocation Factors	Input	48.581%	6.580%	28.950%	15.881%	0.008%	100.000%
9	Renewable, Cogeneration, and Qualifying Facilities Purchased Power - Capacity allocated on Production Plant %	Line 7 * Line 8	\$ 21,132,983	\$ 2,862,334	\$ 12,593,398	\$ 6,908,316	\$ 3,480	\$ 43,500,511
10	Renewable, Cogeneration, and Qualifying Facilities Purchased Power - Capacity cents/kWh based on Projected Billing Period Sales	Line 9 / Line 1 / 10	0.132	0.159	0.122	0.075	0.001	0.116
Summary of Total Rate by Class								
11	Fuel and Fuel Related Costs excluding Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity cents/kWh	Line 16 - Line 12 - Line 14 - Line 15	2.244	2.471	2.406	1.716	2.385	
12	Renewable, Cogeneration, and Qualifying Facilities Purchased Power - Capacity cents/kWh	Line 10	0.132	0.159	0.122	0.075	0.001	
13	Total adjusted Fuel and Fuel Related Costs cents/kWh	Line 11 + Line 12	2.376	2.630	2.528	1.791	2.386	
14	EMF Increment/(Decrement) cents/kWh	Exh 3 pg 2, 3, 4, 5, 6	0.575	0.363	0.343	1.038	0.885	
15	EMF Interest Decrement cents/kWh	Exh 3 pg 2, 3, 4, 5, 6	-	-	-	-	-	
16	Net Fuel and Fuel Related Costs Factors cents/kWh	Exh 2 Sch 3 Page 3	2.951	2.993	2.871	2.829	3.271	

Note: Rounding differences may occur

Line No.	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) cents /kwh	Current Total Fuel Rate (including renewables and EMF) E-2, Sub 1146 cents/kwh	Proposed Total Fuel Rate (including renewables and EMF) cents /kwh
		A	B	C	D	E	F	G
		Exhibit 2, Schedule 3, page 2	Worksheet 9	Line 27 as a % of Column B	C / B	If D=0 then 0 if not then (C*100)/(A*1000)	Exhibit 1, Line 4	E + F = H
1	Residential	15,956,916 \$	1,752,285,692 \$	123,174,978	7.0%	0.772	2.179	2.951
2	Small General Service	1,795,996 \$	222,700,739 \$	15,654,501	7.0%	0.872	2.121	2.993
3	Medium General Service	10,351,641 \$	903,433,492 \$	63,505,854	7.0%	0.613	2.758	2.871
4	Large General Service	9,176,034 \$	538,274,962 \$	37,837,441	7.0%	0.412	2.417	2.829
5	Lighting	379,219 \$	87,096,514 \$	6,122,353	7.0%	1.614	1.657	3.271
6	NC Retail	37,659,805 \$	3,503,791,399 \$	246,295,127				
Total Proposed Composite Fuel Rate:								
7	Adjusted System Total Fuel Costs		Worksheet 7b \$ 1,515,447,671					
8	System Renewable, Cogeneration and Qualifying Facilities Purchased Power Capacity		Exhibit 2 Sch 3, Page 2 71,877,910					
9	System Other Fuel Costs		Line 7 - Line 8 \$ 1,443,569,761					
10	NC Retail Allocation % - sales at generation		Worksheet 8 60.87%					
11	NC Retail Other Fuel Costs		Line 9 * Line 10 \$ 878,700,913					
12	NC Renewable, Cogeneration, and Qualifying Facilities Purchased Power Capacity		Exhibit 2 Sch 3, Page 2 48,500,511					
13	NC Retail Total Fuel Costs		Line 11 + Line 12 \$ 927,201,425					
14	NC Retail Reduction due to 2.5% Purchased Power Test		Worksheet 14 \$ (57,234,383)					
15	NC Retail Total Fuel Costs		Line 13 + Line 14 \$ 869,967,041					
16	NC Projected Billing Period MWH Sales	Line 6, col A	37,659,805					
17	Calculated Fuel Rate cents/kWh	Line 13 / Line 14 / 10	2.297					
18	Proposed Composite EMF Rate cents/kWh	Exhibit 3 Page 1	0.602					
19	Proposed Composite EMF Rate Interest cents/kWh	Exhibit 3 Page 1	0.000					
20	Total Proposed Composite Fuel Rate	Sum of Lines 15-17	2.899					
Total Current Composite Fuel Rate - Docket E-2 Sub 1146:								
21	Current composite Fuel Rate cents/kWh	Revised Ward Exhibit 2, Sch. 1, Pg 3	2.274					
22	Current composite EMF Rate cents/kWh	Revised Ward Exhibit 2, Sch. 1, Pg 3	(0.025)					
23	Current composite EMF Interest cents/kWh	Revised Ward Exhibit 2, Sch. 1, Pg 3	(0.004)					
24	Total Current Composite Fuel Rate	Sum of Lines 19 - 21	2.245					
25	Increase/(Decrease) in Composite Fuel rate cents/kWh	Line 18 - Line 22	0.654					
26	NC Projected Billing Period MWH Sales	Line 6, col A	37,659,805					
27	Increase/(Decrease) in Fuel Costs	Line 23* Line 24 * 10	\$ 246,295,127					

Note: Rounding differences may occur

Note: Rounding differences may occur

A

Duke Energy Progress, LLC.
 North Carolina Annual Fuel and Fuel Related Expense
 Calculation of Experience Modification Factor - Proposed Composite
 Test Period Twelve Months Ended March 31, 2018
 Docket E-2, Sub 1173

Line No.	Month	Fuel Cost Incurred ¢/ kWh (a)	Fuel Cost Billed ¢/ kWh (b)	NC Retail MWh Sales (c)	Reported (Over) Under Recovery (d)	Adjustments (e)	Adjusted (Over) Under Recovery (f)
1	April 2017 (Sub 1107)			2,551,836	\$ 11,792,408	-	\$ 11,792,408
2	May			2,882,501	1,074,362	-	1,074,362
3	June			3,143,065	14,218,550	-	14,218,550
4	July			3,603,205	12,646,832	-	12,646,832
5	August			3,552,280	15,752,665	-	15,752,665
6	September			3,365,322	2,759	-	2,759
7	October			2,985,025	797,505	-	797,505
8	November			2,690,885	3,496,224	-	3,496,224
9	December (1) (New Rates - Sub 1146)			2,903,935	19,036,979	-	19,036,979
10	January 2018			4,015,062	101,804,334	-	101,804,334
11	February			3,240,480	632,717	(9,307,627)	(8,674,910)
12	March			2,763,834	10,521,637	-	10,521,637
13	Total Test Period			37,697,429	\$ 191,776,973	\$ (9,307,627)	\$ 182,469,346
14	Plus: Under collection deferred in E-2, Sub 1146 in 2017						41,864,753
15	Booked (Over) Under Recovery						\$ 224,334,099
16	Normalized Test Period MWh Sales		Exhibit 4				37,259,304
17	Experience Modification Increment / (Decrement) cents/KWh						0.602
18	Interest						\$ -
19	EMF Interest Decrement						-

Notes:
 (1) Adjustment included in (over)/under recovery total
 Totals may not foot due to rounding.

Duke Energy Progress, LLC.
 North Carolina Annual Fuel and Fuel Related Expense
 Calculation of Experience Modification Factor - Residential
 Test Period Twelve Months Ended March 31, 2018
 Docket E-2, Sub 1173

Line No.	Month	Fuel Cost Incurred ¢/ kWh (a)	Fuel Cost Billed ¢/ kWh (b)	NC Retail MWh Sales (c)	(Over) Under Recovery (d)	Adjustments (e)	Adjusted (Over) Under Recovery (f)
1	April 2017 (Sub 1107)	2.723	1.993	954,712	\$ 6,971,117		\$ 6,971,117
2	May	2.353	1.993	1,050,149	3,784,634		3,784,634
3	June	2.563	1.993	1,246,475	7,105,529		7,105,529
4	July	2.226	1.993	1,572,276	3,667,492		3,667,492
5	August	2.452	2.040	1,492,578	6,158,080		6,158,080
6	September	2.163	2.040	1,342,663	1,659,263		1,659,263
7	October	2.448	2.040	1,067,867	4,357,219		4,357,219
8	November	2.438	2.040	1,003,422	3,996,127		3,996,127
9	December (1) (New Rates - Sub 1146)	2.489	2.116	1,324,401	4,933,487		4,933,487
10	January 2018	3.590	2.212	2,139,382	29,481,610		29,481,610
11	February	1.983	2.226	1,523,879	(3,697,234)	(3,557,294)	(7,254,528)
12	March	2.513	2.202	1,175,447	3,654,188		3,654,188
13	Total Test Period			15,893,252	\$ 72,071,512	\$ (3,557,294)	\$ 68,514,218
14	Plus: Under collection deferred in E-2, Sub 1146 in 2017						21,282,684
15	Booked (Over) Under Recovery						\$ 89,796,902
16	Normalized Test Period MWh Sales		Exhibit 4				15,621,843
17	Experience Modification Increment (Decrement) cents/KWh						0.575
18	Annual Interest Rate						10%
19	Monthly Interest Rate						0.83333%
20	Number of Months (October 2017 - May 2019)						20
21	Interest						\$ -
22	EMF Interest Decrement						-

Notes:

⁽¹⁾ Adjustment included in (over)/under recovery total
 Totals may not foot due to rounding.

Duke Energy Progress, LLC.
 North Carolina Annual Fuel and Fuel Related Expense
 Calculation of Experience Modification Factor - Small General Service
 Test Period Twelve Months Ended March 31, 2018
 Docket E-2, Sub 1173

Line No.	Month	Fuel Cost Incurred ¢/ kWh (a)	Fuel Cost Billed ¢/ kWh (b)	NC Retail MWh Sales (c)	(Over) Under Recovery (d)	Adjustments (e)	Adjusted (Over) Under Recovery (f)
1	April 2017 (Sub 1107)	2.478	2.088	126,398	\$ 492,826		\$ 492,826
2	May	2.071	2.088	143,788	(24,660)		(24,660)
3	June	2.338	2.088	164,782	411,839		411,839
4	July	2.217	2.088	190,221	246,279		246,279
5	August	2.345	2.136	188,473	394,908		394,908
6	September	1.893	2.136	185,362	(448,965)		(448,965)
7	October	2.041	2.136	154,591	(145,856)		(145,856)
8	November	2.237	2.136	131,824	133,565		133,565
9	December (1) (New Rates - Sub 1146)	2.724	2.149	141,647	813,619		813,619
10	January 2018	4.259	2.166	202,795	4,243,795		4,243,795
11	February	2.059	2.169	165,238	(181,018)	(427,226)	(608,244)
12	March	2.383	2.144	139,212	332,560		332,560
13	Total Test Period			1,934,331	\$ 6,268,892	\$ (427,226)	\$ 5,841,666
14	Plus: Under collection deferred in E-2, Sub 1146 in 2017						1,023,834
15	Booked (Over) Under Recovery						\$ 6,865,500
16	Normalized Test Period MWh Sales		Exhibit 4				1,891,451
17	Experience Modification Increment (Decrement) cents/kWh						0.363
18	Annual Interest Rate						10%
19	Monthly Interest Rate						0.83333%
20	Number of Months (October 2017 - May 2019)						20
21	Interest						\$ -
22	EMF Interest Decrement						-

Notes:

⁽¹⁾ Adjustment included in (over)/under recovery total
 Totals may not foot due to rounding.

Duke Energy Progress, LLC.
North Carolina Annual Fuel and Fuel Related Expense
Calculation of Experience Modification Factor - Medium General Service
Test Period Twelve Months Ended March 31, 2018
Docket E-2, Sub 1173

Line No.	Month	Fuel Cost Incurred ¢/ kWh (a)	Fuel Cost Billed ¢/ kWh (b)	NC Retail MWh Sales (c)	(Over) Under Recovery (d)	Adjustments (e)	Adjusted (Over) Under Recovery (f)
1	April 2017 (Sub 1107)	2.652	2.431	789,518	\$ 1,748,388		\$ 1,748,388
2	May	2.153	2.431	924,297	(2,569,638)		(2,569,638)
3	June	2.596	2.431	988,512	1,627,980		1,627,980
4	July	2.619	2.431	1,075,522	2,022,734		2,022,734
5	August	2.790	2.474	1,049,747	3,311,218		3,311,218
6	September	2.191	2.474	1,058,549	(2,994,635)		(2,994,635)
7	October	2.156	2.474	970,578	(3,085,566)		(3,085,566)
8	November	2.392	2.474	822,703	(679,388)		(679,388)
9	December (1) (New Rates - Sub 1146)	3.163	2.443	801,738	5,771,676		5,771,676
10	January 2018	5.780	2.405	967,815	32,669,134		32,669,134
11	February	2.494	2.399	869,360	827,631	(2,891,957)	(2,064,326)
12	March	2.634	2.377	806,191	2,075,998		2,075,998
13	Total Test Period			11,124,532	\$ 40,725,530	\$ (2,891,957)	\$ 37,833,573
14	Plus: Under collection deferred in E-2, Sub 1146 in 2017						-
15	Booked (Over) Under Recovery						\$ 37,833,573
16	Normalized Test Period MWh Sales		Exhibit 4				11,038,646
17	Experience Modification Increment (Decrement) cents/KWh						0.343
18	Annual Interest Rate						10%
19	Monthly Interest Rate						0.833333%
20	Number of Months (October 2017 - May 2019)						20
21	Interest						\$ -
22	EMF Interest Decrement						-

Notes:

(1) Adjustment included in (over)/under recovery total
Totals may not foot due to rounding.

Line No.	Month	Fuel Cost Incurred ¢/ kWh (a)	Fuel Cost Billed ¢/ kWh (b)	NC Retail MWh Sales (c)	(Over) Under Recovery (d)	Adjustments (e)	Adjusted (Over) Under Recovery (f)
1	April 2017 (Sub 1107)	2.645	2.253	652,260	\$ 2,555,619		\$ 2,555,619
2	May	2.238	2.253	732,368	(112,858)		(112,858)
3	June	2.956	2.253	712,955	5,014,712		5,014,712
4	July	3.155	2.253	734,908	6,626,518		6,626,518
5	August	3.029	2.294	791,056	5,818,694		5,818,694
6	September	2.530	2.294	748,823	1,771,340		1,771,340
7	October	2.252	2.294	761,068	(318,203)		(318,203)
8	November	2.302	2.294	703,016	58,561		58,561
9	December (1) (New Rates - Sub 1146)	3.584	2.361	607,070	7,425,005		7,425,005
10	January 2018	7.547	2.446	675,275	34,448,206		34,448,206
11	February	3.012	2.458	652,526	3,616,627	(2,403,226)	1,213,401
12	March	3.153	2.437	613,366	4,390,398		4,390,398
13	Total Test Period			8,384,692	\$ 71,294,620	\$ (2,403,226)	\$ 68,891,394
14	Plus: Under collection deferred in E-2, Sub 1146 in 2017						17,750,323
15	Booked (Over) Under Recovery						\$ 86,641,717
16	Normalized Test Period MWh Sales		Exhibit 4				8,346,128
17	Experience Modification Increment (Decrement) cents/KWh						1.038
18	Annual Interest Rate						10%
19	Monthly Interest Rate						0.83333%
20	Number of Months (October 2017 - May 2019)						20
21	Interest						\$ -
22	EMF Interest Decrement						-

Notes:

(1) Adjustment included in (over)/under recovery total
 Totals may not foot due to rounding.

Duke Energy Progress, LLC.
 North Carolina Annual Fuel and Fuel Related Expense
 Calculation of Experience Modification Factor - Lighting
 Test Period Twelve Months Ended March 31, 2018
 Docket E-2, Sub 1173

Line No.	Month	Fuel Cost Incurred ¢/ kWh (a)	Fuel Cost Billed ¢/ kWh (b)	NC Retail MWh Sales (c)	(Over) Under Recovery (d)	Adjustments (e)	Adjusted (Over) Under Recovery (f)
1	April 2017 (Sub 1107)	0.680	0.596	28,948	\$ 24,458		\$ 24,458
2	May	0.586	0.596	31,898	(3,116)		(3,116)
3	June	0.789	0.596	30,342	58,490		58,490
4	July	0.873	0.596	30,278	83,809		83,809
5	August	0.887	0.658	30,425	69,765		69,765
6	September	0.711	0.658	29,925	15,756		15,756
7	October	0.625	0.658	30,920	(10,089)		(10,089)
8	November	0.616	0.658	29,919	(12,641)		(12,641)
9	December (1) (New Rates - Sub 1146)	1.414	1.093	29,078	93,192		93,192
10	January 2018	4.870	1.642	29,796	961,589		961,589
11	February	1.945	1.719	29,476	66,711	(27,924)	38,787
12	March	1.918	1.687	29,618	68,493		68,493
13	Total Test Period			360,623	\$ 1,416,415	\$ (27,924)	\$ 1,388,491
14	Plus: Under collection deferred in E-2, Sub 1146 in 2017						1,807,912
15	Booked (Over) Under Recovery						\$ 3,196,403
16	Normalized Test Period MWh Sales		Exhibit 4				361,235
17	Experience Modification Increment (Decrement) cents/KWh						0.885
18	Annual Interest Rate						10%
19	Monthly Interest Rate						0.83333%
20	Number of Months (October 2017 - May 2019)						20
21	Interest						\$ -
22	EMF Interest Decrement						-

Notes:

⁽¹⁾ Adjustment included in (over)/under recovery total
 Totals may not foot due to rounding.

A

Duke Energy Progress, LLC.
 North Carolina Annual Fuel and Fuel Related Expense
 Sales, Fuel Revenue, Fuel Expense and System Peak
 Test Period Twelve Months Ended March 31, 2018
 Billing Period December 1, 2018 - November 30, 2019
 Docket E-2, Sub 1173

Word Exhibit 4

Line No.	Description	Reference	Total Company	North Carolina Retail	North Carolina Residential	North Carolina Small General Service	North Carolina Medium General Service	North Carolina Large General Service	North Carolina Lighting
1	Test Period MWH Sales	Company Records	62,453,151	37,697,429	15,893,252	1,934,331	11,124,532	8,384,692	360,623
2	Customer Growth MWH Adjustment	Workpaper 12	367,658	215,505	137,163	11,784	23,604	42,341	613
3	Weather MWH Adjustment	Workpaper 11	(949,818)	(653,630)	(408,572)	(54,664)	(109,490)	(80,904)	-
4	Total Adjusted MWH Sales	Sum Lines 1-3	61,870,991	37,259,304	15,621,843	1,891,451	11,038,646	8,346,128	361,235
5	Test Period Fuel and Fuel Related Revenue *		\$ 1,478,909,275	\$ 841,686,271					
6	Test Period Fuel and Fuel Related Expense *		\$ 1,688,993,608	\$ 1,024,155,617					
7	Test Period Unadjusted (Over)/Under Recovery	Line 5 - Line 6	\$ 210,084,333	\$ 182,469,346					
			Winter Coincidental Peak (CP) KW						
8	Total System Peak		14,154,354						
9	NC Retail		8,441,853						
10	NC Residential Peak		5,330,241						
11	NC Small General Service		454,283						
12	NC Medium General Service		1,730,830						
13	NC Large General Service		926,500						

Notes:

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

Rounding differences may occur

1A

Duke Energy Progress, LLC.
North Carolina Annual Fuel and Fuel Related Expense
Nuclear Capacity Ratings - MWs
Test Period Twelve Months Ended March 31, 2018
Billing Period December 1, 2018 - November 30, 2019
Docket E-2, Sub 1173

Ward Exhibit 5

<u>Unit</u>	<u>Rate Case Docket E-2, Sub 1142</u>	<u>Fuel Docket E-2, Sub 1146</u>	<u>Proposed Capacity Rating MW</u>
Brunswick 1	938	938	938
Brunswick 2	932	932	932
Harris 1	928	928	932
Robinson 2	741	741	741
Total Company	<u>3,539</u>	<u>3,539</u>	<u>3,543</u>

Duke Energy Progress, LLC.
 North Carolina Annual Fuel and Fuel Related Expense
 Calculation of Fuel EMF Deficiency Rates
 Docket E-2, Sub 1173

Ward Exhibit 6

/A

Rate Class	Residential	Small General Service	Medium General Service	Large General Service	Lighting
March 2018 kWh Sales ¹	154,521,470	17,222,832	89,368,710	38,221,917	3,145,188
April 2018 kWh Sales ¹	978,887,275	120,138,944	708,597,097	450,174,978	26,072,668
May 2018 kWh Sales ¹	1,016,144,646	136,806,000	871,434,718	689,302,944	29,670,105
Total kWh Sales	2,149,553,391	274,167,776	1,669,400,525	1,177,699,839	58,887,961
December 2016 EMF Rate (cents/kWh) ²	(0.160)	(0.359)	(0.448)	(0.016)	0.280
Revenue Impact	(3,439,285)	(984,262)	(7,478,914)	(188,432)	164,886
Normalized Test Period MWH Sales	15,621,843	1,891,451	11,038,646	8,346,128	361,235
Increment (Decrement) cents/KWh	0.022	0.052	0.068	0.002	(0.046)

¹ Billed Sales under the Docket No. E-2, Sub 1142 compliance rates effective March 16, 2018, per company records

² EMF Rate is per Annual Billing Adjustments Rider BA-12 and includes the NC Regulatory Fee

1A

**Duke Energy Progress, LLC.
North Carolina Annual Fuel and Fuel Related Expense
Monthly Fuel and Baseload Report for March 2016
Test Period Twelve Months Ended March 31, 2018
Docket E-2, Sub 1173**

Ward Exhibit 7

Monthly Fuel Filing and Baseload Report Cover Sheet

Exhibit 7
Schedule 1

Duke Energy Progress
Summary of Monthly Fuel Report

Docket No. E-2, Sub 1164

Line No.	Fuel Expenses:	March 2018	12 Months Ended March 2018
1	Total Fuel and Fuel-Related Costs	\$ 123,514,039	\$ 1,688,993,608
	MWH sales:		
2	Total System Sales	4,906,209	67,937,557
3	Less intersystem sales	<u>252,246</u>	<u>5,484,405</u>
4	Total sales less intersystem sales	<u>4,653,963</u>	<u>62,453,152</u>
5	Total fuel and fuel-related costs (¢/KWH) (Line 1/Line 4)	<u>2.654</u>	<u>2.704</u>
6	Current fuel & fuel-related cost component (¢/KWH) (per Schedule 4, Line 5a Total)	<u>2.297</u>	
	Generation Mix (MWH):		
	Fossil (By Primary Fuel Type):		
7	Coal	459,748	9,240,778
8	Oil	6,725	376,658
9	Natural Gas - Combustion Turbine	370,780	2,089,636
10	Natural Gas - Combined Cycle	1,672,122	20,467,065
11	Total Fossil	<u>2,509,375</u>	<u>32,174,137</u>
12	Nuclear	2,033,784	29,666,537
13	Hydro - Conventional	73,923	587,221
14	Solar Distributed Generation	21,477	247,821
15	Total MWH generation	<u>4,638,559</u>	<u>62,675,716</u>

Notes: Detail amounts may not add to totals shown due to rounding.
Line 1 excludes April through June Sutton beneficial reuse.

Duke Energy Progress
Details of Fuel and Fuel-Related Costs

Docket No. E-2, Sub 1164

Description	March 2018	12 Months Ended March 2018
Fuel and Fuel-Related Costs:		
Steam Generation - Account 501		
0501110 coal consumed - steam	\$ 16,172,215	\$ 312,848,340
0501310 fuel oil consumed - steam	973,543	10,155,828
Total Steam Generation - Account 501	17,145,758	323,004,168
Nuclear Generation - Account 518		
0518100 burnup of owned fuel	13,884,551	203,484,583
Other Generation - Account 547		
0547000 natural gas consumed - Combustion Turbine	9,190,716	91,290,352
0547000 natural gas consumed - Combined Cycle	52,622,346	700,670,360
0547200 fuel oil consumed	345,916	66,682,534
Total Other Generation - Account 547	62,158,978	858,643,246
Reagents		
Catalyst Depreciation	364,468	6,936,927
Reagents (lime, limestone, ammonia, urea, dibasic acid, and sorbents)	787,583	14,832,880
Total Reagents	1,152,051	21,769,806
By-products		
Net proceeds from sale of by-products	1,213,568	4,675,972
Total By-products	1,213,568	4,675,972
Total Fossil and Nuclear Fuel Expenses		
Included in Base Fuel Component	95,554,906	1,411,577,774
Purchased Power and Net Interchange - Account 555		
Capacity component of purchased power (PURPA)	2,458,565	14,220,929
Capacity component of purchased power (renewables)	1,053,053	40,664,605
Fuel and fuel-related component of purchased power	32,585,896	395,666,483
Total Purchased Power and Net Interchange - Account 555	36,097,515	450,552,017
Less fuel and fuel-related costs recovered through Intersystem sales - Account 447		
	8,138,382	173,136,183
Total Fuel and Fuel-Related Costs	\$ 123,514,039	\$ 1,688,993,608

Notes: Detail amounts may not add to totals shown due to rounding.
Net proceeds from sale of by-products excludes April through June Sutton beneficial reuse.

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

MARCH 2018

Exhibit 7
Schedule 3, Purchases
Page 1 of 4

Purchased Power	Total	Capacity	Non-capacity			
			mWh	Fuel \$	Fuel-related \$	Not Fuel \$ Not Fuel-related \$
Economic	\$	\$				
Broad River Energy, LLC.	\$ 6,036,509	\$ 1,085,194	108,490	\$ 4,035,731	\$ 915,584	
City of Fayetteville	892,645	714,350	3,084	81,645	96,650	
DE Carolinas - Native Load Transfer	6,465,830	-	190,808	5,080,298	1,383,982	\$ 1,550
DE Carolinas - Native Load Transfer Benefit	371,126	-	-	371,126	-	
DE Carolinas - Fees	802,539	-	-	-	802,539	
Haywood EMC	29,050	29,050	-	-	-	
NCEMC	4,546,722	2,712,743	45,543	1,833,979	-	
PJM Interconnection, LLC.	(1,015)	-	-	-	(1,015)	
Southern Company Services	4,065,103	787,332	109,089	2,696,096	581,675	
	<u>\$ 23,208,509</u>	<u>\$ 5,328,669</u>	<u>457,014</u>	<u>\$ 14,098,875</u>	<u>\$ 3,779,415</u>	<u>\$ 1,550</u>
Renewable Energy						
REPS	\$ 10,551,470	-	162,520	-	\$ 10,551,470	-
DERP Qualifying Facilities	48,912	-	966	-	48,912	-
	<u>\$ 10,600,382</u>	<u>\$ -</u>	<u>163,486</u>	<u>\$ -</u>	<u>\$ 10,600,382</u>	<u>\$ -</u>
HB589 PURPA Purchases						
Qualifying Facilities	\$ 7,578,107	-	121,964	-	\$ 7,578,107	-
	<u>\$ 7,578,107</u>	<u>\$ -</u>	<u>121,964</u>	<u>\$ -</u>	<u>\$ 7,578,107</u>	<u>\$ -</u>
Non-dispatchable						
Energy Imbalance	\$ 44,297	-	1,234	\$ 38,672	\$ 5,725	
Generation Imbalance	3,547	-	114	2,164	1,383	
	<u>\$ 47,844</u>	<u>\$ -</u>	<u>1,348</u>	<u>\$ 40,736</u>	<u>\$ -</u>	<u>\$ 7,108</u>
Total Purchased Power	<u>\$ 41,434,842</u>	<u>\$ 5,328,669</u>	<u>743,812</u>	<u>\$ 14,139,611</u>	<u>\$ 21,957,904</u>	<u>\$ 8,658</u>

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

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

MARCH 2018

Exhibit 7
 Schedule 3, Sales
 Page 2 of 4

Sales	Total	Capacity	Non-capacity		
	\$	\$	mWh	Fuel \$	Non-fuel \$
Market Based:					
NCEMC Purchase Power Agreement	\$ 945,265	\$ 652,500	9,547	\$ 332,996	\$ (40,231)
PJM Interconnection, LLC.	11,680	-	238	7,837	3,843
Other:					
DE Carolinas - Native Load Transfer Benefit	1,423,414	-	-	1,423,414	-
DE Carolinas - Native Load Transfer	6,760,693	-	242,448	6,374,135	386,558
Generation Imbalance	(2)	-	13	-	(2)
Total Intersystem Sales	\$ 9,141,050	\$ 652,500	252,246	\$ 8,138,382	\$ 350,168

* Sales for resale other than native load priority.

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

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

**Twelve Months Ended
MARCH 2018**

Exhibit 7
Schedule 3, Purchases
Page 3 of 4

Purchased Power	Total	Capacity	Non-capacity			
			mWh	Fuel \$	Fuel-related \$	Not Fuel \$ Not Fuel-related \$
Economic	\$	\$				
Broad River Energy, LLC.	\$ 81,621,192	\$ 44,488,519	537,408	\$ 29,885,546	\$ 7,247,128	
City of Fayetteville	21,987,506	12,748,400	53,539	8,438,800	800,306	
DE Carolinas - Native Load Transfer	62,537,002	-	1,514,709	37,838,000	23,697,832	\$ 1,001,170
DE Carolinas - Native Load Transfer Benefit	4,360,824	-	-	4,360,824	-	
DE Carolinas - Fees	1,284,829	-	-	-	1,284,829	
Haywood EMC	355,800	355,800	-	-	-	
NCEMC	54,875,007	36,519,963	288,781	18,355,044	-	
PJM Interconnection, LLC.	3,464,720	-	50,256	2,304,428	1,160,292	
Southern Company Services	49,722,669	13,271,548	1,104,378	30,812,493	5,638,628	
	\$ 280,209,549	\$ 107,384,230	3,549,071	\$ 131,995,134	\$ 39,829,015	\$ 1,001,170
Renewable Energy						
REPS	\$ 222,130,053	-	3,255,337	\$ -	\$ 219,573,488	\$ 2,556,565
DERP Net Metering Excess Generation	2,673	\$ 463	62	-	-	2,210
DERP Qualifying Facilities	71,592	-	1,432	-	71,592	-
	\$ 222,204,318	\$ 463	3,256,831	\$ -	\$ 219,645,080	\$ 2,558,775
HB589 PURPA Purchases						
Qualifying Facilities	\$ 58,574,133	-	927,268		\$ 58,574,133	-
	\$ 58,574,133	\$ -	927,268	\$ -	\$ 58,574,133	\$ -
Non-dispatchable						
Virginia Electric and Power Company - Emergency	\$ 265,573	-	890	\$ 161,999		\$ 103,574
Cargill-Aligant, LLC.	72,000	-	1,500	43,920		28,080
Haywood EMC	12,962	\$ 12,962	-	-		-
Smurfit Stone Container Corp	106,362	-	3,324	98,072		8,290
Energy Imbalance	202,049	-	3,302	176,560		25,489
Generation Imbalance	46,940	-	1,628	28,105		18,835
Qualifying Facilities - Pre HB589	30,373,016	7,215,071	431,674	-		23,157,945
	\$ 31,078,902	\$ 7,228,033	442,318	\$ 508,656	\$ -	\$ 23,342,213
Total Purchased Power	\$ 592,066,902	\$ 114,612,726	8,175,488	\$ 132,503,790	\$ 318,048,228	\$ 26,902,158

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

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

Twelve Months Ended
 MARCH 2018

Exhibit 7
 Schedule 3, Sales
 Page 4 of 4

Sales	Total	Capacity	Non-capacity		
	\$	\$	mWh	Fuel \$	Non-fuel \$
Utilities:					
SC Electric & Gas - Emergency	\$ 57,649	-	1,593	\$ 49,290	\$ 8,359
SC Public Service Authority - Emergency	116,020	\$ 64,000	400	43,053	8,967
Market Based:					
NCEMC Purchase Power Agreement	12,683,004	7,830,000	124,183	7,934,954	(3,081,950)
PJM Interconnection, LLC.	3,829,604	-	53,827	1,949,091	1,880,513
Other:					
DE Carolinas - Native Load Transfer Benefit	15,515,060	-	-	15,515,060	-
DE Carolinas - Native Load Transfer	153,524,666	-	5,304,271	147,644,735	5,879,931
Generation Imbalance	(883)	-	131	-	(863)
Total Intersystem Sales	\$ 185,725,140	\$ 7,894,000	5,484,405	\$ 173,136,183	\$ 4,694,957

* Sales for resale other than native load priority.

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

Duke Energy Progress
(Over) / Under Recovery of Fuel Costs
March 2018

Line No.		Residential	Small General Service	Medium General Service	Large General Service	Lighting	Total	
1	1a. System Retail kWh sales	Input						4,653,962,859
	1b. System kWh Sales at generation	Input						4,817,946,985
2	2a. DERP Net Metered kWh generation	Input						1,044,569
	2b. Line loss percentage from Cost of Service	Input Annually						4.15%
	2c. DERP Net Metered kWh at generation	L2a * (1 + 2b)						1,088,013
3	Adjusted System kWh sales	L1b + L2c						4,819,034,958
4	4a. N.C. Retail kWh sales	Input						1,175,447,120
	4b. Line loss percentage from Cost of Service	Input Annually						4.80%
	4c. NC kWh Sales at generation	4a * (1+4b)						1,231,850,863
	4d. NC allocation % by customer class	Calculated						42.881%
	4e. NC retail % of actual system total	L4c NC Total / L1b Total System						59.809%
	4f. NC retail % of adjusted system total	L4c NC Total / L3 Total System						59.896%
5	Approved fuel and fuel-related rates (\$/kWh)							
	5a Billed rates by class (\$/kWh)	Input Annually						2.179
	5b Purchased Power in Base Rates (\$/kWh) - Note 2	Input						0.023
	5c Total billed rates by class (\$/kWh)	L5a + L5b						2.202
	5d Billed fuel expense	L4e * L5c / 100						\$25,879,743
6	Incurred base fuel and fuel-related (less renewable purchased power capacity) rates by class (\$/kWh)							
	6a Docket E-2, Sub 1142 allocation factor	Input Annually						39.67%
	6b System incurred expense	Input						\$28,521,416
	6c NC incurred expense by class	L4f * L6a * L6b						\$3,185,023
	6d NC incurred base fuel rates (\$/kWh)	L6c / L4e * 100						2.42643
7	Incurred renewable purchased power capacity rates (\$/kWh)							
	7a NC retail production plant %	Input Annually						48.271%
	7b Production plant allocation factors	Input						6.307%
	7c System incurred expense	Input						\$1,012,520
	7d NC incurred renewable capacity expense	L7a * L7b * L7c						\$1,012,520
	7e NC incurred rates by class	L7d / L4e * 100						0.08614
8	Total incurred rates by class (\$/kWh)	L5h + 7e						2.5126
9	Difference in \$/kWh (incurred - billed)	L5c - L8						0.31088
10	(Over) / under recovery (See footnote)	L9 * L4e / 100						\$3,654,188
11	Prior period adjustments	Input						0
12	Total (over) / under recovery (See footnote)	L10 + L11						\$3,654,188
13	Total System Incurred Expenses							\$123,547,494
14	Less: Jurisdictional allocation adjustment	Input						33,455
15	Total Fuel and Fuel-related Costs per Schedule 2							\$123,514,039
16	(Over) / under recovery for each month of the current test period (See footnote)							

	Total To Date	(Over) / Under Recovery					Lighting	Total Company
		Residential	Small General Service	Medium General Service	Large General Service	Lighting		
April 2017	\$ 11,792,408	\$ 6,971,117	\$ 492,826	\$ 1,748,388	\$ 2,555,619	\$ 24,458	\$ 11,792,408	
May	12,856,770	3,794,834	(24,660)	(2,569,838)	(112,858)	(3,116)	1,074,962	
June	27,085,320	7,105,529	411,839	1,827,880	5,014,712	58,490	14,218,550	
July	39,732,152	3,687,492	246,279	2,022,734	6,626,518	83,869	12,648,832	
August	55,484,817	6,159,090	354,908	3,311,218	5,618,694	69,765	15,752,665	
September	55,487,576	1,669,263	(446,963)	(2,994,633)	1,771,340	16,768	2,759	
October	56,285,081	4,357,219	(145,896)	(3,085,966)	(918,203)	(10,089)	787,505	
November	59,781,305	3,998,127	133,565	(678,388)	58,581	(12,641)	3,498,224	
December	76,818,284	4,933,487	813,619	5,771,678	7,425,005	93,192	19,036,979	
January 2018	180,622,618	29,461,610	4,243,795	32,669,134	34,448,206	961,589	101,804,334	
February	171,847,708	(7,254,528)	(608,244)	(2,084,326)	1,213,401	39,787	(8,674,910)	
March	\$ 182,469,345	\$ 3,654,188	\$ 332,560	\$ 2,075,998	\$ 4,390,398	\$ 68,493	\$ 10,521,637	
Total		\$ 68,914,218	\$ 8,041,856	\$ 37,833,978	\$ 62,891,393	\$ 1,384,493	\$ 182,469,345	

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.

_f1 Includes prior period adjustments.

_f2 Purchased power in base rates only represents the first 15 days of March per Docket E-2, Sub 1142. Purchased power will be in fuel rates going forward, beginning March 16, 2018.

Duke Energy Progress
Fuel and Fuel Related Cost Report
March 2018

Exhibit 7
Schedule 5
Page 1 of 2

Description	Weatherspoon CT	Lee CC	Sutton CC/CT	Robinson Nuclear	Asheville Steam	Asheville CT	Roxboro Steam	Mayo Steam
Cost of Fuel Purchased (\$)								
Coal	-	-	-	-	\$5,605,018	-	\$14,127,492	\$1,088,158
Oil	959	-	-	-	(6,330)	-	489,297	276,024
Gas - CC	-	17,976,147	13,680,108	-	-	-	-	-
Gas - CT	23	-	976,936	-	-	1,147,519	-	-
Total	982	\$17,976,147	\$14,657,044	-	\$5,598,688	\$1,147,519	\$14,616,789	\$1,364,182
Average Cost of Fuel Purchased (¢/MBTU)								
Coal	-	-	-	-	326.95	-	307.92	370.62
Oil	-	-	-	-	-	-	1,571.74	1,561.66
Gas - CC	-	390.01	453.27	-	-	-	-	-
Gas - CT	-	-	410.45	-	-	386.40	-	-
Weighted Average	-	390.01	450.14	-	326.56	386.40	316.43	438.25
Cost of Fuel Burned (\$)								
Coal	-	-	-	-	\$3,188,731	-	\$10,039,468	\$2,944,016
Oil - CC	-	-	-	-	-	-	-	-
Oil - Steam/CT	45,478	-	-	-	135,010	247,399	527,192	311,342
Gas - CC	-	17,976,147	13,680,108	-	-	-	-	-
Gas - CT	23	-	976,936	-	-	1,147,519	-	-
Nuclear	-	-	-	4,106,946	-	-	-	-
Total	\$45,501	\$17,976,147	\$14,657,044	\$4,106,946	\$3,323,741	\$1,394,918	\$10,566,660	3,255,358
Average Cost of Fuel Burned (¢/MBTU)								
Coal	-	-	-	-	317.17	-	319.18	330.77
Oil - CC	-	-	-	-	-	-	-	-
Oil - Steam/CT	1,583.50	-	-	-	1,648.47	1,648.56	1,537.90	1,511.88
Gas - CC	-	390.01	453.27	-	-	-	-	-
Gas - CT	-	-	410.45	-	-	386.40	-	-
Nuclear	-	-	-	69.31	-	-	-	-
Weighted Average	1,584.30	390.01	450.14	69.31	327.93	447.11	332.32	357.48
Average Cost of Generation (¢/kWh)								
Coal	-	-	-	-	3.82	-	3.27	4.25
Oil - CC	-	-	-	-	-	-	-	-
Oil - Steam/CT	47.37	-	-	-	19.98	20.41	15.88	19.44
Gas - CC	-	2.83	3.24	-	-	-	-	-
Gas - CT	-	-	3.88	-	-	4.46	-	-
Nuclear	-	-	-	0.70	-	-	-	-
Weighted Average	47.40	2.83	3.28	0.70	3.95	5.18	3.41	4.60
Burned MBTU's								
Coal	-	-	-	-	1,005,375	-	3,145,392	890,057
Oil - CC	-	-	-	-	-	-	-	-
Oil - Steam/CT	2,872	-	-	-	8,190	15,007	34,280	20,593
Gas - CC	-	4,609,163	3,018,123	-	-	-	-	-
Gas - CT	-	-	238,016	-	-	296,978	-	-
Nuclear	-	-	-	5,925,058	-	-	-	-
Total	2,872	4,609,163	3,256,139	5,925,058	1,013,565	311,985	3,179,672	910,650
Net Generation (MWh)								
Coal	-	-	-	-	83,505	-	307,006	69,237
Oil - CC	-	-	-	-	-	-	-	-
Oil - Steam/CT	96	-	-	-	676	1,212	3,319	1,802
Gas - CC	-	635,445	421,670	-	-	-	-	-
Gas - CT	-	-	25,148	-	-	25,734	-	-
Nuclear	-	-	-	590,430	-	-	-	-
Hydro (Total System)	-	-	-	-	-	-	-	-
Solar (Total System)	-	-	-	-	-	-	-	-
Total	96	635,445	446,818	590,430	84,181	26,946	310,325	70,839
Cost of Reagents Consumed (\$)								
Ammonia	-	-	-	-	-	-	\$41,853	\$10,301
Limestone	-	-	-	-	104,520	-	313,013	79,074
Re-emission Chemical	-	-	-	-	-	-	-	-
Sorbents	-	-	-	-	8,110	-	98,233	28,204
Urea	-	-	-	-	83,163	-	-	-
Total	-	-	-	-	\$195,792	-	\$453,100	\$117,579

Notes:

Detail amounts may not add to totals shown due to rounding.
Schedule excludes in-transit, terminal and tolling agreement activity.
Cents/MBTU and cents/kWh are not computed when costs and/or net generation is negative.
Lee and Wayne oil burn is associated with inventory consumption shown on Schedule 6 for Wayne.
Re-emission chemical reagent expense is not recoverable in NC.

Duke Energy Progress
Fuel and Fuel Related Cost Report
March 2018

Description	Brunswick Nuclear	Blewett CT	Wayne County CT	Darlington CT	Smith Energy Complex CC/CT	Harris Nuclear	Current Month	Total 12 ME March 2018
Cost of Fuel Purchased (\$)								
Coal	-	-	-	-	-	-	\$20,820,668	\$273,562,818
Oil	-	-	(29,034)	(37,281)	17,990	-	711,625	77,828,014
Gas - CC	-	-	-	-	20,966,091	-	52,622,346	700,670,360
Gas - CT	-	-	98,133	70,901	6,897,204	-	9,190,716	91,290,352
Total	-	-	\$69,099	\$33,620	\$27,881,285	-	\$83,345,355	\$1,143,351,544
Average Cost of Fuel Purchased (¢/MBTU)								
Coal	-	-	-	-	-	-	315.65	318.72
Oil	-	-	1,036.56	11,128.66	1,025.59	-	1,500.56	1,692.60
Gas - CC	-	-	-	-	498.11	-	444.58	479.96
Gas - CT	-	-	350.25	367.27	193.33	-	221.47	390.33
Weighted Average	-	-	274.02	177.23	358.44	-	368.30	440.09
Cost of Fuel Burned (\$)								
Coal	-	-	-	-	-	-	\$16,172,215	\$312,848,340
Oil - CC	-	-	-	-	156	-	156	59,966
Oil - Steam/CT	-	25,506	9,859	17,517	-	-	1,319,303	76,778,393
Gas - CC	-	-	-	-	20,966,091	-	52,622,346	700,670,360
Gas - CT	-	-	98,133	70,901	6,897,204	-	9,190,716	91,290,352
Nuclear	4,881,884	-	-	-	-	4,895,721	13,884,551	203,484,583
Total	\$4,881,884	\$25,506	\$107,992	\$88,418	\$27,863,451	\$4,895,721	\$93,189,287	\$1,385,131,994
Average Cost of Fuel Burned (¢/MBTU)								
Coal	-	-	-	-	-	-	320.82	315.35
Oil - CC	-	-	-	-	1,733.33	-	1,733.33	1,842.03
Oil - Steam/CT	-	1,667.07	1,760.54	1,762.27	-	-	1,570.11	1,650.30
Gas - CC	-	-	-	-	498.11	-	444.58	479.96
Gas - CT	-	-	350.25	367.27	193.33	-	221.47	390.33
Nuclear	62.81	-	-	-	-	65.45	65.56	65.07
Weighted Average	62.81	1,667.07	377.89	435.58	358.29	65.45	220.37	236.38
Average Cost of Generation (¢/kWh)								
Coal	-	-	-	-	-	-	3.52	3.39
Oil - CC	-	-	-	-	15.60	-	15.60	20.32
Oil - Steam/CT	-	94.47	-	-	-	-	19.62	20.40
Gas - CC	-	-	-	-	3.41	-	3.15	3.42
Gas - CT	-	-	5.58	5.90	2.18	-	2.48	4.37
Nuclear	0.67	-	-	-	-	0.68	0.68	0.69
Weighted Average	0.67	94.47	6.42	8.26	2.99	0.68	2.01	2.21
Burned MBTU's								
Coal	-	-	-	-	-	-	5,040,824	99,206,526
Oil - CC	-	-	-	-	9	-	9	3,255
Oil - Steam/CT	-	1,530	560	994	-	-	84,026	4,652,392
Gas - CC	-	-	-	-	4,209,128	-	11,836,414	145,983,948
Gas - CT	-	-	28,018	19,305	3,567,622	-	4,149,939	23,387,875
Nuclear	7,772,130	-	-	-	-	7,480,052	21,177,240	312,735,532
Total	7,772,130	1,530	28,578	20,299	7,776,759	7,480,052	42,288,452	585,969,528
Net Generation (mWh)								
Coal	-	-	-	-	-	-	459,748	9,240,778
Oil - CC	-	-	-	-	1	-	1	295
Oil - Steam/CT	-	27	(77)	(131)	-	-	6,724	376,363
Gas - CC	-	-	-	-	615,007	-	1,672,122	20,467,065
Gas - CT	-	-	1,760	1,202	316,936	-	370,780	2,089,636
Nuclear	727,984	-	-	-	-	715,370	2,033,784	29,666,537
Hydro (Total System)	-	-	-	-	-	-	73,923	587,221
Solar (Total System)	-	-	-	-	-	-	21,477	247,821
Total	727,984	27	1,683	1,071	931,944	715,370	4,638,559	62,675,716
Cost of Reagents Consumed (\$)								
Ammonia	-	-	-	-	\$21,113	-	\$73,267	\$1,860,168
Limestone	-	-	-	-	-	-	496,607	9,348,300
Re-emission Chemical	-	-	-	-	-	-	-	226,743
Sorbents	-	-	-	-	-	-	134,546	2,624,356
Urea	-	-	-	-	-	-	83,163	1,000,055
Total	-	-	-	-	\$21,113	-	\$787,583	\$15,059,623

**Duke Energy Progress
Fuel & Fuel-related Consumption and Inventory Report
March 2018**

**Exhibit 7
Schedule 6
Page 1 of 3**

Description	Weatherspoon	Lee	Sutton	Roblnson	Asheville
Coal Data:					
Beginning balance	-	-	-	-	99,694
Tons received during period	-	-	-	-	69,160
Inventory adjustments	-	-	-	-	-
Tons burned during period	-	-	-	-	40,636
Ending balance	-	-	-	-	128,218
MBTUs per ton burned	-	-	-	-	24.74
Cost of ending inventory (\$/ton)	-	-	-	-	78.39
Oil Data:					
Beginning balance	689,629	-	2,638,405	78,040	2,971,224
Gallons received during period	-	-	-	-	-
Miscellaneous use and adjustments	-	-	-	-	(4,205)
Gallons burned during period	20,520	-	-	-	168,735
Ending balance	669,109	-	2,638,405	78,040	2,798,284
Cost of ending inventory (\$/gal)	2.22	-	2.80	2.49	2.27
Gas Data:					
Beginning balance	-	-	-	-	-
MCF received during period	-	4,483,691	3,168,771	-	289,172
MCF burned during period	-	4,483,691	3,168,771	-	289,172
Ending balance	-	-	-	-	-
Limestone/Lime Data:					
Beginning balance	-	-	-	-	18,351
Tons received during period	-	-	-	-	735
Inventory adjustments	-	-	-	-	-
Tons consumed during period	-	-	-	-	2,049
Ending balance	-	-	-	-	17,037
Cost of ending inventory (\$/ton)	-	-	-	-	48.86

Notes:

Detail amounts may not add to totals shown due to rounding.
Schedule excludes in-transit, terminal and tolling agreement activity.
Gas is burned as received; therefore, inventory balances are not maintained.
The oil inventory data for Wayne reflects the common usage of the oil tank used for both Wayne and Lee units.

**Duke Energy Progress
Fuel & Fuel-related Consumption and Inventory Report
March 2018**

**Exhibit 7
Schedule 6
Page 2 of 3**

<u>Description</u>	<u>Roxboro</u>	<u>Mayo</u>	<u>Brunswick</u>	<u>Blewett</u>	<u>Wayne County</u>
Coal Data:					
Beginning balance	981,749	305,174	-	-	-
Tons received during period	180,080	11,613	-	-	-
Inventory adjustments	-	-	-	-	-
Tons burned during period	124,633	36,007	-	-	-
Ending balance	1,037,196	280,780	-	-	-
MBTUs per ton burned	25.24	24.72	-	-	-
Cost of ending inventory (\$/ton)	80.52	81.76	-	-	-
Oil Data:					
Beginning balance	381,833	294,896	174,304	715,134	11,661,259
Gallons received during period	225,587	128,081	-	-	(20,294)
Miscellaneous use and adjustments	(7,513)	(805)	-	-	-
Gallons burned during period	249,527	149,605	3,130	10,886	4,069
Ending balance	350,380	272,567	171,174	704,248	11,636,896
Cost of ending inventory (\$/gal)	2.11	2.08	2.49	2.34	2.42
Gas Data:					
Beginning balance	-	-	-	-	-
MCF received during period	-	-	-	-	27,271
MCF burned during period	-	-	-	-	27,271
Ending balance	-	-	-	-	-
Limestone/Lime Data:					
Beginning balance	87,881	25,621	-	-	-
Tons received during period	7,548	75	-	-	-
Inventory adjustments	-	-	-	-	-
Tons consumed during period	8,613	1,962	-	-	-
Ending balance	86,816	23,734	-	-	-
Cost of ending inventory (\$/ton)	33.63	37.05	-	-	-

**Duke Energy Progress
Fuel & Fuel-related Consumption and Inventory Report
March 2018**

Exhibit 7
Schedule 6
Page 3 of 3

Description	Darlington	Smith Energy Complex	Harris	Current Month	Total 12 ME March 2018
Coal Data:					
Beginning balance	-	-	-	1,386,617	1,932,778
Tons received during period	-	-	-	260,853	3,384,739
Inventory adjustments	-	-	-	-	24,990
Tons burned during period	-	-	-	201,276	3,896,313
Ending balance	-	-	-	1,446,194	1,446,194
MBTUs per ton burned	-	-	-	25.04	25.46
Cost of ending inventory (\$/ton)	-	-	-	80.58	80.58
Oil Data:					
Beginning balance	10,294,337	8,272,744	267,363	38,439,168	38,887,412
Gallons received during period	(2,428)	12,711	-	343,657	33,319,878
Miscellaneous use and adjustments	-	-	-	(12,523)	(180,760)
Gallons burned during period	7,211	67	-	613,750	33,869,978
Ending balance	10,284,698	8,285,388	267,363	38,156,552	38,156,552
Cost of ending inventory (\$/gal)	2.43	2.33	2.49	2.41	2.41
Gas Data:					
Beginning balance	-	-	-	-	-
MCF received during period	18,778	7,566,012	-	15,553,695	163,717,123
MCF burned during period	18,778	7,566,012	-	15,553,695	163,717,123
Ending balance	-	-	-	-	-
Limestone/Lime Data:					
Beginning balance	-	-	-	131,853	124,498
Tons received during period	-	-	-	8,358	225,395
Inventory adjustments	-	-	-	-	14,691
Tons consumed during period	-	-	-	12,624	236,997
Ending balance	-	-	-	127,587	127,587
Cost of ending inventory (\$/ton)	-	-	-	36.30	36.30

**DUKE ENERGY PROGRESS
ANALYSIS OF COAL PURCHASED
MARCH 2018**

STATION	TYPE	QUANTITY OF TONS DELIVERED	DELIVERED COST	DELIVERED COST PER TON
ASHEVILLE	SPOT	326	\$ 15,315	\$ 46.92
	CONTRACT	68,834	5,486,599	79.71
	ADJUSTMENTS	-	103,104	-
	TOTAL	69,160	5,605,018	81.04
MAYO	SPOT	-	-	-
	CONTRACT	11,613	863,867	74.39
	ADJUSTMENTS	-	224,291	-
	TOTAL	11,613	1,088,158	93.70
ROXBORO	SPOT	-	-	-
	CONTRACT	180,080	13,577,032	75.39
	ADJUSTMENTS	-	550,460	-
	TOTAL	180,080	14,127,492	78.45
ALL PLANTS	SPOT	326	15,315	46.92
	CONTRACT	260,527	19,927,498	76.49
	ADJUSTMENTS	-	877,855	-
	TOTAL	260,853	\$ 20,820,668	\$ 79.82

**DUKE ENERGY PROGRESS
ANALYSIS OF COAL QUALITY RECEIVED
MARCH 2018**

STATION	PERCENT MOISTURE	PERCENT ASH	HEAT VALUE	PERCENT SULFUR
ASHEVILLE	7.09	10.31	12,394	1.73
MAYO	7.06	8.49	12,642	3.27
ROXBORO	6.49	8.40	12,739	2.54

DUKE ENERGY PROGRESS
ANALYSIS OF OIL PURCHASED
MARCH 2018

	DARLINGTON	MAYO	ROXBORO
VENDOR	Indigo, Hightowers Petroleum Co. and Huguenot Fuels	Greensboro Tank Farm	Greensboro Tank Farm
SPOT/CONTRACT	Spot	Contract	Contract
SULFUR CONTENT %	0	0	0
GALLONS RECEIVED	(2,428)	128,081	225,587
TOTAL DELIVERED COST	\$ (37,281)	\$ 276,024	\$ 489,297
DELIVERED COST/GALLON	\$ 15.35	\$ 2.16	\$ 2.17
BTU/GALLON	138,000	138,000	138,000
	SMITH ENERGY COMPLEX	SMITH ENERGY COMPLEX	WAYNE
VENDOR	Hightowers Petroleum Co., Petroleum Traders, Potter Oil and Tire	Petroleum Traders	Hightowers Petroleum Co., Indigo and Potter Oil and Tire
SPOT/CONTRACT	Spot	Contract	Spot
SULFUR CONTENT %	0	0	0
GALLONS RECEIVED	4,684	8,027	(20,294)
TOTAL DELIVERED COST	\$ 2,262	\$ 15,728	\$ (29,034)
DELIVERED COST/GALLON	\$ 0.48	\$ 1.96	\$ 1.43
BTU/GALLON	138,000	138,000	138,000

Notes:

Federal environmental fee reversals for January and February for the Asheville station totaling \$(6,330) are excluded.
A price adjustment and federal environmental fee reversals for the Weatherspoon station, which net to \$959, are also excluded.

Duke Energy Progress
Power Plant Performance Data
Twelve Month Summary
April, 2017 - March, 2018
Nuclear Units

<u>Unit Name</u>	<u>Net Generation (mWh)</u>	<u>Capacity Rating (mW)</u>	<u>Capacity Factor (%)</u>	<u>Equivalent Availability (%)</u>
Brunswick 1	7,408,780	938	90.17	90.34
Brunswick 2	7,573,495	932	92.76	93.12
Harris 1	8,077,994	929	99.26	96.70
Robinson 2	6,606,268	741	101.77	97.65

**Duke Energy Progress
Power Plant Performance Data
Twelve Month Summary
April, 2017 through March, 2018
Combined Cycle Units**

Unit Name		Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Lee Energy Complex	1A	1,484,954	224	75.85	83.02
Lee Energy Complex	1B	1,453,699	223	74.34	83.28
Lee Energy Complex	1C	1,517,702	224	77.27	84.18
Lee Energy Complex	ST1	2,885,224	379	86.90	94.61
Lee Energy Complex	Block Total	7,341,579	1,050	79.82	87.54
Richmond County CC	7	1,219,345	189	73.65	80.37
Richmond County CC	8	1,203,968	189	72.72	79.64
Richmond County CC	ST4	1,374,680	175	89.67	88.05
Richmond County CC	9	1,413,543	215	75.23	79.94
Richmond County CC	10	1,437,289	215	76.49	81.41
Richmond County CC	ST5	1,903,723	248	87.63	91.01
Richmond County CC	Block Total	8,552,548	1,230	79.38	83.61
Sutton Energy Complex	1A	1,400,211	225	71.12	79.68
Sutton Energy Complex	1B	1,452,443	225	73.77	81.77
Sutton Energy Complex	ST1	1,720,578	268	73.29	91.08
Sutton Energy Complex	Block Total	4,573,232	718	72.76	84.59

Notes:

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

**Duke Energy Progress
 Power Plant Performance Data
 Twelve Month Summary
 April, 2017 through March, 2018**

Intermediate Steam Units

Unit Name	Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Equivalent Availability (%)
Mayo 1	1,441,969	746	22.07	86.01
Roxboro 2	1,908,224	673	32.37	85.99
Roxboro 3	2,342,686	698	38.31	86.74
Roxboro 4	1,406,706	711	22.59	49.30

Notes:

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

**Duke Energy Progress
Power Plant Performance Data
Twelve Month Summary
April, 2017 through March, 2018
Other Cycling Steam Units**

Unit Name	Net Generation (mWh)	Capacity Rating (mW)	Capacity Factor (%)	Operating Availability (%)
Asheville 1	584,089	192	34.73	73.22
Asheville 2	624,780	192	37.15	83.95
Roxboro 1	996,819	380	29.95	88.33

Notes:

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

**Duke Energy Progress
Power Plant Performance Data
Twelve Month Summary
April, 2017 through March, 2018
Combustion Turbine Stations**

Station Name	Net Generation (mWh)	Capacity Rating (mW)	Operating Availability (%)
Asheville CT	163,987	370	93.85
Blewett CT	204	68	92.54
Darlington CT	142,058	895	75.43
Richmond County CT	1,764,333	921	87.48
Sutton CT	-113	76	100.00
Sutton Fast Start CT	138,730	92	90.81
Wayne County CT	191,175	960	96.03
Weatherspoon CT	1,130	164	83.58

Notes:

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

**Duke Energy Progress
Power Plant Performance Data**

Exhibit 7
Schedule 10
Page 6 of 6

**Twelve Month Summary
April, 2017 through March, 2018
Hydroelectric Stations**

Station Name	Net Generation (mWh)	Capacity Rating (mW)	Operating Availability (%)
Blewett	91,910	27.0	85.54
Marshall	5,234	4.0	33.15
Tillery	137,014	84.0	97.37
Walters	353,063	113.0	99.23

Notes:

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

PA

FUEL EMF DEFICIENCY RIDER FED-1

APPLICABILITY

This Rider recovers the revenue deficiency due to the inclusion in rates of an expired fuel experience modification factor (EMF) from March 16 through May 30, 2018. This rider shall remain in effect for a fixed 12-month period expiring on and after November 30, 2019.

MONTHLY RATE

The rates shown below are included in the MONTHLY RATE provision in each schedule identified in the table below:

Rate Class	Rate Adjustment Factor (cents per kWh)
Residential Applicable to Schedules: RES, R-TOUD, & R-TOU	0.022
Small General Service Applicable to Schedules: SGS, SGS-TOUE, SGS-TOU-CLR, TSF & TSS	0.052
Medium General Service Applicable to Schedules: MGS, SGS-TOU, SI, CH-TOUE, GS-TES, APH-TES, CSG, CSE	0.068
Large General Service Applicable to Schedules: LGS, LGS-TOU, LGS-RTP	0.002
Lighting Applicable to Schedules: ALS, SLS, SLR & SFLS	(0.046)

* Billing Adjustment Factors, shown above, include a North Carolina regulatory fee.

Effective for service rendered on and after December 1, 2018
NCUC Docket No. E-2, Subs 1142 and 1173

DUKE ENERGY PROGRESS, LLC
 North Carolina Annual Fuel and Fuel Related Expense
 Proposed Nuclear Capacity Factor
 Billing Period December 2018 - November 2019

Ward Workpaper 1
 Docket No. E-2, Sub 1173

1A

	Brunswick 1	Brunswick 2	Harris 1	Robinson 1	Total
MWhs	8,052,542	7,431,097	7,365,335	6,361,337	29,210,311
Cost	\$ 53,911,370	\$ 48,342,888	\$ 52,040,505	\$ 42,106,618	\$ 196,401,382
\$/MWhs	\$ 6.6950	\$ 6.5055	\$ 7.0656	\$ 6.6191	

Avg. \$/MWhs					\$ 6.7237
Cents per kWh					0.6724

MDC	Unit		Dec'2018 - Nov'19
Brunswick 1	MW		938
Brunswick 2	MW		932
Harris 1	MW		932
Robinson 1	MW		741
			<u>3,543</u>

Hours in Year			8,760
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Generation in GWhs			
Brunswick 1	GWh		8,053
Brunswick 2	GWh		7,431
Harris 1	GWh		7,365
Robinson 1	GWh		6,361
			<u>29,210</u>

Proposed Nuclear Capacity Factor 94.1%

DUKE ENERGY PROGRESS, LLC
 North Carolina Annual Fuel and Fuel Related Expense
 NERC 5 Year Average Nuclear Capacity Factor
 Billing Period December 2018 - November 2019

Ward Workpaper 2
 Docket No. E-2, Sub 1173

1A

	Brunswick 1	Brunswick 2	Harris 1	Robinson 1	Total
MWhs with NERC applied	7,676,209	7,627,108	7,347,888	5,292,243	27,943,448
Hours	8,760	8,760	8,760	8,760	8,760
MDC	938	932	932	741	3,543
Capacity Factor-NERC 5yr Avg	0.9342	0.9342	0.9000	0.8153	
Cost (\$)	\$ 51,612,532	\$ 51,282,388	\$ 49,404,998	\$ 35,583,455	\$ 187,883,372
Avg. \$/MWhs				\$	6.7237
Cents per kWh					0.6724

	Capacity Rating	NCF Rating	Weighted Average
Brunswick 1	938	0.9342	24.73
Brunswick 2	932	0.9342	24.57
Harris 1	932	0.9000	23.67
Robinson 1	741	0.8153	17.05
	<u>3,543</u>		<u>90.03</u>

1A

DUKE ENERGY PROGRESS, LLC
North Carolina Annual Fuel and Fuel Related Expense
North Carolina Generation in MWhs
Billing Period December 2018 - November 2019

<u>Resource Type</u>	<u>Dec'18 - Nov'19</u>	
Nuclear		29,089,426
Adjust for Higher Nuclear Capacity Factor		120,885
Adjusted Nuclear Total		<u>29,210,311</u>
Coal		5,842,453
Adjust for Higher Nuclear Capacity Factor		(120,885)
Adjusted Coal Total		<u>5,721,568</u>
Gas CT and CC Total		22,506,145
Total Hydro		606,686
Utility Owned Solar Generation		304,154
Total Net Generation		<u>58,348,864</u>
Purchases	2,063,173	
Purchases for REPS Compliance	3,026,065	
Purchases from Qualifying Facilities	3,410,393	
Allocated Economic Purchases	768,328	
Joint Dispatch purchases	1,051,034	10,318,993
Total Net Generation and Purchases		<u>68,667,857</u>
Sales Totals (intersystem sales, JDA sales)		(4,650,587)
Line Losses and Company Use		(1,883,902)
Total NC System Sales		<u>62,133,368</u>

DUKE ENERGY PROGRESS, LLC
North Carolina Annual Fuel and Fuel Related Expense
Fuel Costs (\$)
Billing Period December 2018 - November 2019

Resource Type	Dec'18 - Nov'19
Nuclear	195,637,911
Adjust for Higher Nuclear Capacity Factor	763,471
Adjusted Nuclear	196,401,382
Coal	195,939,163
Adjust for Higher Nuclear Capacity Factor	(4,054,124)
Adjusted Coal Total	191,885,039
Reagent and By-Product Costs	14,989,402
Gas CT and CC Total	653,485,803
Total Hydro	-
Utility Owned Solar Generation	-
Total Generation Costs	1,056,761,626
Purchases	71,395,237
Purchases for REPS Compliance	187,595,597
Purchases for REPS Compliance Capacity	38,515,117
Purchases from Qualifying Facilities Energy	162,649,793
Purchases from Qualifying Facilities Capacity	33,362,793
Allocated Economic Purchases	19,703,265
Fuel Transfer Purchases	28,928,103
Joint Dispatch savings	(12,766,851)
Total Purchase Costs	529,383,055
Sales Totals (intersystem sales)	(6,081,270)
Fuel Transfer Sales	(99,268,979)
Total Sales Costs	(105,350,249)
Total Fuel and Related Expenses	1,480,794,432

PA

DUKE ENERGY PROGRESS, LLC
North Carolina Annual Fuel and Fuel Related Expense
Merger Fuel Impacts
Billing Period December 2018 - November 2019

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

Date	Allocated Economic Purchase Cost		Economic Sales Cost		Fuel Transfer Payment		JDA Savings Payment		Gas Savings Payment		Coal Savings Payment		Nuclear Savings Payment	
	PEC	DEC	PEC	DEC	PEC	DEC	PEC	DEC	PEC	DEC	PEC	DEC	PEC	DEC
12/1/2018	\$ 1,345,873	\$ 1,955,237	\$ (140,930)	\$ (83,850)	\$ (9,189,225)	\$ 9,189,225	\$ (1,375,188)	\$ 1,375,188	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
1/1/2019	\$ 541,737	\$ 745,107	\$ (700,368)	\$ (1,355,398)	\$ 5,124,715	\$ (5,124,715)	\$ 1,728,069	\$ (1,728,069)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2/1/2019	\$ 479,661	\$ 648,044	\$ (252,787)	\$ (478,599)	\$ 4,986,493	\$ (4,986,493)	\$ 1,373,256	\$ (1,373,256)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
3/1/2019	\$ 748,053	\$ 1,054,241	\$ (276,328)	\$ (413,915)	\$ (5,141,840)	\$ 5,141,840	\$ (602,037)	\$ 602,037	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
4/1/2019	\$ 1,392,702	\$ 2,003,761	\$ (86,557)	\$ (4,897)	\$ (10,088,094)	\$ 10,088,094	\$ (2,588,754)	\$ 2,588,754	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
5/1/2019	\$ 1,432,388	\$ 2,134,064	\$ (139,193)	\$ (77,686)	\$ (8,719,301)	\$ 8,719,301	\$ (1,820,155)	\$ 1,820,155	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
6/1/2019	\$ 2,825,496	\$ 4,161,449	\$ (141,931)	\$ (207,604)	\$ (8,410,050)	\$ 8,410,050	\$ (1,400,517)	\$ 1,400,517	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
7/1/2019	\$ 1,990,176	\$ 2,806,745	\$ (194,526)	\$ (385,609)	\$ (6,038,136)	\$ 6,038,136	\$ (2,238,685)	\$ 2,238,685	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
8/1/2019	\$ 2,704,270	\$ 3,787,546	\$ (82,066)	\$ (186,361)	\$ (4,051,006)	\$ 4,051,006	\$ 661,492	\$ (661,492)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
9/1/2019	\$ 2,835,549	\$ 3,919,422	\$ (70,328)	\$ (67,422)	\$ (8,068,946)	\$ 8,068,946	\$ (1,385,455)	\$ 1,385,455	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
10/1/2019	\$ 1,783,526	\$ 2,428,310	\$ (42,634)	\$ (20,186)	\$ (2,932,457)	\$ 2,932,457	\$ (487,002)	\$ 487,002	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
11/1/2019	\$ 1,623,825	\$ 2,408,602	\$ (176,982)	\$ (13,394)	\$ (17,813,028)	\$ 17,813,028	\$ (4,631,873)	\$ 4,631,873	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Total	\$ 19,703,265	\$ 28,046,630	\$ (2,304,630)	\$ (70,340,876)	\$ (70,340,876)	\$ 70,340,876	\$ (12,766,851)	\$ 12,766,851	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Note: Totals may not sum due to rounding

	Fuel Transfer Payments	
	Purchases	Sales
12/1/2018	\$ 1,142,030	\$ 10,331,256
1/1/2019	\$ 7,776,073	\$ 2,651,359
2/1/2019	\$ 8,278,838	\$ 3,292,345
3/1/2019	\$ 3,548,261	\$ 8,690,101
4/1/2019	\$ 341,351	\$ 10,429,445
5/1/2019	\$ 699,389	\$ 9,418,690
6/1/2019	\$ 450,598	\$ 8,900,647
7/1/2019	\$ 1,743,100	\$ 7,781,236
8/1/2019	\$ 1,727,214	\$ 5,778,220
9/1/2019	\$ 720,534	\$ 8,789,480
10/1/2019	\$ 2,448,887	\$ 5,381,344
11/1/2019	\$ 11,829	\$ 17,824,857
	\$ 28,928,103	\$ 99,768,979
		\$ (70,340,876)

Workpaper 6

DUKE ENERGY PROGRESS, LLC
 North Carolina Annual Fuel and Fuel Related Expense
 Merger Payments
 Billing Period December 2018 - November 2019

Ward Workpaper 6
 Docket No. E-2, Sub 1173

1/A

Date	Transfer Projection		Purchase Allocation Delta		Adjusted Transfer		Fossil Gen Cost		Pre-Net Payments		Actual Payments	
	PEC to DEC	DEC to PEC	PEC	DEC	PEC to DEC	DEC to PEC	PEC	DEC	PEC to DEC	DEC to PEC	PEC to DEC	DEC to PEC
12/1/2018	397,277	41,555	(381)	381	397,277	41,936	\$ 26.01	\$ 27.23	\$ 1,142,030	\$ 10,331,256	\$ -	\$ 9,189,225
1/1/2019	88,029	254,914	(8,444)	8,444	88,029	263,359	\$ 30.12	\$ 29.53	\$ 7,776,073	\$ 2,651,359	\$ 5,124,715	\$ -
2/1/2019	109,267	275,569	(12,598)	12,598	109,267	288,167	\$ 30.13	\$ 28.73	\$ 8,278,838	\$ 3,292,345	\$ 4,986,493	\$ -
3/1/2019	357,709	128,272	(4,538)	4,538	357,709	132,810	\$ 24.29	\$ 26.72	\$ 3,548,261	\$ 8,690,101	\$ -	\$ 5,141,840
4/1/2019	454,246	13,245	14,770	(14,770)	469,016	13,245	\$ 22.24	\$ 25.77	\$ 341,351	\$ 10,429,445	\$ -	\$ 10,088,094
5/1/2019	399,784	29,283	7,743	(7,743)	407,527	29,283	\$ 23.11	\$ 23.88	\$ 699,389	\$ 9,418,690	\$ -	\$ 8,719,301
6/1/2019	350,309	19,051	22,145	(22,145)	372,455	19,051	\$ 23.90	\$ 25.75	\$ 490,598	\$ 8,900,647	\$ -	\$ 8,410,050
7/1/2019	307,333	64,087	(910)	910	307,333	64,997	\$ 25.32	\$ 26.82	\$ 1,743,100	\$ 7,781,236	\$ -	\$ 6,038,136
8/1/2019	229,021	65,127	4,087	(4,087)	233,109	65,127	\$ 24.79	\$ 26.52	\$ 1,727,214	\$ 5,778,220	\$ -	\$ 4,051,006
9/1/2019	366,006	29,272	22,042	(22,042)	388,048	29,272	\$ 22.65	\$ 24.61	\$ 720,534	\$ 8,789,480	\$ -	\$ 8,068,946
10/1/2019	253,028	103,286	(33)	33	253,028	103,319	\$ 21.27	\$ 23.70	\$ 2,448,887	\$ 5,381,344	\$ -	\$ 2,932,457
11/1/2019	923,530	466	64,082	(64,082)	987,612	466	\$ 18.05	\$ 25.40	\$ 11,829	\$ 17,824,857	\$ -	\$ 17,813,028
	4,235,540	1,024,129			4,370,410	1,051,034			\$ 28,928,103	\$ 99,268,979		

Note: Totals may not sum due to rounding

DUKE ENERGY PROGRESS, LLC
North Carolina Annual Fuel and Fuel Related Expense
Projected Sales
Billing Period December 2018 - November 2019

Ward Workpaper 7
Docket No. E-2, Sub 1173

A

Spring 2018 Forecast

	Projection MWhs	Remove impact of SC DERP Net Metered Generation	Adjusted Projected Sales (MWhs)
NC			
Residential	15,956,916		15,956,916
Small General Service	1,795,996		1,795,996
Medium General Service	10,351,641		10,351,641
Large General Service	9,176,034		9,176,034
Lighting	379,219		379,219
Total	37,659,805		37,659,805
SC Retail	6,666,325	21,344	6,687,669
Total Wholesale	17,807,238		17,807,238
Total Adjusted NC System Sales	62,133,368	21,344	62,154,712
NC as a percentage of total	60.61%	0.00%	60.59%
SC as a percentage of total	10.73%	100.00%	10.76%
Wholesale as a percentage of total	28.66%	0.00%	28.65%
SC Net Metering allocation adjustment			
Total Projected SC NEM MWhs	21,344		
Marginal Fuel rate per MWh for SC NEM	\$ 32.06		
Fuel Benefit to be directly assigned to SC	\$ 684,289		
System Fuel Expense	1,480,794,432	Ward Exhibit 2, Schedule 1, Page 1	
Fuel benefit to be directly assigned to SC Retail	\$ 684,289		
Total Adjusted System Fuel Expense	1,481,478,720		

DUKE ENERGY PROGRESS, LLC
 North Carolina Annual Fuel and Fuel Related Expense
 Normalized Sales
 Billing Period December 2018 - November 2019

Ward Workpaper 7a
 Docket No. E-2, Sub 1173

Spring 2018 Forecast

	Test Period Sales MWhs	Weather Normalization	Customer Growth	Remove impact of SC DERP Net Metered Generation	Adjusted Projected Sales (MWhs)
NC					
Residential	15,893,252	(408,572)	137,163		15,621,843
Small General Service	1,934,331	(54,664)	11,784		1,891,451
Medium General Service	11,124,532	(109,490)	23,604		11,038,646
Large General Service	8,384,692	(80,904)	42,341		8,346,128
Lighting	360,623	0	613		361,235
Total	37,697,429	(653,630)	215,505		37,259,304
SC Retail	6,353,202	(98,915)	4,557	21,344	6,280,188
Total Wholesale	18,402,520	(197,273)	147,596		18,352,843
Total Adjusted NC System Sales	62,453,151	(949,818)	367,658	21,344	61,892,335
NC as a percentage of total	60.36%				60.20%
SC as a percentage of total	10.17%				10.15%
Wholesale as a percentage of total	29.47%				29.65%
SC Net Metering allocation adjustment	21,344				
Total Projected SC NEM MWhs	\$ 32.06				
Marginal Fuel rate per MWh for SC NEM	\$ 684,289				
Fuel Benefit to be directly assigned to SC					
System Fuel Expense	\$ 1,471,710,965				
Fuel benefit to be directly assigned to SC Retail	\$ 684,289				
Total Adjusted System Fuel Expense	\$ 1,472,395,253				

DUKE ENERGY PROGRESS, LLC
 North Carolina Annual Fuel and Fuel Related Expense
 Projected Sales - NERC 5 year Average
 Billing Period December 2018 - November 2019

Ward Workpaper 7b
 Docket No. E-2, Sub 1173

Spring 2018 Forecast

	Projection MWhs	Remove impact of SC DERP Net Metered Generation	Adjusted Projected Sales (MWhs)
NC			
Residential	15,956,916		15,956,916
Small General Service	1,795,996		1,795,996
Medium General Service	10,351,641		10,351,641
Large General Service	9,176,034		9,176,034
Lighting	379,219		379,219
Total	37,659,805		37,659,805
SC Retail	6,666,325	21,344	6,687,669
Total Wholesale	17,807,238		17,807,238
Total Adjusted NC System Sales	62,133,368	21,344	62,154,712
NC as a percentage of total	60.61%	0.00%	60.59%
SC as a percentage of total	10.73%	100.00%	10.76%
Wholesale as a percentage of total	28.66%	0.00%	28.65%
SC Net Metering allocation adjustment			
Total Projected SC NEM MWhs	21,344		
Marginal Fuel rate per MWh for SC NEM	\$ 32.06		
Fuel Benefit to be directly assigned to SC	\$ 684,289		
System Fuel Expense	1,514,763,382		
Fuel benefit to be directly assigned to SC Retail	\$ 684,289		
Total Adjusted System Fuel Expense	1,515,447,671		

DUKE ENERGY PROGRESS, LLC
North Carolina Annual Fuel and Fuel Related Expense
NC Retail Allocation %
Energy Allocation Factors - 12 Months Ending December 31, 2017

	kWh @ Meter	E-2 Allocation	kWh @ Prod Out.	E-1 Allocation
NC RES	14,637,333,282	0.240750	15,191,620,578	0.242266
NC RES-TOU	486,245,935	0.007998	504,659,121	0.008048
NC SGS	1,844,386,439	0.030336	1,914,220,716	0.030527
NC SGS-CLR	30,133,412	0.000496	31,274,506	0.000499
NC MGS-TOU	8,233,618,359	0.135424	8,536,022,048	0.136127
NC MGS	2,760,634,474	0.045406	2,863,468,664	0.045665
NC SI	51,779,687	0.000852	53,603,512	0.000855
NC LGS	1,145,912,181	0.018848	1,183,504,912	0.018874
NC LGS-TOU	1,661,914,071	0.027335	1,716,393,791	0.027372
NC LGS-RTP	5,608,836,997	0.092252	5,775,997,908	0.092112
NC TSS	4,917,974	0.000081	5,104,208	0.000081
NC ALS	276,265,920	0.004544	286,727,572	0.004573
NC SLS	86,757,985	0.001427	90,043,341	0.001436
NC SFLS	1,161,856	0.000019	1,200,652	0.000019
Total NCR	36,829,898,572	0.605765	38,153,841,530	0.608452
NCEMPA	7,301,615,320	0.120094	7,453,121,270	0.118857
NCEMC	7,431,239,052	0.122226	7,585,434,650	0.120957
Fayetteville	2,043,810,625	0.033616	2,086,218,976	0.033270
FBEMC	517,036,898	0.008504	527,765,232	0.008416
Piedmont EMC	65,450,426	0.001077	66,849,329	0.001066
Haywood EMC	71,534,846	0.001177	73,019,169	0.001164
Tri-Towns	72,323,029	0.001190	73,823,707	0.001177
Waynesville	-	0.000000	-	0.000000
WIntersville	53,202,365	0.000875	54,306,296	0.000856
Total NCWHS	10,254,637,241	0.168665	10,467,417,358	0.166927
Total NC	54,386,151,132	0.894524	56,074,380,158	0.894236
SC RES	1,978,209,443	0.032537	2,053,120,381	0.032742
SC RET	40,124,603	0.000660	41,644,044	0.000664
SC SGS	266,717,007	0.004387	276,906,870	0.004414
SC SGS-CLR	4,147,619	0.000068	4,304,681	0.000069
SC MGS-TOU	1,102,797,227	0.018138	1,143,152,090	0.018230
SC MGS	529,245,596	0.008705	548,740,427	0.008751
SC SI	16,757,842	0.000276	17,338,385	0.000277
SC LGS	675,487,312	0.011110	697,836,088	0.011129
SC LGS-TOU	287,281,247	0.004725	296,025,780	0.004721
SC LGS-CRTL-TOU	681,470,500	0.011209	700,362,469	0.011169
SC LGS-RTP	556,970,460	0.009161	571,996,347	0.009122
SC TSS	855,647	0.000014	888,049	0.000014
SC ALS	66,112,583	0.001087	68,616,138	0.001094
SC SLS	17,160,829	0.000282	17,810,676	0.000284
SC SFLS	141,879	0.000002	146,617	0.000002
Total SCR	6,223,479,794	0.102362	6,438,789,041	0.102681
SCWHS (Camden)	189,347,622	0.003114	193,276,519	0.003082
Total SC	6,412,827,416	0.105476	6,632,065,560	0.105764
Total System	60,798,978,548	1.000000	62,706,445,718	1.000000

	2017 Cost of Service Data			
	kWh @ Meter	kWh @ Prod Out.	Losses (kWh)	Loss Percent
Residential	15,123,579,217	15,696,278,699	572,700,482	3.79%
SGS	1,879,437,825	1,850,599,430	71,161,605	3.76%
MGS	11,046,032,520	11,453,094,224	407,061,704	3.69%
LGS	8,416,663,249	8,675,896,612	259,233,363	3.08%
Lighting	354,185,761	377,971,565	13,785,804	3.79%
Total NC Retail	36,829,898,572	38,153,841,530	1,323,942,958	3.59%
Total NC Retail	36,829,898,572	38,153,841,530	1,323,942,958	3.59%
SC Retail	6,223,479,794	6,438,789,041	215,309,247	
NEM Generation	846,239	878,568	30,329	
Total SC Retail	6,224,326,033	6,439,667,609	215,339,576	3.46%
All other jurisdictions	17,744,753,944	18,112,838,579	368,084,635	2.07%
Total System	60,798,978,548	62,706,445,718	1,907,467,170	3.14%
Line Loss Calculations for Projected Fuel Costs				
	MWh @ Meter	MWh @ Prod Out.	Losses (MWh)	Loss Percent
Total NC Retail	37,659,605	39,064,061	1,404,256	3.73%
Total SC Retail	6,687,669	6,927,330	239,661	3.58%
All other jurisdictions	17,807,238	18,184,548	377,310	2.12%
Total System	62,154,712	64,175,938	2,021,226	3.25%
Allocation percent - NC retail	60.59%	60.87%		
Line Loss Calculations for Normalized Test Period Sales				
	MWh @ Meter	MWh @ Prod Out.	Losses (MWh)	Loss Percent
Total NC Retail	37,259,304	38,648,625	1,389,322	3.73%
Total SC Retail	6,280,188	6,505,246	225,058	3.58%
All other jurisdictions	18,352,843	18,741,713	388,870	2.12%
Total System	61,892,335	63,895,585	2,003,251	3.24%
Allocation percent - NC retail	60.20%	60.49%		

DUKE ENERGY PROGRESS, LLC
 North Carolina Annual Fuel and Fuel Related Expense
 Actual Sales by Jurisdiction - Subject to Weather
 Twelve Months Ended March 31, 2018
 MWH

Ward Workpaper 10
 Docket No. E-2, Sub 1173

A

Line #	Description	Reference	NORTH CAROLINA	SOUTH CAROLINA	Retail TOTAL COMPANY	% NC	% SC
1	Residential	Company Records	15,960,038	2,134,908	18,094,947	88.20	11.80
2	Commercial	Company Records	12,350,308	1,713,501	14,063,810	87.82	12.18
3	Industrial	Company Records	7,896,728	2,442,440	10,339,168	76.38	23.62
4	Other Public Authority	Company Records	1,426,646	47,368	1,474,013	96.79	3.21
5	Total Retail Sales subject to weather	Sum 1 through 4	37,633,721	6,338,217	43,971,938		
6	Lighting	Company Records	63,708	14,985	78,693		
7	Total Retail Sales subject to weather	Line 5 + Line 6	37,697,429	6,353,202	44,050,631		

DUKE ENERGY PROGRESS, LLC
 North Carolina Annual Fuel and Fuel Related Expense
 Weather Adjustment - MWh
 Twelve Months Ended March 31, 2018

A

Line #	Description	REFERENCE	Total Company MWh	NC RETAIL		SC RETAIL	
				% To Total	MWh	% To Total	MWh
	<u>Residential</u>						
1	Residential		(463,234)	88.20	(408,572)	11.80	(54,662)
	<u>Commercial</u>						
2	Small and Medium General Service		(186,921)	87.82	(164,154)	12.18	(22,767)
	<u>Industrial</u>						
3	Large General Service		(89,172)	76.38	(68,110)	23.62	(21,062)
	<u>OPA</u>						
4	Other Public Authority (Large General Service)		<u>(13,218)</u>	96.79	<u>(12,794)</u>	3.21	<u>(424)</u>
5	Total Retail	L1+ L2+ L3 + L4	(752,544)		(653,630)		(98,915)
6	Wholesale		(197,273)				
7	Total Company	L5 + L6	<u>(949,818)</u>		<u>(653,630)</u>		<u>(98,915)</u>

Note: Totals may not sum due to rounding

DUKE ENERGY PROGRESS, LLC
North Carolina Annual Fuel and Fuel Related Expense
Weather Adjustment - MWh
Twelve Months Ended March 31, 2018

Ward Workpaper 11
Docket No. E-2, Sub 1173
Page 2 of 2

	Total MWH Residential Adjustment	Total MWH Commercial Adjustment	Total MWH Industrial Adjustment	Total MWH OPA Adjustment	Total MWHs
Apr-17	43,301	0	8,977	0	52,279
May-17	(83,133)	0	0	0	(83,133)
Jun-17	(181,673)	(72,685)	(22,292)	(4,448)	(281,098)
Jul-17	(120,803)	(37,364)	(16,310)	(3,640)	(178,117)
Aug-17	(85,189)	(32,858)	(16,440)	(4,159)	(138,646)
Sep-17	86,938	39,136	9,825	4,533	140,432
Oct-17	(98,436)	(45,155)	(40,938)	(6,522)	(191,051)
Nov-17	24,601	0	0	0	24,601
Dec-17	(1,534)	0	0	0	(1,534)
Jan-18	(333,869)	(37,994)	(11,994)	0	(383,857)
Feb-18	82,652	0	0	1,016	83,668
Mar-18	203,912	0	0	0	203,912
Total	(463,234)	(186,921)	(89,172)	(13,218)	(752,544)

Wholesale Weather Adjustment
MWH

Apr-17	228
May-17	(11,168)
Jun-17	(55,686)
Jul-17	(34,162)
Aug-17	(30,326)
Sep-17	22,829
Oct-17	2,525
Nov-17	14,415
Dec-17	7,398
Jan-18	(194,756)
Feb-18	5,069
Mar-18	76,360
Total	(197,273)

DUKE ENERGY PROGRESS, LLC
 North Carolina Annual Fuel and Fuel Related Expense
 Customer Growth Adjustment - MWh
 Twelve Months Ended March 31, 2018

Ward Workpaper 12
 Docket No. E-2, Sub 1173

JA

Rate Schedule	Reference	NC Proposed KWH ¹ Adjustment	SC Proposed KWH Adjustment	Wholesale Proposed KWH Adjustment
Residential	RES	137,163,199	7,293,996	
General:				
General Service Small	SGS	11,784,474	139,247	
General Service Medium	MGS	23,603,834	(2,915,568)	
Total General		35,388,308	(2,776,321)	
Lighting:				
Street Lighting	SLS/SLR	421,060	38,032	
Sports Field Lighting	SFLS	46,843	1,087	
Traffic Signal Service	TSS/TFS	144,824	-	
Total Street Lighting		612,727	39,119	
Industrial:				
I - Textile	LGS	1,357,530	-	
I - Nontextile	LGS	40,982,999	-	
Total Industrial		42,340,529	-	
Total		215,504,763	4,556,794	147,596,126

¹ Using the regression method (Residential, Lighting, SGS classes) and a customer by customer method for MGS and Industrial

DUKE ENERGY PROGRESS, LLC
 North Carolina Annual Fuel and Fuel Related Expense
 Reagents
 Billing Period December 2018 - November 2019
 (\$)

Ward Workpaper 13
 Docket No. E-2, Sub 1173

JA

Date	Ammonia	Limestone	Limestone Off-System Sales	Catalyst Depreciation	Magnesium hydroxide	Calcium Carbonate	Total NC System Reagent Cost \$	Gypsum (Gain)/Loss\$	Ash (Gain)/Loss \$	Total NC System Reagent Cost and ByProduct (Gain)/Loss \$
12/1/18	\$ 136,259	\$ 510,002	(6,857)	\$ 364,466	\$ 112,631	\$ 57,943	\$ 1,174,443	\$ (21,499)	\$ (1,435)	\$ 1,151,510
1/1/19	466,205	1,576,890	(38,351)	364,466	481,522	213,712	3,064,444	(151,153)	(8,863)	2,904,427
2/1/19	372,520	1,296,381	(19,446)	364,466	376,083	174,781	2,564,785	(113,752)	(6,837)	2,444,196
3/1/19	90,404	332,996	(9,449)	364,466	88,337	40,627	907,380	(22,588)	(1,498)	883,295
4/1/19	6,762	26,551	(1,038)	364,466	3,971	2,617	403,330	(2,682)	(131)	400,517
5/1/19	47,919	201,433	(9,810)	364,466	40,426	24,129	668,563	(4,944)	(648)	662,972
6/1/19	141,184	560,225	(14,675)	364,466	146,523	76,334	1,274,056	(15,063)	(2,079)	1,256,914
7/1/19	240,795	920,886	(20,479)	364,466	265,612	124,141	1,895,420	(34,392)	(3,796)	1,857,232
8/1/19	188,602	743,336	(12,176)	364,466	202,957	99,816	1,587,002	(18,513)	(2,769)	1,565,720
9/1/19	70,739	292,768	(8,022)	364,466	76,998	35,632	832,581	(4,771)	(943)	826,867
10/1/19	17,314	92,264	(3,628)	364,466	8,697	2,138	481,250	(2,131)	(105)	479,014
11/1/19	29,663	114,311	(1,676)	364,466	35,172	19,535	561,472	(4,206)	(526)	556,740
Total	\$ 1,808,367	\$ 6,668,042	\$ (145,607)	\$ 4,373,590	\$ 1,838,929	\$ 871,405	\$ 15,414,726	\$ (395,693)	\$ (29,631)	\$ 14,989,402

DUKE ENERGY PROGRESS, LLC
 North Carolina Annual Fuel and Fuel Related Expense
 2.5% Calculation Test
 Billing Period December 2018 - November 2019

Ward Workpaper 14
 Docket No. E-2, Sub 1173

JA

Line No.	Description	EMF (Over)/Under		
		Forecast \$	Collection \$	Total \$
1	Amount in current docket	\$ 310,910,776	\$ 78,097,747	\$ 389,008,523
2	- Amount in 2017 Filing: Docket E-2 Sub 1146 ⁽¹⁾	\$ 189,044,284	\$ 63,374,757	\$ 252,419,041
3	Increase/(Decrease)	\$ 121,866,491	\$ 14,722,990	\$ 136,589,482
4	2.5% of 2017 NC revenue of \$3,174,203,935			\$ 79,355,098
5	Amount over 2.5%			\$ 57,234,383

⁽¹⁾ Updated for Ward Supplemental filing from E-2, Sub 1146

	System Cost	Alloc %	NC Alloc. Forecast
WP 4 Purchases	\$ 71,395,237	60.59%	\$ 43,258,374
WP 4 Purchases for REPS Compliance	187,595,597	60.59%	113,664,172
WP 4 Purchases for REPS Compliance Capacity	38,515,117	60.52%	23,309,349
WP 4 Purchases from Qualifying Facilities Energy	162,649,793	60.59%	98,549,509
WP 4 Purchases from Qualifying Facilities Capacity	33,362,793	60.52%	20,191,162
WP 4 Allocated Economic Purchases	19,703,265	60.59%	11,938,208
Total	\$ 513,221,803		\$ 310,910,776

Revision of prior year amount based on Supplemental filing

	System Cost	Alloc %	NC Alloc. Forecast
Purchases	\$ 41,519,620	60.35%	\$ 25,057,091
Purchases for REPS Compliance	154,215,192	60.35%	93,068,868
Purchases for REPS Compliance Capacity	31,684,006	59.73%	18,924,857
Purchases from Qualifying Facilities Energy	55,113,822	60.35%	33,261,192
Purchases from Qualifying Facilities Capacity	11,792,060	59.73%	7,043,397
Allocated Economic Purchases	19,368,483	60.35%	11,688,879
Total	\$ 313,693,183		\$ 189,044,284

DUKE ENERGY PROGRESS, LLC
North Carolina Annual Fuel and Fuel Related Expense
2.5% Calculation Test - Normalized
Billing Period December 2018 - November 2019

Ward Workpaper 14a
Docket No. E-2, Sub 1173

Line No.	Description	EMF		Total \$
		Forecast \$	(Over)/Under Collection \$	
1	Amount in current docket	\$ 309,190,377	\$ 78,097,747	\$ 387,288,125
2	Amount in 2017 Filing: Docket E-2 Sub 1146 ⁽¹⁾	\$ 189,827,914	\$ 63,374,757	\$ 253,202,671
3	Increase/(Decrease)	\$ 119,362,463	\$ 14,722,990	\$ 134,085,454
4	2.5% of 2017 NC revenue of <u>\$3,174,203,935</u>			\$ 79,355,098
5	Amount over 2.5%			\$ 54,730,355

⁽¹⁾ Updated for Ward Supplemental filing from E-2, Sub 1146

	System Cost	Alloc %	NC Alloc. Forecast
WP 4 Purchases	\$ 71,395,237	60.20%	\$ 42,980,069
WP 4 Purchases for REPS Compliance	187,595,597	60.20%	112,932,908
WP 4 Purchases for REPS Compliance Capacity	38,515,117	60.52%	23,309,349
WP 4 Purchases from Qualifying Facilities Energy	162,649,793	60.20%	97,915,486
WP 4 Purchases from Qualifying Facilities Capacity	33,362,793	60.52%	20,191,162
WP 4 Allocated Economic Purchases	19,703,265	60.20%	11,861,403
Total	\$ 513,221,803		\$ 309,190,377

Revision of prior year amount based on Supplemental filing

	System Cost	Alloc %	NC Alloc. Forecast
Purchases	\$ 41,519,620	60.64%	\$ 25,177,498
Purchases for REPS Compliance	154,215,192	60.64%	93,516,092
Purchases for REPS Compliance Capacity	31,684,006	59.73%	18,924,857
Purchases from Qualifying Facilities Energy	55,113,822	60.64%	33,421,022
Purchases from Qualifying Facilities Capacity	11,792,060	59.73%	7,043,397
Allocated Economic Purchases	19,368,483	60.64%	11,745,048
Total	\$ 313,693,183		\$ 189,827,914

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Duke Energy Progress, 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, environmental permit and emissions considerations, projected renewable capacity, and wholesale energy imports and exports.
- Station and system inventory targets are developed to provide reliability, insulation from short-term market volatility, and sensitivity 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 additional needs.
- All qualified suppliers are invited to participate in proposals to satisfy additional or contract needs.
- Spot market solicitations are conducted on an on-going basis to supplement contract purchases.
- Contracts are awarded based on the lowest evaluated offer, 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 capacity, and fleet maintenance and availability schedules.
- Physical procurement targets are developed to procure a cost effective and reliable natural gas supply.
- Over time, short-term and long-term Requests for Proposals and market solicitations are conducted with potential suppliers 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 ascertain additional 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 36-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 PROGRESS
Summary of Coal Purchases
Twelve Months Ended March 2018 & 2017
Tons

<u>Line No.</u>	<u>Month</u>	<u>Contract (Tons)</u>	<u>Net Spot Purchase and Sales (Tons)</u>	<u>Total (Tons)</u>
1	April 2017	223,875	0	223,875
2	May	224,952	0	224,952
3	June	238,854	12,264	251,118
4	July	320,213	0	320,213
5	August	430,436	0	430,436
6	September	346,651	0	346,651
7	October	325,000	0	325,000
8	November	324,889	0	324,889
9	December	229,150	0	229,150
10	January 2018	212,233	0	212,233
11	February	235,368	0	235,368
12	March	260,527	326	260,853
13	Total (Sum L1:L12)	3,372,148	12,590	3,384,738

<u>Line No.</u>	<u>Month</u>	<u>Contract (Tons)</u>	<u>Net Spot Purchase and Sales (Tons)</u>	<u>Total (Tons)</u>
14	April 2016	243,140	0	243,140
15	May	240,749	0	240,749
16	June	251,139	0	251,139
17	July	367,433	0	367,433
18	August	496,536	0	496,536
19	September	505,889	0	505,889
20	October	392,494	41	392,535
21	November	525,819	0	525,819
22	December	494,298	12,899	507,197
23	January 2017	319,044	72,713	391,757
24	February	284,208	29,067	313,275
25	March	191,908	13,396	205,304
26	Total (Sum L14:L25)	4,312,657	128,116	4,440,773

DUKE ENERGY PROGRESS
Summary of Gas Purchases
Twelve Months Ended March 2018 & 2017
MBTUs

<u>Line</u>		
<u>No.</u>	<u>Month</u>	<u>MBTUs</u>
1	April 2017	11,260,572
2	May	11,466,510
3	June	13,517,327
4	July	15,763,956
5	August	15,138,794
6	September	13,928,655
7	October	12,729,705
8	November	14,540,861
9	December	16,817,106
10	January 2018	14,446,004
11	February	13,775,980
12	March	15,986,353
13	Total (Sum L1:L12)	<u>169,371,823.0</u>

<u>Line</u>		
<u>No.</u>	<u>Month</u>	<u>MBTUs</u>
14	April 2016	14,115,727
15	May	14,616,922
16	June	14,111,918
17	July	16,564,902
18	August	17,177,486
19	September	12,559,298
20	October	9,919,151
21	November	14,384,387
22	December	13,607,974
23	January 2017	13,786,819
24	February	14,028,144
25	March	14,884,889
26	Total (Sum L14:L25)	<u>169,757,617</u>

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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1173

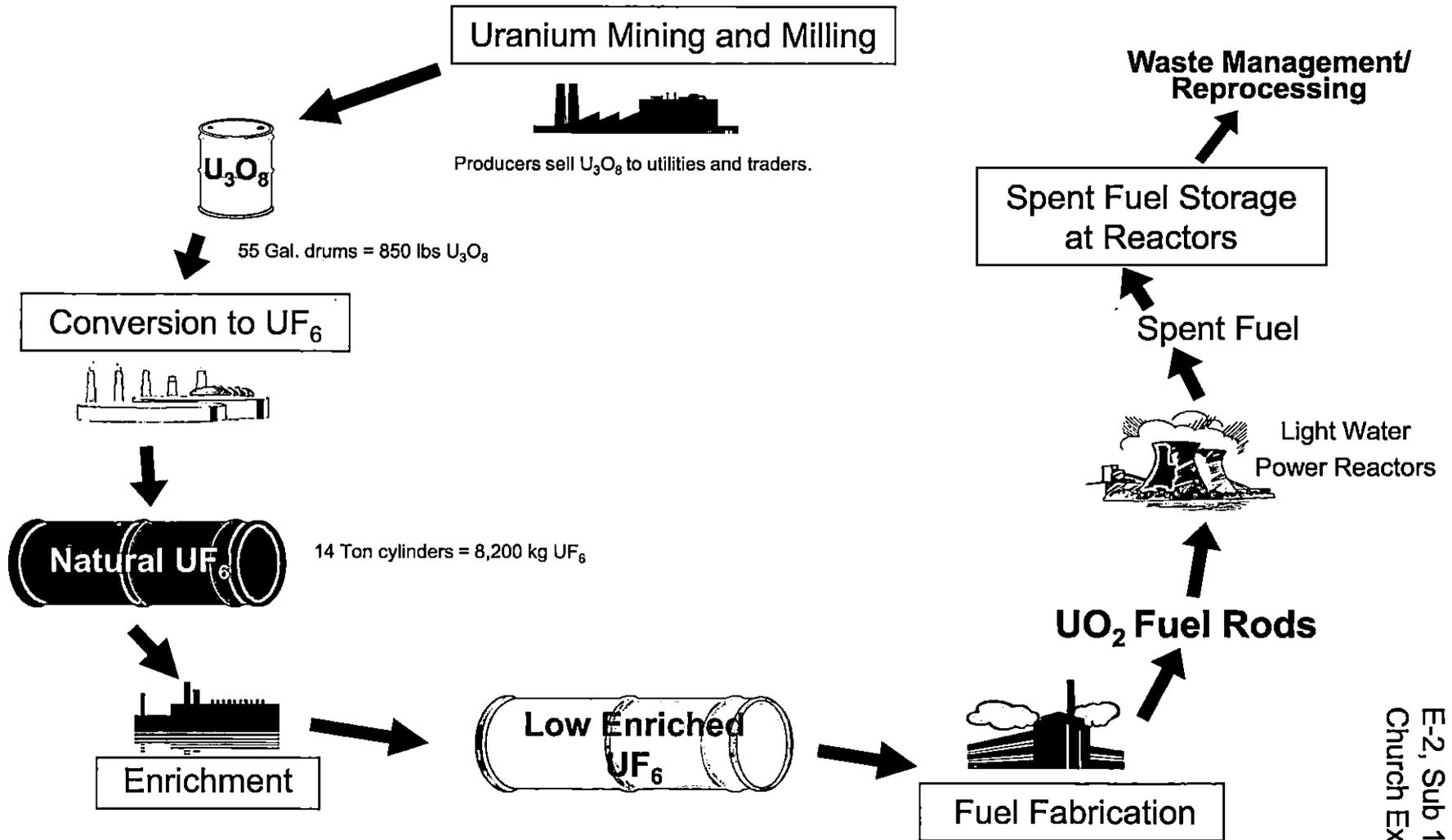
In the Matter of)
Application of Duke Energy Progress, LLC)
Pursuant to G.S. 62-133.2 and NCUC Rule)
R8-55 Relating to Fuel and Fuel-Related)
Charge Adjustments for Electric Utilities)

ERIC S. GRANT CONFIDENTIAL EXHIBIT 3

FILED UNDER SEAL

JUNE 20, 2018

The Nuclear Fuel Cycle



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Duke Energy Progress, 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.