

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

DOCKET NO. E-2, SUB 1146

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

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

HEARD: Tuesday, September 19, 2017, at 9:30 a.m. in the Commission Hearing Room, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

BEFORE: Chairman Edward S. Finley, Jr., Presiding, Commissioner Bryan E. Beatty, Commissioner ToNola D. Brown-Bland, Commissioner Jerry C. Dockham, Commissioner James G. Patterson, Commissioner Lyons Gray and Commissioner Daniel G. Clodfelter

APPEARANCES:

For Duke Energy Progress, LLC:

Dwight Allen, Allen Law Offices, PLLC, 1514 Glenwood Ave., Suite 200, Raleigh, North Carolina 27608

Robert W. Kaylor, Law Office of Robert W. Kaylor, P.A., 353 Six Forks Road, Suite 260, Raleigh, North Carolina 27609

For Carolina Utility Customer Association, Inc.

Robert F. Page, Esq., Crisp & Page, PLLC, 4010 Barrett Drive, Suite 205, Raleigh, North Carolina 27609

For North Carolina Sustainable Energy Association:

Peter H. Ledford, Esq., 4800 Six Forks Road, Suite 300, Raleigh, North Carolina 27609

For Carolinas Industrial Group for Fair Utility Rates II:

Adam Olls, Esq., Warren K. Hicks, Esq., Bailey & Dixon, L.L.P., Post Office  
Box 1351, Raleigh, North Carolina 27602

For the Using and Consuming Public:

Robert S. Gillam, Staff Attorney, Robert B. Josey, Jr., Staff Attorney, Public  
Staff, North Carolina Utilities Commission, 4326 Mail Service Center,  
Raleigh, North Carolina 27699-4300

BY THE COMMISSION: On June 21, 2017, Duke Energy Progress, LLC (Duke Energy Progress, DEP, or the Company), filed an application pursuant to G.S. 62-133.2 and Commission Rule R8-55 regarding fuel and fuel-related cost adjustments for electric utilities, along with the testimony and exhibits of Kendra A. Ward, Brett Phipps, Joseph A. Miller, Jr., T. Preston Gillespie, Jr., and Kenneth D. Church.

Petitions to intervene were filed by the North Carolina Sustainable Energy Association (NCSEA) on July 6, 2017, by Carolina Industrial Group for Fair Utility Rates II (CIGFUR) on June 30, 2017, and by Carolina Utility Customers Association, Inc. (CUCA) on July 11, 2017. The Commission granted CIGFUR's petition to intervene on July 5, 2017, NCSEA's petition to intervene on July 10, 2017, and CUCA's petition to intervene on July 13, 2017.

On July 6, 2017, the Commission entered an Order Scheduling Hearing, Requiring Filing of Testimony, Establishing Discovery Guidelines, and Requiring Public Notice. That Order provided that, among other things, direct testimony of intervenors should be filed on September 5, 2017, that rebuttal testimony should be filed on September 13, 2017, and that a hearing on this matter would be held on September 19, 2017.

The intervention of the Public Staff is recognized pursuant to G.S. 62-15(d) and Commission Rule R1-19(e).

On September 15, 2017, DEP filed affidavits of publication indicating that public notice had been provided in accordance with the Commission's procedural Order issued on July 6, 2017.

On September 6, 2017, DEP filed the supplemental testimony and revised exhibits of Kendra A. Ward.

On September 7, 2017, the Public Staff filed the testimony of Darlene P. Peedin and the testimony of Dustin R. Metz.

On September 7, 2017, the Commission issued an Order Requiring Publication of Second Public Notice due to the proposed rate changes reflected in the revised

supplemental exhibits of witness Ward. Affidavits of publication for the second public notice were filed with the Commission on September 18, 2017 and September 21, 2017.

On September 13, 2017, DEP and the Public Staff filed a joint motion requesting that all witnesses be excused from appearance at the evidentiary hearing, representing that all parties to the proceeding had agreed to waive cross-examination of the witnesses. On September 15, 2017, the Commission granted the motion, excusing DEP witnesses Ward, Phipps, Miller, Gillespie, and Church, and Public Staff witnesses Peedin and Metz from appearing at the evidentiary hearing.

The case came on for hearing as scheduled on September 19, 2017. The prefiled direct and supplemental testimony of DEP's witnesses and the prefiled testimony of the Public Staff's witnesses were received into evidence. No other party presented witnesses, and no public witnesses appeared at the hearing.

The Public Staff and DEP filed a joint proposed order on October 24, 2017.

Based upon the Company's verified application, the testimony, affidavits, and exhibits received into evidence at the hearing, and the record as a whole, the Commission makes the following:

#### FINDINGS OF FACT

1. Duke Energy Progress is a duly organized corporation existing under the laws of the State of North Carolina, is engaged in the business of developing, generating, transmitting, distributing, and selling electric power to the public in North Carolina, and is subject to the jurisdiction of the Commission as a public utility. Duke Energy Progress is lawfully before this Commission based upon its application filed pursuant to G.S. 62-133.2.

2. The test period for purposes of this proceeding is the 12 months ended March 31, 2017 (test period).

3. In its application and supplemental testimony in this proceeding, DEP requested a total increase of approximately \$110 million to its North Carolina retail revenue requirement associated with fuel and fuel-related costs, excluding the regulatory fee. The fuel and fuel-related cost factors requested by DEP included Experience Modification Factor (EMF) riders to take into account fuel and fuel-related cost under-recoveries and over-recoveries experienced during the test period, with an overall net under-recovery of \$33 million made up of a \$42 million under-recovery from the Residential, Small General Service, Large General Service, and Lighting customer classes, partially offset by a \$9 million over-recovery from the Medium General Service class.

4. The Company and the Public Staff agreed to remove \$876,686 of replacement power costs incurred by the Company during an August 2016 outage at the

Robinson Nuclear Station consistent with similar treatment in South Carolina. The Company's baseload plants were generally managed prudently and efficiently during the test period so as to minimize fuel and fuel-related costs.

5. The Company's fuel and reagent procurement and power purchasing practices during the test period were reasonable and prudent.

6. The Company's merger-related fuel savings for the test period as reported in Schedule 11 of the Company's Monthly Fuel Report are reasonable.

7. The test period per book system sales are 60,973,121 megawatt-hours (MWh). The test period per book system generation (net of auxiliary use and joint owner generation) and purchased power is 70,235,878 MWh and is categorized as follows:

<u>Net Generation Type</u>	<u>MWh</u>
Coal	11,114,200
Natural Gas, Oil and Biomass	22,074,423
Nuclear	29,033,303
Hydro – Conventional	339,751
Solar	188,088
Purchased Power – subject to economic dispatch or curtailment	3,896,948
Other Purchased Power	<u>3,589,165</u>
Total Net Generation (may not add to sum due to rounding)	70,235,878

8. The appropriate nuclear capacity factor for use in this proceeding is 92.6%.

9. The North Carolina retail test period sales, adjusted for customer growth and weather, for use in calculating the EMF are 37,570,033 MWh. The adjusted North Carolina retail customer class MWh sales are as follows:

<u>N.C. Retail Customer Class</u>	<u>Adjusted MWh Sales</u>
Residential	15,786,375
Small General Service	1,896,757
Medium General Service	11,162,395
Large General Service	8,347,370
Lighting	<u>377,137</u>
Total (may not add to sum due to rounding)	37,570,033

10. The projected billing period (December 2017-November 2018) sales for use in this proceeding are 62,163,816 MWh on a system basis and 37,526,498 MWh on a North Carolina retail basis. The projected billing period North Carolina retail customer class MWh sales are as follows:

<u>N.C. Retail Customer Class</u>	<u>Projected MWh Sales</u>
Residential	15,667,933
Small General Service	1,808,399
Medium General Service	10,417,309
Large General Service	9,237,571
Lighting	<u>395,287</u>
Total (may not add to sum due to rounding)	37,526,498

11. The projected billing period system generation and purchased power for use in this proceeding in accordance with projected billing period system sales is 68,022,851 MWh and is categorized as follows:

<u>Generation Type</u>	<u>MWh</u>
Coal	9,784,920
Gas Combustion Turbine (CT) and Combined Cycle (CC)	20,231,727
Nuclear	28,721,189
Hydro	598,023
Solar	282,714
Purchased Power	<u>8,404,277</u>
Total (may not add to sum due to rounding)	68,022,851

12. The appropriate fuel and fuel-related prices and expenses for use in this proceeding to determine projected system fuel expense are as follows:

- A. The coal fuel price is \$32.32/MWh.
- B. The gas CT and CC fuel price is \$28.71/MWh.
- C. The appropriate expense for ammonia, lime, limestone, urea, dibasic acid, sorbents, and catalysts consumed in reducing or treating emissions (collectively, Reagents) is \$23,900,904.
- D. The total nuclear fuel price (including Joint Owners generation) is \$7.14/MWh.
- E. The total system purchased power cost (including the impact of Joint Dispatch Agreement (JDA) Savings Shared and the impact of House Bill 589, N.C. Sess. L. 2017-192), is \$354,447,029.
- F. System fuel expense recovered through intersystem sales is \$79,089,672.

13. The projected fuel and fuel-related costs for the North Carolina retail jurisdiction for use in this proceeding are \$853,205,811.

14. The Company's appropriate North Carolina retail jurisdictional fuel and fuel-related expense under-collection for purposes of the EMF was \$32,521,056, consisting of under-recoveries of \$21,282,684; \$1,023,834; \$17,750,323 and \$1,807,912, for the Residential, Small General Service, Large General Service, and

Lighting classes, respectively, and an over-recovery of \$9,343,696 for the Medium General Service class. The under-recovered amounts will be deferred until the 2018 fuel proceeding, without any recovery of interest by the Company.

15. The appropriate amount of interest on the Company's fuel and fuel-related cost over-collection for the North Carolina retail jurisdiction is \$1,557,282 for the Medium General Service class.

16. The increase in customer class fuel and fuel-related cost factors from the amounts approved in Docket No. E-2, Sub 1107 should be allocated among the rate classes on a uniform percentage basis, using the uniform bill adjustment methodology that was approved by the Commission in that docket.

17. The appropriate prospective fuel and fuel-related cost factors for this proceeding for each of DEP's rate classes, excluding the regulatory fee, are as follows: 2.179¢/kilowatt-hour (kWh) for the Residential class; 2.121¢/kWh for the Small General Service class; 2.356¢/kWh for the Medium General Service class; 2.417¢/kWh for the Large General Service class; and 1.657¢/kWh for the Lighting class.

18. The appropriate EMFs established in this proceeding, excluding the regulatory fee and deferring the under-recoveries until the 2018 fuel proceeding, are as follows: 0.000¢/kWh for the Residential class; 0.000¢/kWh for the Small General Service class; (0.084)¢/kWh for the Medium General Service class; 0.000¢/kWh for the Large General Service class; and 0.000¢/kWh for the Lighting class.

19. The appropriate EMF interest decrements established in this proceeding, excluding GRT and the regulatory fee and deferring the under-recoveries until 2018's fuel proceeding, are as follows: 0.000¢/kWh for the Residential class; 0.000¢/kWh for the Small General Service class; (0.014)¢/kWh for the Medium General Service class; 0.000¢/kWh for the Large General Service class; and 0.000¢/kWh for the Lighting class.

20. The total net fuel and fuel-related cost factors for this proceeding for each of DEP's rate classes, excluding the regulatory fee, are as follows: 2.179¢/kWh for the Residential class; 2.121¢/kWh for the Small General Service class; 2.258¢/kWh for the Medium General Service class; 2.417¢/kWh for the Large General Service class; and 1.657¢/kWh for the Lighting class.

#### EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 1

This finding of fact is essentially informational, procedural, and jurisdictional in nature and is uncontroverted.

#### EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 2

G.S. 62-133.2(c) sets out the verified, annualized information that each electric utility is required to furnish to the Commission in an annual fuel and

fuel-related cost adjustment proceeding for a historical 12-month test period. Commission Rule R8-55(b) prescribes the 12 months ending March 31 as the test period for DEP. The Company's filing in this proceeding was based on the 12 months ended March 31, 2017.

### EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 3

The evidence for this finding of fact is contained in the application, the direct and supplemental testimony of Company witness Ward, and the entire record in this proceeding. This finding is not contested by any party.

### EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 4

The evidence for this finding of fact is contained in the testimony of Company witnesses Gillespie and Miller and the testimony of Public Staff witnesses Peedin and Metz.

Commission Rule R8-55(d)(1) provides that capacity factors for nuclear production facilities will be normalized based generally on the national average for nuclear production facilities as reflected in the most recent North American Electric Reliability Corporation (NERC) Generating Availability Report, adjusted to reflect the unique, inherent characteristics of the utility facilities and any unusual events. Company witness Gillespie testified that DEP's nuclear fleet consists of three generating stations and a total of four units. He testified that the Company's four nuclear units operated at a system average capacity factor of 93.65% during the test period. This capacity factor, as well as the Company's 2-year average capacity factor of 92.34%, exceeded the five-year industry weighted average capacity factor of 88.9% for the period 2011-2015 for average comparable units on a capacity-rated basis, as reported by NERC in its latest Generating Availability Report.

Company witness Miller testified concerning the performance of DEP's fossil/hydro assets. He stated that the Company's generating units operated efficiently and reliably during the test period. He explained that several key measures are used to evaluate operational performance, depending on the generator type: (1) equivalent availability factor (EAF), which refers to the percent of a given time period a facility was available to operate at full power, if needed (EAF is not affected by the manner in which the unit is dispatched or by the system demands; it is impacted, however, by planned and unplanned (*i.e.*, forced) outage time); (2) net capacity factor (NCF), which measures the generation that a facility actually produces against the amount of generation that theoretically could be produced in a given time period, based upon its maximum dependable capacity (NCF is affected by the dispatch of the unit to serve customer needs); (3) equivalent forced outage rate (EFOR), which represents the percentage of unit failure (unplanned outage hours and equivalent unplanned derated<sup>1</sup> hours); a low EFOR represents fewer unplanned outage and derated hours, which equates to a higher

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<sup>1</sup> Derated hours are hours the unit operation was less than full capacity.

reliability measure; and (4) starting reliability (SR), which represents the percentage of successful starts.

Witness Miller presented the following chart, which shows operational results, categorized by generator type, as well as results from the most recently published NERC Generating Availability Brochure for the period 2011 through 2015:

<i>Generator Type</i>	Measure	Review Period	2011-2015	Nbr of Units
		DEP Operational Results	NERC Average	
<i>Coal-Fired Test Period</i>	EAFF	91.1%	82.5%	446
	NCF	35.8%	60.5%	
	EFOR	3.8%	7.4%	
<i>Coal-Fired Summer Peak</i>	EAFF	93.4%	n/a	n/a
<i>Total CC Average</i>	EAFF	86.5%	84.6%	309
	NCF	77.0%	51.6%	
	EFOR	1.56%	5.8%	
<i>Total CT Average</i>	EAFF	89.6%	87.0%	876
	SR	98.2%	97.8%	
<i>Hydro</i>	EAFF	92.5%	81.9%	1,141

Company witness Miller also testified that the Company, like other utilities across the United States, has experienced a change in the dispatch order for each type of generating facility due to continued favorable economics resulting from the lower pricing of natural gas. Gas-fired facilities provided 65% of the DEP fossil/hydro generation during the test period.

Public Staff witness Peedin testified that, in DEP’s cost review proceeding in South Carolina, the Office of Regulatory Staff (ORS) proposed the adjustment to remove the South Carolina share of certain replacement costs incurred by the Company during an August 2016 unscheduled outage at the Robinson Nuclear Plant. DEP stipulated to the adjustment in South Carolina. Witness Peedin noted that North Carolina’s share is \$876,686, and DEP has agreed that it will not object to the disallowance of this amount for purposes of this proceeding.

Based upon the evidence in the record, the Commission concludes that the disallowance proposed by witness Peedin, and as agreed to by DEP, is appropriate. The Commission further concludes that DEP generally managed its baseload plants prudently and efficiently so as to minimize fuel and fuel-related costs.

## EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 5

Commission Rule R8-52(b) requires each electric utility to file a Fuel Procurement Practices Report at least once every 10 years and each time the utility's fuel procurement practices change. The Company's revised fuel procurement practices were filed with the Commission in Docket No. E-100, Sub 47A in 2008, and were in effect throughout the 12 months ending March 31, 2017. In addition, the Company files monthly reports of its fuel and fuel-related costs pursuant to Commission Rule R8-52(a). Further evidence for this finding of fact is contained in the testimony of Company witnesses Ward, Phipps, Miller, and Church.

Company witness Ward testified that DEP's fuel procurement strategies that mitigate volatility in supply costs are a key factor in DEP's ability to maintain lower fuel and fuel-related rates. Other key factors include DEP's diverse generating portfolio mix of nuclear, coal, natural gas, and hydro; lower natural gas and coal prices; the capacity factors of its nuclear fleet; the combination of DEP's and DEC's respective skills in procuring, transporting, managing and blending fuels and procuring reagents; the increased and broader purchasing ability of the combined companies; and the joint dispatch of DEP's and DEC's generation resources.

Company witness Phipps described DEP's fossil fuel procurement practices, set forth in Phipps Exhibit 1. Those practices include computing near and long-term consumption forecasts, determining and designing inventory targets, inviting proposals from all qualified suppliers, awarding contracts based on the lowest evaluated offer, monitoring delivered coal volume and quality against contract commitments, and conducting short-term and spot purchases to supplement term supply.

According to witness Phipps, the Company's average delivered coal cost per ton decreased approximately 1%, from \$80.74 per ton in the prior test period to \$80.26 per ton in the test period. The Company's transportation costs increased approximately 17%, from \$24.02 per ton in the prior test period to \$28.03 per ton in the test period.

Witness Phipps stated that DEP's current coal burn projection for the billing period is 3.7 million tons compared to 4.7 million tons consumed during the test period. DEP's billing period projections for coal generation may be impacted due to changes from, but not limited to, the following factors: delivered natural gas prices versus the average delivered cost of coal, volatile power prices, and electric demand. Combining coal and transportation costs, DEP projects average delivered coal costs of approximately \$78.96 per ton for the billing period compared to \$80.26 per ton in the test period.

According to witness Phipps, DEP continues to maintain a comprehensive coal and natural gas procurement strategy that has proven successful over the years in limiting average annual fuel price changes while actively managing the dynamic demands of its fossil fuel generation fleet in a reliable and cost-effective manner.

Witness Phipps further testified that DEP's current natural gas burn projection for the billing period is approximately 147 MMBtu, which is a decrease from the 170 MMBtu consumed during the test period. The current average forward Henry Hub price for the billing period is \$3.01 per MMBtu, compared to \$2.77 per MMBtu in the test period. Witness Phipps also testified that the Company's average price of gas purchased for the test period was \$4.00 per MMBtu, compared to \$4.10 per MMBtu in the prior test period, representing a decrease of 2%.

G.S. 62-133.2(a1)(3) permits DEP to recover the cost of "ammonia, lime, limestone, urea, dibasic acid, sorbents, and catalysts consumed in reducing or treating emissions." Company witness Miller testified that the Company's fossil/hydro generation portfolio consists of 9,288 MW of generating capacity, 3,544 MW of which is coal-fired generation across three generating stations and a total of seven units. These units are equipped with emission control equipment, including selective catalytic reduction (SCR) equipment for removing nitrogen oxides (NO<sub>x</sub>), flue gas desulfurization (FGD or scrubber) equipment for removing sulfur dioxide (SO<sub>2</sub>), and low NO<sub>x</sub> burners. This inventory of coal-fired assets with emission control equipment enhances DEP's ability to maintain current environmental compliance and concurrently utilize coal with increased sulfur content, thereby providing flexibility for DEP to procure the most cost-effective options for fuel supply.

Company witness Miller further testified that overall, the type and quantity of chemicals used to reduce emissions at the plants varies depending on the generation output of the unit, the chemical constituents in the fuel burned, and/or the level of emissions reduction required.

Company witness Church testified that DEP's nuclear fuel procurement practices involve computing near and long-term consumption forecasts, establishing nuclear system inventory levels, projecting required annual fuel purchases, requesting proposals from qualified suppliers, negotiating a portfolio of long-term contracts from diverse sources of supply, and monitoring deliveries against contract commitments. Witness Church explained that for uranium concentrates, conversion and enrichment services, long-term contracts are used extensively in the industry to cover forward requirements and ensure security of supply. He also stated that, throughout the industry, the initial delivery under new long-term contracts commonly occurs several years after contract execution. For this reason, DEP relies extensively on long-term contracts to cover the largest portion of its forward requirements. By staggering long-term contracts over time for these components of the nuclear fuel cycle, DEP'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. He further stated that diversifying fuel suppliers reduces DEP's exposure to possible disruptions from any single source of supply. Due to the technical complexities of changing fabrication services suppliers, DEP generally sources these services to a single domestic supplier on a plant-by-plant basis using multi-year contracts.

G.S. 62-133.2(a1)(4), (5), (6), and (7) permit the recovery of the cost of non-capacity power purchases subject to economic dispatch or economic curtailment; capacity costs of power purchases associated with qualifying facilities subject to economic dispatch; certain costs associated with power purchases from renewable energy facilities; and the fuel costs of other power purchases. Company witness Phipps testified that DEP and DEC utilize the same process to ensure that the assets of the Companies are reliably and economically available to serve their respective customers. To that end, both companies consider numerous factors such as the latest forecasted fuel prices, transportation rates, planned maintenance and refueling outages at the generating units, estimated forced outages at generating units based on historical trends, generating unit performance parameters, and expected market conditions associated with power purchases and off-system sales opportunities in order to determine the most economic and reliable means of serving their customers.

No party presented or elicited testimony contesting the Company's fuel and reagent procurement and power purchasing practices. Based upon the fuel procurement practices report, the evidence in the record, and the absence of any direct testimony to the contrary, the Commission concludes that these practices were reasonable and prudent during the test period.

#### EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 6

The evidence supporting this finding of fact is contained in the testimony of Company witness Phipps.

According to witness Phipps, during September 2016, the Utilities met the guaranteed merger savings target of \$721.8 million established pursuant to both the merger agreement between Duke Energy and Progress Energy, Inc., and the merger agreement between Duke Energy and Piedmont Natural Gas Company, Inc. The combined merger savings through September 2016 totaled \$723 million, of which DEP's North Carolina share was \$183 million.

Based on the evidence presented by DEP, and noting the absence of evidence presented to the contrary by any other party, the Commission finds and concludes that the Company's merger-related fuel savings for the test period are reasonable.

#### EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 7

The evidence supporting this finding of fact is contained in the testimony and exhibits of Company witness Ward.

According to the exhibits sponsored by Company witness Ward, the test period per book system sales were 60,973,121 MWh, and test period per book system generation and purchased power amounted to 70,235,878 MWh (net of auxiliary use and joint owner generation). The test period per book system generation and purchased power are categorized as follows (Ward Exhibit 6):

<u>Net Generation Type</u>	<u>MWh</u>
Coal	11,114,200
Natural Gas, Oil and Biomass	22,074,423
Nuclear	29,033,303
Hydro – Conventional	339,751
Solar	188,088
Purchased Power – subject to economic dispatch or curtailment	3,896,948
Other Purchased Power	<u>3,589,165</u>
Total Net Generation (may not add to sum due to rounding)	70,235,878

The evidence presented regarding the operation and performance of the Company's generation facilities is discussed in the Evidence and Conclusions for Finding of Fact No. 4.

No party took issue with the portions of witness Ward's exhibits setting forth per books system sales, generation by fuel type, and purchased power. Therefore, based on the evidence presented and noting the absence of evidence presented to the contrary, the Commission concludes that the per books levels of test period system sales of 60,973,121 MWh and system generation and purchased power of 70,235,878 MWh are reasonable and appropriate for use in this proceeding.

#### EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 8

The evidence supporting this finding of fact is contained in the testimony and exhibits of Company witness Gillespie and the testimony of Public Staff witness Metz.

Commission Rule R8-55(d)(1) provides that capacity factors for nuclear production facilities will be normalized based generally on the national average for nuclear production facilities as reflected in the most recent NERC Generating Availability Report, adjusted to reflect the unique, inherent characteristics of the utility's facilities and any unusual events. The Company proposed using a 92.6% capacity factor in this proceeding based on the operational history of the Company's nuclear units, and the number of planned outage days scheduled during the 2017-2018 billing period. This proposed capacity factor exceeds the five-year industry weighted average capacity factor of 88.9% for the period 2011-2015 for average comparable units on a capacity-rated basis, as reported by NERC in its latest Generating Availability Report. Public Staff witness Metz did not dispute the Company's proposed use of a 92.6% capacity factor.

Based upon the requirements of Commission Rule R8-55(d)(1), the historical and reasonably expected performance of the DEP system, and the fact that the Public Staff did not dispute the Company's proposed capacity factor, the Commission concludes that the 92.6% nuclear capacity factor, and its associated generation of 28,721,189 MWh, are

reasonable and appropriate for determining the appropriate fuel and fuel-related costs in this proceeding.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 9-11

The evidence supporting these findings of fact is contained in the testimony and exhibits of Company witness Ward.

On her Exhibit 4, Company witness Ward set forth the test year per books North Carolina retail sales, adjusted for weather and customer growth, of 37,570,033 MWh, comprised of Residential class sales of 15,786,375 MWh, Small General Service sales of 1,896,757 MWh, Medium General Service sales of 11,162,395 MWh, Large General Service sales 8,347,370 MWh, and Lighting class sales of 377,137 MWh.

Witness Ward used projected billing period system sales, generation, and purchased power to calculate the proposed prospective component of the fuel and fuel-related cost rate. The projected system sales level used, as set forth on Ward Exhibit 2, Schedule 1, is 62,163,816 MWh. The projected level of generation and purchased power used was 68,022,851 MWh (calculated using the 92.6% capacity factor found reasonable and appropriate above), and was broken down by witness Ward as follows, as set forth on that same schedule:

<u>Generation Type</u>	<u>MWh</u>
Coal	9,784,920
Gas Combustion Turbine and Combined Cycle	20,231,727
Nuclear	28,721,189
Hydro	598,023
Solar	282,714
Purchased Power	<u>8,404,277</u>
Total (may not add to sum due to rounding)	68,022,851

As part of her Workpaper 7, Company witness Ward also presented an estimate of the projected billing period North Carolina retail Residential, Small General Service, Medium General Service, Large General Service, and Lighting MWh sales. The Company estimates billing period North Carolina retail MWh sales to be as follows:

<u>N.C. Retail Customer Class</u>	<u>Projected MWh Sales</u>
Residential	15,667,933
Small General Service	1,808,399
Medium General Service	10,417,309
Large General Service	9,237,571
Lighting	<u>395,287</u>
Total (may not add to sum due to rounding)	37,526,498

These class totals were used in Revised Ward Exhibit 2, Schedule 1, in calculating the total fuel and fuel-related cost factors by customer class.

Based on the evidence presented by the Company, the Public Staff's acceptance of the amounts presented by the Company, and the absence of evidence presented to the contrary, the Commission concludes that the projected North Carolina retail levels of sales set forth in the Company's exhibits (normalized for customer growth and weather), as well as the projected levels of generation and purchased power, are reasonable and appropriate for use in this proceeding.

#### EVIDENCE AND CONCLUSION FOR FINDING OF FACT NO. 12

The evidence supporting this finding of fact is contained in the testimony and exhibits of Company witnesses Ward and Phipps and the testimony of Public Staff witness Metz.

In her Revised Exhibit 2, Schedule 1, Company witness Ward recommended the fuel and fuel-related prices and expenses. The total adjusted system fuel and fuel-related expense, based in part on the use of these amounts, is utilized to calculate the prospective fuel and fuel-related cost factors recommended by the Company and the Public Staff.

In his affidavit, Public Staff witness Metz stated that, based on his investigation, the projected fuel and fuel-related costs (including reagents) set forth in DEP's application and testimony, in combination with the testimony of Public Staff witness Peedin, are reasonable and in accordance with the requirements of G.S. 62-133.2.

No other party presented evidence on the level of DEP's fuel and fuel-related prices and expenses.

Based upon the evidence in the record as to the appropriate fuel and fuel-related prices and expenses, the Commission concludes that the fuel and fuel-related prices recommended by Company witness Ward and accepted by the Public Staff for purposes of determining projected system fuel expense are reasonable and appropriate for use in this proceeding.

#### EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 13

The evidence supporting this finding of fact is contained in the testimony and exhibits of Company witness Ward and the testimony of Public Staff witness Metz.

According to Revised Ward Exhibit 2, Schedule 1, the projected fuel and fuel-related costs for the North Carolina retail jurisdiction for use in this proceeding are \$853,205,811. Public Staff witness Metz did not take issue with her calculation.

Aside from the Company and the Public Staff, no other party presented or elicited testimony contesting the Company's projected fuel and fuel-related costs for the North Carolina retail jurisdiction. Based upon the evidence in the record and the absence of any direct testimony to the contrary, the Commission concludes that the Company's projected total fuel and fuel-related cost for the North Carolina retail jurisdiction of \$853,205,811 is reasonable.

#### EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NOS. 14-20

The evidence supporting these findings of fact is contained in the testimony and exhibits of Company witness Ward, the testimony of Public Staff witnesses Peedin and Metz.

Company witness Ward presented DEP's original fuel and fuel-related expense over(under) collection and prospective fuel and fuel-related cost factors. Company witness Ward's supplemental testimony sets forth the projected fuel and fuel-related costs, the amount of over/(under) collection for purposes of the EMF, the method for allocating the decrease in fuel and fuel-related costs, the composite fuel and fuel-related cost factors, EMFs and the EMF interest along with revised exhibits and work papers. Public Staff witness Peedin testified that the Public Staff proposed to disallow the North Carolina retail amount of \$876,686 in replacement power costs associated with an outage in August 2016 at the Robinson Nuclear Plant. Of the total \$876,686 adjustment, \$257,907 is allocable to the medium general service class and will be added to the over-recovery to be refunded to this class. Company witness Ward testified that the Company accepted the \$876,686 adjustment. The remaining \$618,779 will be offset against the under-recovery that must be collected from the other four customer classes. Public Staff witness Peedin testified that DEP's EMF increment/(decrement) riders for each customer class should be approved based on the following over/(under)-recoveries:

	<u>Test Period</u>	
<u>N.C. Retail Customer Class</u> <u>Customer Class</u>	<u>Over/(Under)-</u> <u>Recovery</u>	<u>Interest</u>
Residential	\$(21,282,684)	\$ 0
Small General Service	(1,023,834)	0
Medium General Service	9,343,696	1,557,282
Large General Service	(17,750,323)	0
Lighting	<u>(1,807,912)</u>	<u>0</u>
Total	\$(32,521,056)	\$1,557,282
(may not add to sum due to rounding)		

The Company proposed, and Public Staff witness Peedin did not oppose, deferring the under-recovery of \$41,864,753 for one year without interest. As a result of these amounts, Public Staff witnesses Peedin and Metz recommended approval of the following EMF increment/(decrement) billing factors, excluding the regulatory fee:

<u>N.C. Retail Customer Class</u>	<u>EMF Increment/ (Decrement) (cents/kWh)</u>	<u>EMF Interest Increment/ (Decrement) (cents/kWh)</u>
Residential	0.000	0.000
Small General Service	0.000	0.000
Medium General Service	(0.084)	(0.014)
Large General Service	0.000	0.000
Lighting	0.000	0.000

The Commission concludes that the EMF increment/(decrement) billing factors set forth in the testimony and exhibit of Public Staff witness Peedin and the testimony of Public Staff witness Metz are reasonable and appropriate for use in this proceeding.

Company witness Ward calculated the Company's proposed fuel and fuel-related cost factors using a uniform bill adjustment method. She stated that the increase in fuel costs from the amounts approved in Docket No. E-2, Sub 1107 should be allocated among the rate classes on a uniform percentage basis, using the uniform bill adjustment methodology utilized in past DEP fuel cases approved by this Commission. No party opposed the use of this allocation method. Public Staff witness Metz recommended the approval of the prospective and total fuel and fuel-related cost factors (excluding regulatory fee) set forth in the testimony of Public Staff witness Peedin.

Based upon the testimony and exhibits in the record, the Commission concludes that DEP's projected fuel and fuel-related cost of \$853,205,811 for the North Carolina retail jurisdiction for use in this proceeding is reasonable. The Commission also concludes that the EMF increment/(decrement) riders and the EMF interest decrement rider for each class set forth in the testimony and exhibit of Public Staff witness Peedin and the testimony of Public Staff witness Metz in this proceeding, excluding the regulatory fee, and the Public Staff's prospective fuel and fuel-related cost factors proposed in this proceeding for each of the rate classes, are appropriate. Additionally, the Commission concludes that DEP's increase in fuel and fuel-related costs from the amounts approved in Docket No. E-2, Sub 1107 should be allocated among the rate classes on a uniform percentage basis, using the uniform bill adjustment methodology approved by this Commission in DEP's past fuel cases.

The test period and projected fuel and fuel-related costs, and the proposed factors, including the EMF and related EMF interest, are not opposed by any party. Accordingly, the overall fuel and fuel-related cost calculation, incorporating the conclusions reached herein, results in net fuel and fuel-related cost factors of 2.179¢/kWh for the Residential class, 2.121¢/kWh for the Small General Service class, 2.258¢/kWh for the Medium General Service class, 2.417¢/kWh for the Large General Service class, and 1.657¢/kWh for the Lighting class, excluding regulatory fee, consisting of the prospective fuel and fuel-related cost factors of 2.179¢/kWh, 2.121¢/kWh, 2.356¢/kWh, 2.417¢/kWh, and 1.657¢/kWh, EMF increments/(decrements) of 0.000¢, 0.000¢, (0.0841)¢, 0.000¢, and 0.000¢/kWh, and EMF interest decrements of 0.000¢/kWh, 0.000¢/kWh, (0.014)¢/kWh, 0.000¢/kWh and 0.000¢/kWh for the Residential, Small General Service, Medium General

Service, Large General Service, and Lighting classes, respectively, all excluding the regulatory fee. The billing factors, both excluding and including the regulatory fee, are shown in Appendix A to this Order.

IT IS, THEREFORE, ORDERED:

1. That, effective for service rendered on and after December 1, 2017, DEP shall adjust the restated base fuel and fuel-related cost factors in its North Carolina retail rates, as approved in Docket No. E-2, Sub 1045, amounting to 3.013¢/kWh for the Residential class, 3.001¢/kWh for the Small General Service class, 2.921¢/kWh for the Medium General Service class, 2.958¢/kWh for the Large General Service class, and 3.655¢/kWh for the Lighting class (all excluding the regulatory fee), by amounts equal to (0.834)¢/kWh, (0.880)¢/kWh, (0.565)¢/kWh, (0.541)¢/kWh and (1.998)¢/kWh, respectively, and further, that DEP shall adjust the resulting approved prospective fuel and fuel-related cost factors by EMF increments/(decrements) of 0.000¢/kWh for the Residential class, 0.000¢/kWh for the Small General Service class, (0.084)¢/kWh for the Medium General Service class, 0.000¢/kWh for the Large General Service class, and 0.000¢/kWh for the Lighting class (excluding the regulatory fee) and EMF interest decrements of 0.000¢/kWh for the Residential class, 0.000¢/kWh for the Small General Service class, (0.014)¢/kWh for the Medium General Service class, and 0.000¢/kWh for the Large General Service class (excluding the regulatory fee). The EMF increments/(decrements) and EMF interest decrements are to remain in effect for service rendered through November 30, 2018;

2. That DEP shall file appropriate rate schedules and riders with the Commission consistent with the rate adjustments ordered by the Commission in Docket No. E-2, Subs 1143, 1144, and 1146 as soon as practicable; and

3. That DEP shall work with the Public Staff to jointly prepare a proposed notice to customers of the rate adjustments ordered by the Commission in Docket No. E-2, Subs 1143, 1144, and 1146 and the Company shall file the proposed notice to customers for approval as soon as practicable.

ISSUED BY ORDER OF THE COMMISSION.

This the 17th day of November, 2017.

NORTH CAROLINA UTILITIES COMMISSION



Linnetta Threatt, Acting Deputy Clerk

## Appendix A

### EXCLUDING REGULATORY FEE

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b>Class</b>	<b>Base Fuel Rate</b>	<b>Decrement to Base Fuel Rate</b>	<b>Prospective Rate (Columns A + B)</b>	<b>EMF Increment/ (Decrement)</b>	<b>EMF Interest (Decrement)</b>	<b>Billed Rate (Cols. C + D + E)</b>
Residential	3.013	(0.834)	2.179	-	-	2.179
Small General Service	3.001	(0.880)	2.121	-	-	2.121
Medium General Service	2.921	(0.565)	2.356	(0.084)	(0.014)	2.258
Large General Service	2.958	(0.541)	2.417	-	-	2.417
Lighting	3.655	(1.998)	1.657	-	-	1.657

### INCLUDING REGULATORY FEE

	<b>A</b>	<b>B</b>	<b>C</b>	<b>D</b>	<b>E</b>	<b>F</b>
<b>Class</b>	<b>Base Fuel Rate</b>	<b>Decrement to Base Fuel Rate</b>	<b>Prospective Rate (Columns A + B)</b>	<b>EMF Increment/ (Decrement)</b>	<b>EMF Interest (Decrement)</b>	<b>Billed Rate (Cols. C + D + E)</b>
Residential	3.017	(0.835)	2.182	-	-	2.182
Small General Service	3.005	(0.881)	2.124	-	-	2.124
Medium General Service	2.925	(0.566)	2.359	(0.084)	(0.014)	2.261
Large General Service	2.962	(0.542)	2.420	-	-	2.420
Lighting	3.660	(2.001)	1.659	-	-	1.659