

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

DOCKET NO. E-2, SUB 1250

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

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

HEARD: Tuesday, September 15, 2020 at 10:00 a.m. in the Commission Hearing Room 2115, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina (Public Witness Hearing, Hearing Examiner Heather Fennell, Presiding)

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

APPEARANCES:

For Duke Energy Progress, LLC:

Kendrick Fentress, Associate General Counsel, Duke Energy Corporation,
NCRH 20/Post Office Box 1551, Raleigh, North Carolina 27602-1551

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

For Carolina Utility Customers Association, Inc.:

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

For Carolina Industrial Group for Fair Utility Rates II:

Christina D. Cress, Bailey & Dixon, LLP, Post Office Box 1351, Raleigh,
North Carolina 27602

For North Carolina Sustainable Energy Association:

Ben Smith, Regulatory Counsel, 4800 Six Forks Road, Suite 300, Raleigh,
North Carolina 27609

For the Sierra Club:

Gudren Thompson, Southern Environmental Law Center, 601 West
Rosemary Street, Suite 220, Chapel Hill, North Carolina 27516

For the Using and Consuming Public:

John D. Little, Staff Attorney, Public Staff, North Carolina Utilities
Commission, 4326 Mail Service Center, Raleigh, North Carolina
27699-4300

BY THE COMMISSION: On June 9, 2020, Duke Energy Progress, LLC (Duke Energy Progress, DEP, or the Company), filed an application pursuant to N.C. Gen. Stat. § 62-133.2 and Commission Rule R8-55 regarding fuel and fuel-related cost adjustments for electric utilities, along with the testimony, exhibits, and workpapers of Dana M. Harrington, and the testimony and exhibits of Regis Repko, Kenneth D. Church, Kelvin Henderson and Brett Phipps.

Petitions to intervene were filed by Carolina Utility Customers Association, Inc. (CUCA) on June 17, 2020, by North Carolina Sustainable Energy Association (NCSEA) on June 25, 2020, by Sierra Club on August 5, 2020, and by Carolina Industrial Group for Fair Utility Rates II (CIGFUR) on August 25, 2020. The Commission granted CUCA's petition to intervene on June 18, 2020, NCSEA's petition to intervene on June 26, 2020, Sierra Club's petition to intervene on August 6, 2020, and CIGFUR's petition to intervene on August 25, 2020.

On June 29, 2020, the Commission entered an Order Scheduling Hearing, Requiring Filing of Testimony, Establishing Discovery Guidelines, and Requiring Public Notice. That Order provided that direct testimony of intervenors should be filed on or before August 25, 2020, that rebuttal testimony should be filed on or before September 3, 2020, and that a hearing on this matter would be held on September 15, 2020. On September 14, 2020, DEP filed affidavits of publication indicating that public notice had been provided in accordance with the Commission's procedural order issued on June 29, 2020.

On August 7, 2020, the Commission issued an Order Scheduling Remote Hearings for Expert Witness Testimony due to the COVID-19 pandemic. All parties subsequently filed notices consenting to remote hearings.

On August 21, 2020, DEP filed the supplemental testimony and revised exhibits and workpapers of Dana M. Harrington.

On August 24, 2020, Sierra Club filed a motion for an extension of time to file testimony until August 27, 2020, noting in consequence the request for an extension of time for DEP to file rebuttal testimony until September 10, 2020. The Commission granted both requests on August 25, 2020.

The intervention of the Public Staff is recognized pursuant to N.C.G.S. § 62-15(d) and Commission Rule R1-19(e). On August 25, 2020, the Public Staff filed the testimony and exhibit of Dustin R. Metz and the affidavit of Jenny X. Li, in accordance with N.C.G.S. § 62-68.

On August 27, 2020, Sierra Club filed the testimony and exhibits of John A. Rosenkranz.

On September 10, 2020, DEP filed the rebuttal testimony of Dana M. Harrington and James J. McClay, III.

On September 11, 2020, DEP, the Public Staff, and Sierra Club filed a joint motion requesting that the Commission excuse DEP's witnesses Regis Repko, Kenneth D. Church, Kelvin Henderson, Brett Phipps, Dana M. Harrington, and James J. McClay III, the Public Staff's witness Dustin R. Metz and affiant Jenny X. Li, and Sierra Club's witness John A. Rosenkranz from appearing at the September 15, 2020, evidentiary hearing, and accept the expert witnesses' testimony and exhibits into the record, representing that all parties to the proceeding had agreed to waive cross-examination of DEP's witnesses, the Public Staff's witness and affiant, and Sierra Club's witness. On September 11, 2020, the Commission issued an order that excused all expert witnesses from appearing at the evidentiary hearing, received the witnesses' prefiled testimony, exhibits, and affidavits into the record, and canceled the expert witness hearing. The order also required that the parties file proposed orders, or briefs, on or before October 16, 2020.

The case came on for hearing as scheduled on September 15, 2020, for the purpose of accepting public witness testimony. No public witnesses appeared at the hearing. The Public Staff and DEP filed a joint proposed order on October 16, 2020. On that same date, the Sierra Club filed a post-hearing brief.

Based upon the verified application, testimony, and exhibits of the Company, the testimony, affidavit, and exhibit of the Public Staff, and the testimony and exhibits of Sierra Club that were received into the record, 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 N.C.G.S. § 62-133.2.

2. The test period for purposes of this proceeding is the 12 months ended March 31, 2020 (test period).

3. In its application and testimony in this proceeding, DEP requested a total decrease of \$140.8 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 experienced during the test period of \$64.9 million. This balance is net of an under-recovered balance of \$41.5 million, incurred during the months of April through June of 2019, which was included in the EMF balance within the update period in DEP's 2019 rider proceeding, Docket No. E-2, Sub 1204. This balance also includes the deferred under-recovered balance of \$7.3 million in losses on the sale of by-products, which were approved for cost recovery through the fuel clause in the Commission's Order Allowing Recovery of Liquidated Damages and Transportation Costs dated July 28, 2020, in Docket No. E-2, Sub 1204.

4. In its direct supplemental testimony and supplemental exhibits in this proceeding, DEP updated its requested decrease in the North Carolina retail revenue requirement associated with fuel and fuel-related costs, excluding the regulatory fee, to \$141.2 million, which included an updated under-recovered EMF of \$64.8 million.

5. The Company's baseload plants were managed prudently and efficiently during the test period so as to minimize fuel and fuel-related costs.

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

7. The test period per book system sales are 61,765,556 megawatt-hours (MWh). The test period per book system generation (net of auxiliary use and joint owner generation) and purchased power is 69,839,648 MWh and is categorized as follows:

<u>Net Generation Type</u>	<u>MWh</u>
Nuclear	28,861,332
Natural Gas, Oil, and Biogas	21,827,253
Coal	8,371,720
Hydro – Conventional	662,207
Solar	258,435
Purchased Power – subject to economic dispatch or curtailment	3,413,330
Other Purchased Power	<u>6,445,371</u>
Total Net Generation (may not add to sum due to rounding)	69,839,648

8. The appropriate nuclear capacity factor for use in this proceeding is 94.46%.

9. The North Carolina retail test period sales, adjusted for weather and customer growth, for use in calculating the EMF are 37,852,870 MWh. The normalized test period North Carolina retail customer class MWh sales are as follows:

<u>N.C. Retail Customer Class</u>	<u>Normalized Test Period MWh Sales</u>
Residential	16,191,429
Small General Service	1,777,668
Medium General Service	10,949,334
Large General Service	8,584,996
Lighting	<u>349,444</u>
Total (may not add to sum due to rounding)	37,852,870

10. The projected billing period (December 2020-November 2021) sales for use in this proceeding are 61,484,301 MWh on a system basis and 37,750,364 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 Billing Period MWh Sales</u>
Residential	16,171,290
Small General Service	1,784,993
Medium General Service	10,287,749
Large General Service	9,128,353
Lighting	<u>377,978</u>
Total (may not add to sum due to rounding)	37,750,364

11. The projected billing period system generation and purchased power for use in this proceeding in accordance with projected billing period system sales is 67,439,293 MWh and is categorized as follows:

<u>Generation Type</u>	<u>MWh</u>
Nuclear	29,730,338
Gas Combustion Turbine (CT) and Combined Cycle (CC)	18,943,545
Coal	7,940,674
Hydro	650,353
Solar	256,176
Purchased Power	<u>9,918,206</u>
Total (may not add to sum due to rounding)	67,439,293

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 total nuclear fuel price is \$6.20/MWh.
- B. The gas CT and CC fuel price is \$25.88/MWh.

- C. The coal fuel price is \$30.59/MWh.
- D. The appropriate expense for ammonia, lime, limestone, urea, dibasic acid, sorbents, and catalysts consumed in reducing or treating emissions (collectively, Reagents) is \$20,467,213.
- 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 \$458,166,122.
- F. System fuel expense recovered through intersystem sales is \$82,750,327.

13. The projected fuel and fuel-related costs for the North Carolina retail jurisdiction for use in this proceeding are \$808,620,116.

14. The Company's appropriate North Carolina retail jurisdictional fuel and fuel-related expense under-collection for purposes of the EMF is \$64,754,391, consisting of under-recoveries of \$29,153,931, \$863,226, \$10,505,756, \$22,900,801, and \$1,330,678, for the Residential, Small General Service, Medium General Service, Large General Service, and Lighting classes, respectively. These amounts include the deferred under-recovered losses on the sale of by-products from the prior year as follows: \$3,080,009, \$375,378, \$2,123,029, \$1,614,722, and \$67,033, for the Residential, Small General Service, Medium General Service, Large General Service, and Lighting classes, respectively.

15. The decrease in customer class fuel and fuel-related cost factors from the amounts approved in Docket No. E-2, Sub 1204 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.

16. 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: 2.080¢/kilowatt-hour (kWh) for the Residential class; 2.126¢/kWh for the Small General Service class; 2.228¢/kWh for the Medium General Service class; 2.204¢/kWh for the Large General Service class; and 1.392¢/kWh for the Lighting class.

17. The appropriate EMFs established in this proceeding, excluding the regulatory fee, are as follows: 0.180¢/kWh for the Residential class; 0.049¢/kWh for the Small General Service class; 0.096¢/kWh for the Medium General Service class; 0.267¢/kWh for the Large General Service class; and 0.381¢/kWh for the Lighting class.

18. 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: 2.260¢/kWh for the Residential class; 2.175¢/kWh for the Small General Service class; 2.324¢/kWh for the Medium General Service class; 2.471¢/kWh for the Large General Service class; and 1.773¢/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

N.C.Gen.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, 2020.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 3

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

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 5

The evidence for this finding of fact is contained in the testimony of Company witnesses Henderson and Repko 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 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 Henderson 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 91.79% during the test period. Neither this annual capacity factor, nor the Company's two-year average capacity factor of 90.50%, met the five-year industry weighted average capacity factor of 92.72% for the period 2014-2018 for average comparable units on a capacity-rated basis, as reported by NERC in its latest Generating Unit Statistical Brochure. The current test period included three refueling outages and nuclear units were removed from service in response to hurricane force winds for the second consecutive year.

To rebut the presumption of imprudence under Rule R8-55(k), Company witness Henderson addressed two particular unplanned outages. First, he testified that the most

significant unplanned outage during the test period resulted from a 23-day outage at the Robinson plant. According to his testimony, an investigation determined that the main generator exciter failed suddenly with no prior indication of problems. Periodic inspections prior to the failure found no significant deficiencies. In addition, the Company's post-event investigations determined that prior inspections and preventative and corrective maintenance were performed correctly. Witness Henderson testified that this outage was unpredictable and unpreventable. Second, witness Henderson described the hurricane-related and unplanned outages at both Brunswick units during the test period. Excluding the Robinson outage caused by the unforeseeable exciter failure and the Brunswick outages attributable to Hurricane Dorian, witness Henderson stated that the Company would have achieved a test period nuclear capacity factor of 93.56%, which would exceed the NERC 5-year average of 92.72%. Witness Henderson testified that this evidence supports the Company's belief that it operated its nuclear plants in a safe, reliable, and prudent manner during the test period.

Company witness Repko 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 hours); a low EFOR represents fewer unplanned outage and derated hours, which equates to a higher reliability measure; and (4) starting reliability (SR), which represents the percentage of successful starts.

Witness Repko 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 2014 through 2018:

<i>Generator Type</i>	Measure	Review Period	2014-2018	Nbr of Units
		DEP Operational Results	NERC Average	
<i>Coal-Fired Test Period</i>	EAF	76.3%	80.7%	399
	NCF	27.1%	56.3%	
	EFOR	5.5%	8.6%	
<i>Coal-Fired Summer Peak</i>	EAF	91.8%	n/a	n/a
<i>Total CC Average</i>	EAF	81.6%	84.9%	333
	NCF	66.0%	53.6%	
	EFOR	0.77%	5.1%	
<i>Total CT Average</i>	EAF	82.7%	87.5%	750
	SR	98.7%	98.3%	
<i>Hydro</i>	EAF	64.9%	80.2%	1,063

Company witness Repko 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 62% of the DEP fossil/hydro generation during the test period.

Public Staff witness Metz noted that the Company did not meet the standard found in Commission Rule R8-55(k). However, based on his review of the specifics that caused or contributed to the outages, Hurricane Dorian related outages, and Company actions from both a technical and commercial aspect, he testified that the overall costs and plant performances for the test period were adequate.

The Commission concludes that DEP successfully rebutted the presumption of imprudence under Commission Rule R8-55(k) through the testimony of Company witness Henderson as described above. Further, there was no evidence to the contrary and no party challenged the prudence of the operation of the Company's baseload units. Therefore, the Commission finds and concludes that DEP managed and operated its baseload plants prudently and efficiently to minimize its fuel and fuel-related costs.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 6

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 2015, and were in effect throughout the 12 months ending March 31, 2020. 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 Harrington, Church, Phipps, and Repko.

Company witness Harrington 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, natural gas, coal, and hydro; lower natural gas and coal prices; the capacity factors of its nuclear fleet; the combination of DEP's and DEC's respective expertise in procuring, transporting, managing and blending fuels, procuring reagents, and utilizing purchasing synergies of the combined Company, as well as the joint dispatch of DEP's and DEC's generation resources.

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.

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 increased approximately 3%, from \$84.81 per ton in the prior test period to \$86.94 per ton in the test period. The Company's transportation costs decreased approximately 3%, from \$32.72 per ton in the prior test period to \$31.76 per ton in the test period.

Witness Phipps stated that DEP's current coal burn projection for the billing period is 3.3 million tons compared to 3.6 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 \$74.41 per ton for the billing period compared to \$86.94 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 135.0 million MMBtu, which is a decrease from the 166.6 million MMBtu consumed during the test period. The current average forward Henry Hub price for the billing period is \$2.64 per MMBtu, compared to \$2.33 per MMBtu in the test period. Witness Phipps also testified that the Company's average price of gas purchased for the test period was \$3.74 per MMBtu, compared to \$4.05 per MMBtu in the prior test period, representing a decrease of approximately 8%.

In addition, in response to the Commission's November 25, 2019 Order Approving Fuel Charge Adjustment in Docket No. E-2, Sub 1204, witness Phipps testified to the results of the Company's review of historic price fluctuations and whether its current method of forecasting and hedging should be adjusted to mitigate the risk of significant under-recovery of fuel costs. Based on its evaluation, the Company determined that no adjustments were needed to its current method of forecasting or to its physical hedging program. However, the Company continues to refine and add modeling capabilities that will provide additional information to help with analyzing fuel forecasts and needed procurement activities, and associated ranges of potential costs. The Company also recommends extending financial hedging activities for a lower percentage in rolling years four and five to mitigate cost risks for customers as explained in more detail in Phipps Confidential Exhibit 4.

Sierra Club witness Rosenkranz testified regarding the natural gas supply costs that DEP was seeking to recover in this proceeding. Witness Rosenkranz did not recommend any changes to the Company's proposed fuel rates. However, witness Rosenkranz testified concerning certain alleged deficiencies in DEP's fuel application and monthly reports and further alleges that some unspecified portion of DEP's long-term contracts for natural gas transportation are not needed.

In rebuttal testimony, Company witness Harrington testified that the Company's fuel rider application, including the supporting testimony, exhibits, and workpapers, fully complies with applicable law and provides sufficient information to demonstrate the reasonableness and prudence of the Company's fuel costs, including its natural gas costs. Company witness McClay testified that the Company's firm transportation (FT) provides the underlying framework for the Company to manage the natural gas supply needed to provide reliable, cost-effective generation for its customers, and that customers receive benefits from the Company's FT in the form of lower cost gas supply, intraday

supply adjustments at minimal cost, and mitigation of punitive pipeline imbalance penalties. Witness McClay further noted that witness Rosenkranz made generalized statements concerning the Company's FT but never actually renders a specific recommendation that the Company should exit a particular FT arrangement. Therefore, in the context of this proceeding, there is no specific recommended action for the Commission to consider. Witness McClay further asserted that even if witness Rosenkranz was making a specific FT recommendation, his testimony was deficient in terms of the rigor and depth of analysis that would be required to support such a recommendation.

Section 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 Repko testified that the Company's fossil/hydro/solar generation portfolio consists of 8,933 MWs of generating capacity, 3,166 MWs of which is coal-fired generation across two generating stations and a total of five units. These units are equipped with emission control equipment, including selective catalytic reduction (SCR) equipment for removing nitrogen oxides (NO_x), flue gas desulfurization (FGD or scrubber) equipment for removing sulfur dioxide (SO₂), and low NO_x 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 Repko 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, or the level of emissions reduction required.

Sections 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, 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.

The Commission does not find the testimony of Sierra Club witness Rosenkranz to be persuasive with regard to any specific action. First, witness Rosenkranz has not recommended any adjustment to the fuel factors proposed in this proceeding. Second, the Commission agrees with Company witness Harrington that the sufficiency of the Company's fuel application should be evaluated based on the requirements of applicable

law. Intervenors have the right to request any additional information they believe to be necessary through the well-established discovery process. The scope and level of detail contained in the Company’s application, testimony, exhibits, and workpapers as filed in this proceeding conforms with applicable law and is consistent with prior applications. The Commission previously declined to accept nearly identical recommendations raised by Sierra Club in the 2020 Duke Energy Carolinas LLC’s fuel application (Docket No. E-7, Sub 1228) and similarly declines to adopt such recommendations in this proceeding. Furthermore, witness Rosenkranz has not actually made a recommendation concerning a specific FT arrangement that is imprudent, and the Commission agrees with witness McClay that witness Rosenkranz’ generalized observations regarding capacity release markets and the Companies’ ability to obtain capacity and delivered gas historically does not provide a sufficient basis to take action, particularly given that witness Rosenkranz made no attempt to assess the Company’s needs and the reliability risks associated with such market reliance nor to assess the unique operational challenges that have arisen and are likely to worsen due to the fully subscribed nature of the existing interstate pipelines as was further described by Company witness McClay.

Aside from Sierra Club, no party presented 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 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. 7

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

According to the exhibits sponsored by Company witness Harrington, the test period per book system sales were 61,765,556 MWh, and test period per book system generation and purchased power amounted to 69,839,648 MWh (net of auxiliary use and joint owner generation). The test period per book system generation and purchased power are categorized as follows (Harrington Exhibit 6):

<u>Net Generation Type</u>	<u>MWh</u>
Nuclear	28,861,332
Natural Gas, Oil and Biogas	21,827,253
Coal	8,371,720
Hydro – Conventional	662,207
Solar	258,435
Purchased Power – subject to economic dispatch or curtailment	3,413,330
Other Purchased Power	<u>6,445,371</u>
Total Net Generation (may not add to sum due to rounding)	69,839,648

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. 5.

No party contested witness Harrington'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 61,765,556 MWh and system generation and purchased power of 69,839,648 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 Henderson 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 94.46% 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 2020-2021 billing period. This proposed capacity factor exceeds the five-year industry weighted average capacity factor of 92.72% for the period 2014-2018 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 94.46% 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 94.46% nuclear capacity factor, and its associated generation of 29,730,338 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 Harrington.

On her Exhibit 4, Company witness Harrington set forth the test year per books North Carolina retail sales, adjusted for weather and customer growth, of 37,852,870 MWh, comprised of Residential class sales of 16,191,429 MWh, Small General Service sales of 1,777,668 MWh, Medium General Service sales of 10,949,334 MWh, Large General Service sales 8,584,996 MWh, and Lighting class sales of 349,444 MWh.

Witness Harrington 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 Revised Harrington Exhibit 2, Schedule 1, is 61,484,301 MWh. The projected level of generation and purchased power used was 67,439,293 MWh (calculated using the 94.46% capacity factor found reasonable and appropriate above), and was broken down by witness Harrington as follows, as set forth on that same schedule:

<u>Generation Type</u>	<u>MWh</u>
Nuclear	29,730,338
Gas Combustion Turbine and Combined Cycle	18,943,545
Coal	7,940,674
Hydro	650,353
Solar	256,176
Purchased Power	<u>9,918,206</u>
Total (may not add to sum due to rounding)	67,439,293

As part of her Revised Workpaper 8, Company witness Harrington 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	16,171,290
Small General Service	1,784,993
Medium General Service	10,287,749
Large General Service	9,128,353
Lighting	<u>377,978</u>
Total (may not add to sum due to rounding)	37,750,364

These class totals were used in Revised Harrington 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 weather and customer growth), 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 Harrington and Phipps and the testimony of Public Staff witness Metz.

In her Exhibit 2, Schedule 1, Company witness Harrington 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 testimony, 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 are reasonable and in accordance with the requirements of N.C.Gen. Stat. § 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 Harrington 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 Harrington and the testimony of Public Staff witness Metz.

According to Revised Harrington Exhibit 2, Schedule 1, the projected fuel and fuel-related costs for the North Carolina retail jurisdiction for use in this proceeding are \$808,620,116. 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 \$808,620,116 is reasonable.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 14-18

The evidence supporting these findings of fact is contained in the testimony and exhibits of Company witness Harrington, and the testimony and affidavit of Public Staff witness Metz and affiant Li.

Company witness Harrington presented DEP's original fuel and fuel-related expense (over)/under-collection and prospective fuel and fuel-related cost factors. Company witness Harrington's 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, and EMFs, along with supplemental revised exhibits and workpapers. Public Staff affiant Li agreed that DEP's EMF increment/(decrement) riders for each customer class should be approved based on the following under-recoveries, which include the deferred under-recovered losses on the sale of by-products of \$7.3 million from the prior year fuel Docket No. E-2, Sub 1204:

<u>N.C. Retail Customer Class</u>	<u>Under-Recovery</u>
Residential	\$29,153,931
Small General Service	863,226
Medium General Service	10,505,756
Large General Service	22,900,801
Lighting	<u>1,330,678</u>
Total (may not add to sum due to rounding)	\$64,754,391

As a result of these amounts, Public Staff affiant Li 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>
Residential	0.180
Small General Service	0.049
Medium General Service	0.096
Large General Service	0.267
Lighting	0.381

The Commission concludes that the EMF increment/(decrement) billing factors as set forth in the affidavit of Public Staff affiant Li are reasonable and appropriate for use in this proceeding.

Company witness Harrington calculated the Company's proposed fuel and fuel-related cost factors using a uniform bill adjustment method. She stated that the decrease in fuel costs from the amounts approved in Docket No. E-2, Sub 1204 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 supplemental testimony of Witness Harrington.

Based upon the testimony and exhibits in the record, the Commission concludes that DEP's projected fuel and fuel-related cost of \$808,620,116 for the North Carolina retail jurisdiction for use in this proceeding is reasonable. The Commission also concludes that the EMF increment/(decrement) riders for each class set forth in the affidavit of Public Staff witness Metz and the affidavit of Public Staff affiant Li 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 decrease in fuel and fuel-related costs from the amounts approved in Docket No. E-2, Sub 1204 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, 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 2.260¢/kWh for the Residential class, 2.175¢/kWh for the Small General Service class, 2.324¢/kWh for the Medium General Service class, 2.471¢/kWh for the Large General Service class, and 1.773¢/kWh for the Lighting class, excluding regulatory fee, consisting of the prospective fuel and fuel-related cost factors of 2.080¢/kWh, 2.126¢/kWh, 2.228¢/kWh, 2.204¢/kWh, and 1.392¢/kWh, and EMF increments/(decrements) of 0.180¢, 0.049¢, 0.096¢, 0.267¢, and 0.381¢/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, 2020, DEP shall adjust the base fuel and fuel-related cost factors in its North Carolina retail rates, as approved in Docket No. E-2, Sub 1142, amounting to 1.993¢/kWh for the Residential class, 2.088¢/kWh for the Small General Service class, 2.431¢/kWh for the Medium General Service class, 2.253¢/kWh for the Large General Service class, and 0.596¢/kWh for the Lighting class (all excluding the regulatory fee), by amounts equal to 0.087¢/kWh, 0.038¢/kWh, (0.203)¢/kWh, (0.049)¢/kWh and 0.796¢/kWh, respectively, and further, that DEP shall adjust the resulting approved prospective fuel and fuel-related cost factors by EMF increments/(decrements) of 0.180¢/kWh for the Residential class, 0.049¢/kWh for the Small General Service class, 0.096¢/kWh for the Medium General Service class, 0.267¢/kWh for the Large General Service class, and 0.381¢/kWh for the Lighting class (excluding the regulatory fee). The EMF increments are to remain in effect for service rendered through November 30, 2021;

2. That DEP shall file appropriate rate schedules and riders with the Commission in order to implement these approved rate adjustments to be effective for service rendered on and after December 1, 2020, as soon as practicable, but not later than ten days after the date that the Commission issues orders in this docket as well as in Docket Nos. E-2, Subs 1251, 1253, and 1254; and

3. That DEP shall work with the Public Staff to jointly prepare a proposed notice to customers of the rate adjustment ordered by the Commission in this Docket, as well as in Docket Nos. E-2, Subs 1251, 1253, and 1254, and the Company shall file the proposed notice to customers for Commission approval as soon as practicable.

ISSUED BY ORDER OF THE COMMISSION.

This the 30th day of November, 2020.

NORTH CAROLINA UTILITIES COMMISSION

A handwritten signature in black ink that reads "Kimberley A. Campbell". The signature is written in a cursive style with a large initial 'K'.

Kimberley A. Campbell, Chief Clerk

APPENDIX A

Rates in ¢/kWh excluding regulatory fee:						
	A	B	C	D	E	F
Class	Base Fuel Rate	Increment / (Decrement) to Base Fuel Rate	Prospective Rate: Columns A+B	EMF Increment / (Decrement)	EMF Interest (Decrement)	Billed Rate: Columns C+D+E
Residential	1.993	0.087	2.080	0.180	-	2.260
Small General Service	2.088	0.038	2.126	0.049	-	2.175
Medium General Service	2.431	(0.203)	2.228	0.096	-	2.324
Large General Service	2.253	(0.049)	2.204	0.267	-	2.471
Lighting	0.596	0.796	1.392	0.381	-	1.773

Rates in ¢/kWh including regulatory fee:						
	A	B	C	D	E	F
Class	Base Fuel Rate	Increment / (Decrement) to Base Fuel Rate	Prospective Rate: Columns A+B	EMF Increment / (Decrement)	EMF Interest (Decrement)	Billed Rate: Columns C+D+E
Residential	1.996	0.087	2.083	0.18	-	2.263
Small General Service	2.091	0.038	2.129	0.049	-	2.178
Medium General Service	2.434	(0.203)	2.231	0.096	-	2.327
Large General Service	2.256	(0.049)	2.207	0.267	-	2.474
Lighting	0.597	0.797	1.394	0.381	-	1.775