

STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-22, SUB 546

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of)	
Application by Virginia Electric and)	
Power Company, d/b/a Dominion Energy)	PROPOSED ORDER
North Carolina Pursuant to G.S. 62-133.2)	OF THE PUBLIC STAFF
and Commission Rule R8-55 Regarding)	APPROVING FUEL
Fuel and Fuel-Related Costs Adjustments)	CHARGE ADJUSTMENT
for Electric Utilities)	

HEARD: Monday, November 7, 2017, beginning at 1:30 p.m. in Commission
Hearing Room 2115, Dobbs Building, 430 North Salisbury Street,
Raleigh, North Carolina 27603

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

APPEARANCES:

For Dominion Energy North Carolina:

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

Mary Lynne Grigg, McGuireWoods LLP, 434 Fayetteville Street,
Suite 2600, Raleigh, North Carolina 27601

For the Carolina Industrial Group for Fair Utility Rates I (CIGFUR I):

Warren K. Hicks, Bailey & Dixon, LLP, Post Office Box 1351,
Raleigh, North Carolina 27602

For Nucor Steel Hertford (Nucor):

Joseph W. Eason, Nelson Mullins Riley & Scarborough, LLP, 4140
Park Lake Avenue, Suite 200, Raleigh, North Carolina 27622

For the Public Staff:

Lucy E. Edmondson, Staff Attorney, Public Staff - North Carolina
Utilities Commission, 4326 Mail Service Center, Raleigh, North
Carolina 27699-4300

BY THE COMMISSION: On August 23, 2017, Virginia Electric and Power Company, d/b/a Dominion Energy North Carolina (DENC or the Company), filed its application for a fuel charge adjustment, along with accompanying testimony and exhibits, pursuant to G.S. 62-133.2 and Commission Rule R8-55 relating to fuel and fuel-related charge adjustments for electric utilities (Application).¹ The Application was accompanied by the testimony and exhibits of Bruce E. Petrie, Manager of Generation System Planning, James D. Merritt, Regulatory Analyst II, Ronnie T. Campbell, Supervisor of Accounting for the Power Generation and Power Delivery Groups, Tom A. Brookmire, Manager of Nuclear Fuel Procurement, and Gregory A. Workman, Director - Fuels.

On August 30, 2017, the Commission issued its Order Scheduling Hearing, Requiring Filing of Testimony, Establishing Discovery Guidelines, and Requiring Public Notice.

Petitions to intervene were filed by CIGFUR on August 28, 2017, and Nucor on August 31, 2017. These petitions were granted by Orders dated September 13 and 12, 2017, respectively. The Public Staff's participation and intervention is recognized pursuant to G.S. 62-15(d) and Commission Rule R1-19(e).

¹ Pursuant to G.S. 62-133.2(a3), DENC is not eligible to recover non-fuel (but still fuel-related) costs through the annual rate adjustments authorized pursuant to G.S. 62-133.2, except for certain costs authorized by G.S. 62-133.2(a1)(6), which DENC did not incur during the test period and is not projected to incur during the rate period. Therefore, throughout this order, the costs being considered for recovery shall be termed "fuel costs," and the proceeding shall be termed the "fuel charge proceeding".

On October 2, 2017, DENC filed a letter requesting that the Commission allow it to publish an amended public notice. This request was granted by Order issued on October 3, 2017. The Company filed its Affidavit of Publication on November 13, 2017.

On October 23, 2017, the Public Staff filed the affidavit and exhibit of Sonja R. Johnson, Staff Accountant, Electric Section, Public Staff Accounting Division, and the testimony and exhibits of Dustin R. Metz, Engineer, Public Staff Electric Division. On October 25, 2017, the Public Staff filed the revised testimony and exhibits of Mr. Metz.

On October 30, 2017, the Company filed the rebuttal testimony of Brandford L. Stanley, Director, Nuclear Regulatory Affairs, John Rosenberg, Director – Nuclear Site Engineering, Julius A. Wright, Managing Partner, J. A. Wright & Associates, LLC, and Mr. Petrie.

On November 2, 2017, DENC and the Public Staff filed a joint motion requesting that the Commission issue an order excusing the appearance of DENC witnesses Brookmire, Campbell, Merritt, and Workman; and Public Staff affiant Johnson. The Commission granted the motion by Order dated November 3, 2017.

The matter came on for evidentiary hearing on November 7, 2017, as scheduled. No public witnesses appeared at the hearing.

On November 17, 2017, the Company filed Company Late-Filed Exhibit 1, which set forth what the nuclear capacity factors (in total and by unit) would have

been if the Company had not experienced the outages for which the Public Staff recommends disallowance of replacement fuel costs.

On December 1, 2017, Nucor filed a post-hearing brief.

Based upon the verified application, the evidence received at the hearing, and the entire record in this matter, the Commission makes the following:

FINDINGS OF FACT

1. DENC is duly organized as a public utility operating under the laws of the State of North Carolina and is subject to the jurisdiction of the North Carolina Utilities Commission. The Company is engaged in the business of generating, transmitting, distributing, and selling electric power to the public in northeastern North Carolina. DENC is lawfully before this Commission based on its application filed pursuant to G.S. 62-133.2.

2. The test period for purposes of this proceeding is the twelve months ended June 30, 2017.

3. The Company's fuel procurement practices during the test period were reasonable and prudent.

4. The test period per book system sales are 83,820,303,238 kilowatt-hours (kWh).

5. The test period per book system generation is 84,848,419 megawatt-hours (MWh), which includes various types of generation as follows:

<u>Generation Types</u>	<u>MWh</u>
Nuclear	27,998,627
Coal	18,885,985
Heavy Oil	186,787
Wood and Natural Gas Steam	1,530,691
Combined Cycle and Combustion Turbine	28,477,922
Solar and Hydro - Conventional and Pumped Storage	3,155,211
Net Power Transactions	7,176,726
Less: Energy for Pumping	(2,563,530)

6. The performance of the Company's nuclear plants contributed to the Company's fuel costs for the test year and for the test period for the twelve months ended June 30, 2016, that was the subject of the 2016 fuel cost proceeding, Docket No. E-22, Sub 534 (Sub 534). N.C. Gen. Stat. § 62-133.2(d) and Commission Rule R8-55 provide that the burden of proof, as to the correctness and reasonableness of any charge and as to whether the test year fuel costs were reasonable and prudently incurred, is on the utility. For purposes of determining the experience modification factor (EMF) rider, a utility must achieve either (a) an actual system-wide nuclear capacity factor in the test year that is at least equal to the national average capacity factor for nuclear production facilities based on the most recent five-year period available as reflected in the most recent North American Reliability Corporation's (NERC) Generating Availability Report, appropriately weighted for size and type of plant (the "NERC average") or (b) an average system-wide nuclear capacity factor, based upon a two-year simple average of the system-wide capacity factors actually experienced in the test year and the preceding year, that is at least equal to the NERC average, or a

presumption is created that the utility imprudently incurred the increased fuel costs and that disallowance of those costs is appropriate.

7. Under the calculation of the most recent NERC average, DENC met and exceeded the performance standard for its nuclear fleet from 2012 - 2016 with a 93.52% nuclear capacity factor, compared to the NERC average of 90.00% for the same period.

8. Nevertheless, DENC's nuclear performance in both the Sub 534 and the current proceeding's (Sub 546) test years was affected by the Sub 546 outages at North Anna Unit 2 from July 30, 2016, through August 3, 2016; and at Surry Unit 2 from October 9, 2016, through October 13, 2016; and the Sub 534 outages at Surry Unit 1 from July 11 - 22, 2015 and October 13 - November 18, 2015; and the refueling outage extension at Surry Unit 2 from December 4 - 11, 2015. After extensive investigation, the Public Staff has shown that these outages during the Subs 546 and 534 test years could have been avoided under efficient management and economic operations, and that the associated replacement power costs should be excluded.

9. Except for the specific outages at North Anna Unit 2 and Surry Units 1 and 2 addressed in Finding of Fact No. 8, the Company's baseload plants were managed prudently and efficiently so as to minimize fuel and fuel-related costs.

10. It is not appropriate for DENC to apply a 2% forced outage allowance in its calculation of replacement power costs.

11. It is appropriate for DENC to forgo recovery of a North Carolina retail allocated amount of \$232,474 of replacement power fuel expenses incurred during the test year due to outages at North Anna Unit 2 from July 30, 2016, through August 3, 2016, and at Surry Unit 2 from October 9, 2016, through October 13, 2016, \$1,575,422 of replacement power fuel expenses incurred during the test year due to outages at Surry Unit 1 from July 11 - 22, 2015, and October 13 - November 18, 2015, and at Surry Unit 2 from July 13 - 22, 2015, and December 4 - 11, 2015, for a total of \$1,807,896.

12. The nuclear capacity factor appropriate for use in this proceeding is 93.54%, which is the estimated nuclear capacity factor for the 12 months ending December 31, 2018.

13. The adjusted test period system sales for use in this proceeding are 84,774,563,328 kWh.

14. The adjusted test period system generation for use in this proceeding is 85,796,167 MWh, which is categorized as follows:

<u>Generation Types</u>	<u>MWh</u>
Nuclear	27,442,508
Coal (Including wood & natural gas steam)	20,939,580
Heavy Oil	191,548
Combined Cycle and Combustion Turbine	29,207,250
Hydro – Conventional and Pumped Storage	3,106,119
Solar	49,093
Net Power Transactions	7,472,692
Less: Energy for Pumping	(2,563,530)

15. Only actual fuel costs associated with power purchases may be recovered by DENC through its fuel charge proceeding and, therefore, a marketer percentage must be derived to serve as a proxy for fuel costs when actual fuel costs are not available. In this proceeding, a marketer percentage of 78% to be applied to determine purchase power expense should continue to be used.

16. The adjusted test period system fuel expense for use in this proceeding is \$1,758,608,978.

17. The proper fuel factors for Rider A for this proceeding, including the regulatory fee,² are as follows:

<u>Customer Class</u>	<u>Rider A (in ¢/kWh)</u>
Residential	\$0.00006
SGS & PA	\$0.00006
LGS	\$0.00003
NS	\$0.00006
6VP	\$0.00006
Outdoor Lighting	\$0.00006
Traffic	\$0.00006

18. The appropriate North Carolina test period jurisdictional fuel expense overcollection is \$7,530,031 (consisting of \$4,739,957 in test year overrecovery, \$1,807,896 from the Sub 534 and Sub 546 outage adjustments, and \$982,178 in interest) and the adjusted North Carolina jurisdictional test period sales are 4,299,466,351 kWh.

² The current regulatory fee is .0014 (.14%).

19. The appropriate Experience Modification Factors (EMF or Rider B) for this proceeding, including the regulatory fee, are as follows:

<u>Customer Class</u>	<u>EMF Billing Factor (in ¢/kWh)</u>
Residential	(\$0.00177)
SGS & PA	(\$0.00177)
LGS	(\$0.00175)
NS	(\$0.00170)
6VP	(\$0.00172)
Outdoor Lighting	(\$0.00177)
Traffic	(\$0.00177)

20. It is appropriate for the Company to recover the final true-up of \$381,535, pursuant to the Company's mitigation proposal approved in Docket No. E-22, Sub 515, that allowed the Company to recover the prior period deferral balance over the 2015 and 2016 fuel rate years, without interest, subject to a final true-up to be determined in the 2017 fuel case and recovered over the 2018 fuel year. The appropriate Rider B2 EMF factor for each class, including the regulatory fee, is 0.009¢/kWh.

21. The base fuel component as approved in Docket No. E-22, Sub 532 in the amount of 2.095 ¢/kWh for the Residential class, 2.093 ¢/kWh for the SGS & PA class, 2.079 ¢/kWh for the LGS class, 2.014 ¢/kWh for Schedule NS, 2.043 ¢/kWh for 6VP, 2.095 ¢/kWh for Outdoor Lighting, and 2.095 ¢/kWh for Traffic, should be adjusted by Rider A for each class as set forth in Finding of Fact No. 17 and further adjusted by EMF Rider B and Rider B2 increments for each class as set forth in Findings of Fact Nos. 19 and 20, respectively. The final net fuel factors

to be billed to DENC's retail customers during the 2018 fuel charge billing period, including the regulatory fee, are as follows:

<u>Customer Class</u>	<u>Total Net Fuel Factor</u>
Residential	1.933 ¢/kWh
SGS & PA	1.931 ¢/kWh
LGS	1.916 ¢/kWh
Schedule NS	1.859 ¢/kWh
6VP	1.886 ¢/kWh
Outdoor Lighting	1.933 ¢/kWh
Traffic	1.933 ¢/kWh

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 1

This finding of fact is essentially informational, jurisdictional, and procedural in nature and is not controverted.

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 the Commission in an annual fuel charge adjustment proceeding for an historical 12-month test period. Commission Rule R8-55(b) prescribes the 12 months ending June 30 as the test period for DENC. The Company's filing was based on the 12 months ended June 30, 2017.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 3

The evidence for this finding of fact is contained in the direct testimony and exhibits of DENC witnesses Workman and Brookmire.

Commission Rule R8-52(b) requires each electric utility to file a Fuel Procurement Practices Report at least once every ten years and each time the utility's fuel procurement practices change. The Company's current fuel procurement practices were filed with the Commission in Docket No. E-100, Sub 47A, on December 20, 2013.

In his direct testimony, Company witness Workman discussed commodity prices, the Company's fuel procurement policy, and coal, natural gas, oil, and biomass procurement. He explained that commodity prices (including coal, natural gas, and crude oil) have begun to recover after falling to historic lows last year, with natural gas, coal, and domestic crude oil prices increasing approximately 32%, 37%, and 16%, respectively, from the prior test year. Mr. Workman described the Company's fossil fuel procurement practices and explained that the Company continues to follow the same procurement practices as in the past in accordance with its report filed in Docket No. E-100, Sub 47A.

Mr. Workman described the Company's hedging program under which it hedges commodities using a range of volume targets that decrease over a three-year period. The duration of the physical procurement agreements is staggered, and may include a fixed price or price trigger option.

To procure natural gas, the Company employs periodic solicitations and the open market to obtain a combination of day-ahead, monthly, seasonal, and multi-year physical gas supply purchases. The Company also continues to evaluate its pipeline transportation and storage contracts, and participates in the interstate

pipeline capacity release and physical supply markets, as well as longer-term, pipeline expansion projects.

In regard to coal procurement, Mr. Workman noted that the Company followed a multi-year plan accomplished primarily through periodic solicitations and secondarily on the open market, allowing the Company to layer in coal contracts of staggered terms and blended prices to mitigate exposure to significant price swings.

Concerning biomass procurement, Mr. Workman testified that multiple suppliers began serving the Hopewell and Southampton Power Stations under long-term agreements effective January 1, 2017, while one supplier continues to serve the long-term needs of the Altavista and Pittsylvania Power Stations. The co-fired Virginia City Hybrid Energy Center facility continues to be served by short-term contracts with various suppliers. In addition, all five biomass plants receive wood deliveries by truck.

Mr. Workman further testified that the Company procures its No. 2 fuel oil and No. 6 oil requirements on the spot market.

With respect to the nuclear fuel market, Company witness Brookmire testified that in the past five years, prices have decreased in the uranium, conversion, and enrichment markets due to the impact of the March 2011 earthquake and tsunami and reductions in demand worldwide. However, some decreases in supply have somewhat offset the downward trend in demand. Prices for spot conversion services have dropped significantly, though prices for long-

term supply remain higher. The cost of enrichment services appears to have stabilized, while domestic fabrication prices are generally expected to continue to increase. Further, several more reactors in Japan are expected to restart in 2017, which may increase prices of front-end components. Mr. Brookmire further testified that these changes have not significantly impacted the Company's near-term costs because the current mix of longer-term front-end component contracts has reduced the impact of changes in market prices. In addition, while the Company still has some older, legacy contracts, its market-based contracts allow it to avail itself of current lower prices. Mr. Brookmire also noted that the Company continues to follow the same nuclear fuel procurement practices as it has in the past, in accordance with its procedures filed in Docket No. E-100, Sub 47A.

No party contested the Company's fuel procurement and power purchasing practices. Based on the foregoing, the Commission concludes that the Company's fuel procurement and power purchasing practices during the test period were reasonable and prudent.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 4 - 5

The evidence for these findings of fact is contained in the direct testimony and exhibits of DENC witnesses Merritt and Petrie.

DENC witness Merritt testified that the Company's test period per book system sales were 83,820,303,238 kWh, and Mr. Petrie testified that the Company's test period per book system generation was 84,848,419 MWh. Mr.

Petrie stated that the test period per book system generation is categorized as follows:

<u>Generation Types</u>	<u>MWh</u>
Nuclear	27,998,627
Coal	18,885,985
Heavy Oil	186,787
Wood and Natural Gas Steam	1,530,691
Combined Cycle and Combustion Turbine	28,477,922
Solar and Hydro - Conventional and Pumped Storage	3,155,211
Net Power Transactions	7,176,726
Less: Energy for Pumping	(2,563,530)

No other party offered or elicited testimony on the level of test period per book system MWh sales or generation. The Commission thus concludes that the foregoing test period per books levels of sales and generation are reasonable and appropriate for use in this proceeding.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 6 - 7

The evidence for these findings of fact is contained in the direct and rebuttal testimony of Company witness Petrie, the rebuttal testimony of Company witnesses Wright and Stanley, and the testimony and exhibits of Public Staff witness Metz.

N.C. Gen. Stat. § 62-133.2(d) and Commission Rule R8-55 provide that the burden of proof, as to the correctness and reasonableness of any charge and as to whether the test year fuel costs were reasonable and prudently incurred, is on the utility. For purposes of determining the EMF rider, a utility must achieve either (a) an actual system-wide nuclear capacity factor in the test year that is at least

equal to the national average capacity factor for nuclear production facilities based on the most recent five-year period available as reflected in the most recent NERC Generating Availability Report, appropriately weighted for size and type of plant (the “NERC average”) or (b) an average system-wide nuclear capacity factor, based upon a two-year simple average of the system-wide capacity factors actually experienced in the test year and the preceding year, that is at least equal to the NERC average, or a presumption is created that the utility imprudently incurred the increased fuel costs and that disallowance of those costs is appropriate.

Company witness Petrie testified on direct that the Company’s four nuclear units operated at an aggregate capacity factor of 95.5% during the test period, which exceeded the five-year average net capacity factor of 88.5% for the period 2011 - 2015 for 800 to 999 megawatt (MW) units, as reported by NERC in its latest Generating Availability Report. He also noted that for the same five-year period, the Company’s net capacity factor was 91.0%, as compared to the national average of 88.5%. During the 2015 - 2016 and 2016 - 2017 test periods, the Company’s nuclear fleet achieved aggregate capacity factors of 92.2% and 95.5%, respectively. In his rebuttal testimony, Mr. Petrie noted that the Company’s net capacity factor for the nuclear fleet from 2012 - 2016 was 93.52%, as compared to the 90.00% NERC industry average for similar units for the same period.

Public Staff witness Metz agreed with Company witness Petrie that the Company had met the standard of Commission Rule R8-55(k) by achieving an actual system-wide nuclear capacity factor that exceeded the NERC weighted average nuclear capacity factor. He also noted that the Company’s two-year

simple average of its system-wide nuclear capacity factor exceeded the NERC weighted average nuclear capacity factor. Therefore, Mr. Metz concluded that no presumption that the utility imprudently incurred increased fuel costs had been created. Thus, there is no disagreement between the Company and the Public Staff as to whether any presumption of imprudence was been created pursuant to Rule R8-55(k) – there was not. The next step of Mr. Metz’s investigation was to examine individual outages to determine whether they occurred under efficient management and whether ensuing the replacement power costs were prudently incurred.

Company witness Stanley pointed out that the standard set by R8-55(k) encourages good performance, but not perfection. Mr. Stanley further noted that the Public Staff did not contend that the Company must operate its nuclear fleet flawlessly. Indeed, Mr. Metz discussed in his testimony a number of nuclear and non-nuclear plant outages he reviewed and did not recommend any disallowance. He then testified in detail about a July 2015 outage at Surry Unit 2 that he determined was outside of the Company’s control, and thus for which he recommended no disallowance. However, the Company took issue with what witness Wright characterizes as the Public Staff’s addition of an additional level of review by examining the performance of individual nuclear plants even though the Company has met the performance standard of Rule R8-55(k).

G.S. 62-133.2(d) as originally enacted in 1982 provided as follows:

(d) The Commission shall provide for notice of a public hearing with reasonable and adequate time for investigation and for all

intervenors to prepare for hearing. At the hearing the Commission shall receive evidence from the Utility, the Public Staff, and any intervenor desiring to submit evidence, and from the public generally. In reaching its decision, the Commission shall consider all evidence required under subsection (c) of this section. The Commission may also consider, but is not bound by, the fuel costs incurred by the utility and the actual recovery under the rate in effect during the test period as well as any and all other competent evidence that may assist the Commission in reaching its decision including changes in the price of fuel consumed and changes in price of the fuel in the fuel component of purchased power occurring within a reasonable time (as determined by the Commission) after the test period is closed. *The burden of proof as to the correctness and reasonableness of the charge shall be on the utility. The Commission shall allow only that portion, if any, of a requested fuel adjustment that is based on adjusted and reasonable fuel expenses prudently incurred under efficient management and economic operations.* To the extent that the Commission determines that an increment or decrement to the rates of the utility due to changes in the cost of fuel and the fuel cost component of purchased power over or under base fuel costs established in the preceding general rate case is just and reasonable, the Commission shall order that the increment or decrement become effective for all sales of electricity and remain in effect until changed in a subsequent general rate case or annual proceeding under this section.

(Emphasis added.)

In a 1985 fuel clause proceeding, Docket No. E-2, Sub 503, Carolina Power & Light (CP&L) requested an increase that included an amount to recoup a fuel expense undercollection for the test year (September 22, 1984 – March 31, 1985), as well as a projected undercollection from April 1, 1985, through September 30, 1985. By order issued September 18, 1985, the Commission allowed the Company to recover 90% of its undercollected fuel costs for the period September 22, 1984, through June 30, 1985, through a rate increment called an “Experience

Modification Factor”.³ The Attorney General and the Public Staff appealed on the grounds that the Commission exceeded its authority under G.S. 62-133.2(d) by allowing a “true-up” of past under-recovery of fuel costs.

The issue on appeal was whether, by enacting G.S. 62-133.2(d), the General Assembly modified the judicially adopted rule prohibiting retroactive ratemaking – or in this case, prospective ratemaking to recover an unexpected past expense – so as to authorize the Commission to use an EMF in a fuel clause proceeding to enable a utility to true-up for past under-recoveries or over-recoveries. CP&L contended that by providing that “[t]he Commission may also consider, but is not bound by, the fuel costs incurred by the utility and the actual recovery under the rate in effect during the test period”, the statute authorized the true-up of differences between actual costs incurred and costs recovered under established rates and that the General Assembly was no doubt aware of true-up procedures that existed in other states.

After examining the language of the statute and its legislative history, along with the language of statutes in other states, the Court of Appeals concluded that the correct interpretation of the provision at issue was that “the Commission is

³ Shortly after the order was issued, the Public Staff filed a motion asking the Commission to reopen Docket No. E-100, Sub 47, the rulemaking docket implementing G.S. 62-133.2, for the purpose of establishing rules for applying an EMF in fuel cases and general rate cases for all electric utilities. The Commission reopened the docket, proposed certain modifications to its rules and procedures, and invited comments. By order issued August 14, 1986, the Commission revised its rules to require normalization of nuclear capacity factors in establishing prospective fuel factors and to modify fuel costs through EMF factors. In making these revisions, the Commission stated, among other things: “The EMF is not and will not function as a mechanism to automatically and indiscriminately pass through increases or decreases in fuel costs; nor will it operate in any way so as to permit the company to recover costs arising from imprudence or malfeasance.” 76 N.C.U.C. 37, 43 (1986).

permitted, but not required, to consider the actual costs and actual recovery as additional indications of how future fuel costs should be recovered.” *State ex rel. Utils. Comm’n v. Thornburg*, 84 N.C. App. 482, 489, 353 S.E.2d 413, 417 (1987), *discr. rev. denied*, 320 N.C. 517, 358 S.E.2d 533 (1987) (*Thornburg*). Accordingly, the court held that G.S. 62-133.2 was not intended by the General Assembly to authorize true-ups of past over-recoveries or under-recoveries of fuel costs and therefore the Commission exceeded its statutory authority in implementing the EMF.

In 1987, the General Assembly enacted S.L. 1987-677 (SB 524), “An Act to Provide Adjustments to Costs in Electric Utility Ratemaking and to Study the Question of Continuing the Authority for True-ups,” which amended G.S. 62-133.2(d) and added a subsection (d1) as follows:

(d) The Commission shall provide for notice of a public hearing with reasonable and adequate time for investigation and for all intervenors to prepare for hearing. At the hearing the Commission shall receive evidence from the utility, the public staff, and any intervenor desiring to submit evidence, and from the public generally. In reaching its decision, the Commission shall consider all evidence required under subsection (c) of this section as well as any and all other competent evidence that may assist the Commission in reaching its decision including changes in the price of fuel consumed and changes in the price of the fuel in the fuel component of purchased power occurring within a reasonable time (as determined by the Commission) after the test period is closed. ~~The Commission may also consider, but is not bound by, the fuel costs incurred by the utility and the actual recovery under the rate in effect during the test period as well as any and all other competent evidence that may assist the Commission in reaching its decision including changes in the price of fuel consumed and changes in price of the fuel in the fuel component of purchased power occurring within a reasonable time~~

~~(as determined by the Commission) after the test period is closed. The Commission shall incorporate in its fuel cost determination under this subsection the experienced over-recovery or under-recovery of reasonable fuel expenses prudently incurred during the test period, based upon the prudent standards set pursuant to subsection (d1) of this section, in fixing an increment or decrement rider. The Commission shall use deferral accounting, and consecutive test periods, in complying with this subsection, and the over-recovery or under-recovery portion of the increment or decrement shall be reflected in rates for 12 months, notwithstanding any changes in the base fuel cost in a general rate case. The burden of proof as to the correctness and reasonableness of the charge shall be on the utility.~~ The burden of proof as to the correctness and reasonableness of the charge and as to whether the fuel charges were reasonably and prudently incurred shall be on the utility. The Commission shall allow only that portion, if any, of a requested fuel adjustment that is based on adjusted and reasonable fuel expenses prudently incurred under efficient management and economic operations. In evaluating whether fuel expenses were reasonable and prudently incurred, the Commission shall apply the rule adopted pursuant to subsection (d1). To the extent that the Commission determines that an increment or decrement to the rates of the utility due to changes in the cost of fuel and the fuel cost component of purchased power over or under base fuel costs established in the preceding general rate case is just and reasonable, the Commission shall order that the increment or decrement become effective for all sales of electricity and remain in effect until changed in a subsequent general rate case or annual proceeding under this section.

(d1) Within one year after ratification of this act, for the purposes of setting fuel rates, the Commission shall adopt a rule that establishes prudent standards and procedures with which it can appropriately measure management efficiency in minimizing fuel costs.

Section 2 of the act provided as follows:

The enactment of this act shall be construed as clarifying rather than changing the meaning of G.S. 62-133.2 as previously worded and as construed by the Commission in Commission Rule R8-55 so that electric utilities will recover only their reasonable and fuel expenses prudently incurred, including the fuel cost component of purchased

power, with non over-recovery or under-recovery, in a manner that will serve the public interest.

Pursuant to G.S. 62-133.2(d1), the Commission instituted a rulemaking proceeding in Docket No. E-100, Sub 55, and by order issued April 27, 1988, it adopted a rule for purposes of determining the EMF rider that established a rebuttable presumption of imprudence and disallowance for failure by the utility to achieve certain average system-wide nuclear capacity factors. A clarifying amendment to the rule was adopted by order issued June 22, 1988. The rulemaking was reopened two years later, and by order issued July 18, 1990, the rule was further amended to establish what the Commission deemed a more appropriate and effective standard of prudence. The amended rule remained unchanged until it was amended to implement S.L. 2007-397 (SB3) by order issued February 29, 2008, in Docket No. E-100, 113. The rule, which is part of Commission Rule R8-55, currently reads as follows:

(k) The burden of proof as to the correctness and reasonableness of any charge and as to whether the test year cost of fuel and fuel-related costs were reasonable and prudently incurred shall be on the utility. For purposes of determining the EMF rider, a utility must achieve either (a) an actual system-wide nuclear capacity factor in the test year that is at least equal to the national average capacity factor for nuclear production facilities based on the most recent 5-year period available as reflected in the most recent North American Electric Reliability Corporation's Generating Availability Report, appropriately weighted for size and type of plant or (b) an average system-wide nuclear capacity factor, based upon a two-year simple average of the system-wide capacity factors actually experienced in the test year and the preceding year, that is at least equal to the national average capacity factor for nuclear production facilities based on the most recent 5-year period available as reflected in the

most recent North American Electric Reliability Corporation's Generating Availability Report, appropriately weighted for size and type of plant, or a presumption will be created that the utility incurred the increased cost of fuel and fuel-related costs resulting therefrom imprudently and that disallowance thereof is appropriate. The utility shall have the opportunity to rebut this presumption at the hearing and to prove that its test year cost of fuel and fuel-related costs were reasonable and prudently incurred. To the extent that the utility rebuts the presumption by the preponderance of the evidence, no disallowance will result.

Company witness Wright suggests that if a utility achieves an average system-wide capacity factor in the test year that meets or exceeds either presumptive minimum standard of prudence established in Rule R8-55(k), the utility's test year nuclear fuel costs are presumed prudent. Presumably, these fuel costs could include additional purchased power costs incurred because of an individual plant outage or outage extension that could have been avoided under efficient management. This contention is flawed in several respects.

First, this contention ignores the plain language of the statute, to wit:

The burden of proof as to the correctness and reasonableness of the charge and as to whether the fuel charges were reasonably and prudently incurred shall be on the utility. The Commission shall allow only that portion, if any, of a requested fuel adjustment that is based on adjusted and reasonable fuel expenses prudently incurred under efficient management and economic operations.

As discussed in *Thornburg*, G.S. 62-133.2 was enacted to eliminate certain "undesirable limitations" of G.S. 62-134(e). One of these limitations was that

under G.S. 62-134(e), the Commission was not empowered to consider efficiency of management or how prudently the fuel costs had been incurred; only the actual increase or decrease in cost

could be taken into account. *Id.* (citing *Utilities Commission v. Virginia Electric and Power Company*, 48 N.C. App. 453, 269 S.E.2d 657, *disc. rev. denied*, 301 N.C. 531, 273 S.E.2d 462 (1980)) This limitation required the Commission, in effect, to automatically pass all fuel costs through to rate-payers without an investigation of the reasonableness of those costs or of the factors causing the change in costs.

Thornburg at 486, 415.

The contention that a presumption of prudence is created if a utility achieves an average system-wide capacity factor in the test year that meets or exceeds either of the standards of prudence established in Rule R8-55(k) also ignores the plain language of the rule: that a utility must meet one of the established standards of nuclear plant performance or “a presumption will be created that the utility incurred the increased cost of fuel and fuel-related costs resulting therefrom imprudently and that disallowance thereof is appropriate”. The rule creates a rebuttable presumption of *imprudence* with respect to the increased fuel and fuel-related costs resulting from the utility’s failure to meet a performance standard. The rule does *not* create a presumption of *prudence* with respect to any of the utility’s fuel and fuel-related costs resulting from achieving or exceeding the performance standard.⁴ If the Commission had intended the rule to create a presumption of prudence as contended by Dr. Wright, it would have explicitly

⁴ The Commission stated in several fuel case orders that Rule R8-55 creates a rebuttable presumption of prudent operation if a utility’s nuclear performance meets the standard set by the rule. See, e.g., *Carolina Power & Light Company*, Docket No. E-2, Sub 868, *Order Approving Fuel Charge Adjustment*, issued September 26, 2005: “Commission Rule R8-55 provides that if a utility’s nuclear generation performance exceeds the most recent five-year NERC average, there is a rebuttable presumption of prudent operation.” This statement is based on testimony by CP&L (now Duke Energy Progress) witnesses in several cases, which appears to have gone unchallenged. In fact, Commission Rule R8-55 provides no such presumption of prudence.

stated so when it promulgated the rule – however, it did not. As stated by Nucor in its brief, merely avoiding a presumption of prudence does not automatically give DENC “an aura of prudence for each individual outage”.

Moreover, the presumption of imprudence is a construct of the rule, not the statute. Its sole purpose is to provide an objective standard and procedure for "evaluating whether fuel and fuel-related expenses were reasonable and prudently incurred," as required by G.S. 62-133.2(d). It cannot -- and it does not purport to - - alter the Commission's statutory authority and duty to “allow only the portion of a requested fuel and fuel-related costs adjustment that is based on adjusted and reasonable fuel expenses prudently incurred under efficient management and economic operations” or the utility's statutory “burden of proof as to the correctness and reasonableness of the charge and as to whether its test year fuel and fuel-related costs were reasonable and prudently incurred”. Nothing in the statute or the rule precludes an intervening party from proffering evidence that a utility's fuel and fuel-related costs were unreasonable and imprudently incurred. If the Commission finds that a portion of a utility's fuel and fuel-related costs were unreasonable and imprudently incurred, the Commission not only may, but must disallow recovery of those costs in the EMF.

In regard to the burden of proof applicable in this proceeding, the concurrence in the November 3, 2011, *Order Granting Partial Rate Increase* in Docket No. W-218, Sub 319, 101 N.C.U.C. 384, 489, explained:

In seeking to justify recovery of test year costs incurred to provide service to its ratepayers, the utility meets its initial burden of proof by

verifying that it incurred the expense in question. A presumption exists that management would not incur a cost unless it was reasonable and prudent . . . Once the utility proves it has incurred the item of test year expense, a party contesting reasonableness and prudence has the burden of presenting affirmative evidence of unreasonableness. Thereafter, the burden shifts back to the utility to rebut the evidence of unreasonableness.

On the other hand, the burden of persuasion as to the reasonableness of expenses always rests with the utility, and the burden of going forward with evidence of reasonableness arises only when the Commission requires it or when it is contradicted or challenged by evidence to the contrary offered by another party to the proceeding. See *Utils. Comm'n v. Intervenor Residents*, 305 N.C. 62, 75, 286 S.E.2d 770, 778 (1982). Thus, absent the presumption of imprudence created by the rule, a presumption of reasonableness and prudence would apply to all of the fuel and fuel-related costs incurred and verified by the utility, not just those costs resulting from failure to meet the performance standards established by the rule. The effect of the presumption of unreasonableness and imprudence created by the rule is to limit the presumption of reasonableness and prudence to those costs resulting from performance equal to or above the standards established by the rule. That is, instead of creating a presumption of prudence -- a presumption that already exists -- the rule limits it by creating a rebuttable presumption of imprudence when certain performance standards are not met. If those standards are met and there is no presumption of unreasonableness and imprudence, the utility's fuel and fuel-related costs are presumed to have been reasonable and prudently incurred. This presumption is also rebuttable. Thus, an intervenor may challenge the reasonableness and prudence of the utility's fuel and fuel-related costs by

producing evidence of imprudence, but the burden of persuasion remains with the utility.

In his testimony, Company witness Wright contends that the Public Staff is applying an incorrect standard when the Company has met the R8-55(k) performance standards and the Public Staff nonetheless investigates individual outages. The Public Staff has the duty and the responsibility to “[r]eview, investigate, and make appropriate recommendations to the Commission with respect to the reasonableness of rates charged or proposed to be charged by any public utility” pursuant to G.S. 62-15(d)(1). In carrying out these duties, the Public Staff has the discretion to determine how best to investigate these rates, including whether to investigate particular outages and the level of scrutiny to apply. Nothing in Rule R8-55(k) precludes the Public Staff from investigating individual outages regardless of the Company’s performance and recommending disallowances, if appropriate. It is clear from Public Staff witness Metz’s testimony that the Public Staff conducted a thorough investigation in this case, and looked behind the performance standards. For example, the Company’s Late-Filed Exhibit shows that the Company’s overall system performance was significantly affected by the individual nuclear outages from Sub 534, and clearly merited investigation by the Public Staff. Pursuant to G.S. 62-15(d), the Public Staff should, as it deems appropriate, look behind the system performance metrics achieved by the Company, conduct further investigation, and make appropriate recommendations. This is not the application of any new standard of review, but simply the Public Staff performing its statutory duties as it deems appropriate.

Likewise, the Commission must review the evidence, conduct its independent analysis, and render its decision along these same lines. Dr. Wright's reading of the statute and Rule would limit the Commission's authority to examine aspects of the Company's operations if the Company met the NERC aggregate capacity factor during the test period. Specifically, adoption of Dr. Wright's analysis would bind the Commission's hands and undermine its authority outlined in G.S. 62-30 to "exercise such general power and authority to supervise and control the public utilities of the State as may be necessary to carry out the laws providing for their regulation, and all such other powers and duties as may be necessary or incident to the proper discharge of its duties". Dr. Wright's contention would essentially create an exception for fuel proceedings provided the Company met the NERC average capacity factor during the test period. Such an application of the Rule would produce an unsupportable restriction on the Commission's authority.

Further, depending on the circumstances, the NERC average capacity factor may not be a good measure of whether DENC has operated its plants prudently. The Commission may find that under certain conditions, while an electric utility may not have met the NERC average capacity factor in a given year, it has rebutted the presumption of imprudence and shown that it efficiently managed its plants. Conversely, meeting or exceeding the NERC average capacity factor does not necessarily mean that an electric utility has managed its plants prudently in a given year. As Nucor noted in its brief, the standard adopted in R8-55(k) is not particularly high, as the standard only encourages an electric

utility to be above average. There certainly may be room for improvement beyond the NERC average. The Commission must consider each case individually under its specific facts, including the NERC average capacity factor. But the Commission should not give the attainment of that performance standard more weight than provided in the Rule.

Finally, adopting Dr. Wright's contention could allow the Company to act imprudently and recover imprudent costs from ratepayers, provided the Company met the NERC average capacity factor during the test period. Dr. Wright is essentially saying the Company should be able to operate imprudently to the extent it exceeds this national average factor without consequence (except perhaps filing a report on an outage with the Commission). Customers would be required to indemnify the Company against its own imprudent actions provided those actions did not cause the aggregate capacity factor to fall below the national average. Additionally, a presumption of prudence would reduce the Company's incentive to efficiently maintain and operate its fleet to maximize its value to the customers that have paid for the investment. These outcomes are inconsistent with this Commission's charge pursuant to Chapter 62 to fix just and reasonable rates that are based upon reasonable and prudent utility investment and operations. All aspects of the Company's actions must be reasonable and prudent regardless of its aggregate capacity factor. Commission Rule R8-55(k) was not designed to shield the Company from cost disallowances if the Company otherwise acted imprudently.

In short, Commission Rule R8-55(k) creates no presumption of prudence if the Company meets the performance standards in the Rule. The Commission may assign the weight it determines appropriate to evidence of the Company's meeting or exceeding the performance standards in R8-55(k). However, if the Commission agrees with an intervenor that some fuel expenses are not reasonable and were not prudently incurred under efficient management and economic operations, the Commission must disallow those costs, regardless of whether the R8-55(k) standards are met.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 8

The evidence for this finding of fact is contained in the testimony of Company witnesses Stanley and Rosenberger and the testimony and exhibits of Public Staff witness Metz.

Public Staff witness Metz testified that the Company's proposed EMF reflects increased fuel costs resulting from the purchase of replacement power during an outage at North Anna Unit 2 that occurred July 30 - August 3, 2016, and an outage at Surry Unit 2 that occurred October 9 - 13, 2016. Additionally, the Company and Public Staff agreed in the 2016 DENC fuel cost proceeding, Sub 534, that the Public Staff would continue its review of nuclear outages that occurred at Surry Unit 1 from July 11 - 22, 2015, and October 13 - November 18, 2015, and at Surry Unit 2 from July 13 - 22, 2015, and December 4 - 11, 2015, and

that any adjustments would be reflected in the EMF adopted in this proceeding.⁵ Therefore, the Public Staff undertook to determine what caused these outages, whether it believed the additional costs were reasonable and prudently incurred, and, if not, what adjustment to the Company's proposed EMF it should recommend to the Commission.

In determining what caused these outages, Mr. Metz testified, and the Company verified, that the Public Staff conducted extensive discovery, including numerous data requests and conference calls. He indicated that as part of its investigation, the Public Staff reviewed and considered information in the Company's Root Cause Evaluations (RCEs), which document the Company's investigation of the causes of and contributing factors to specific outages and recommend appropriate corrective actions. He used the RCEs as a "launch point" to "narrow down" the Public Staff's investigation to "specific information." (T. p. 214, In. 2-5) Company witness Stanley indicated that the Nuclear Regulatory Commission (NRC) periodically reviews RCEs to ensure that nuclear licensees are "detecting and correcting problems in a manner that limits the risks to members of the public". (T. p. 226, In. 17-18) Mr. Stanley agreed that the RCEs reviewed by the Public Staff were "quality documents", "full and fair reviews", and "sufficient to

⁵ Finding of Fact No. 6 of the Commission's Order Approving Fuel Charge Adjustment, issued December 22, 2016, in Sub 534, provides:

The Public Staff completed its review of test year plant performance except for the following outages: 1) Surry Unit 1, July 11-22, 2015; 2) Surry Unit 1, October 13 - November 18, 2015; 3) Surry Unit 2, July 13-22, 2015; and Surry Unit 2, December 4-11, 2015. Should any adjustment be appropriate due to these outages, such adjustments will be made in the experience modification factor (EMF) in the 2017 fuel adjustment proceeding.

prevent recurrence of significant conditions adverse to quality”, and that the NRC and the Commission should be able to rely on the information contained within the RCEs. (T. pp. 297, ln. 12-13; 298, ln. 20 – p. 299, ln. 7)

However, as DENC witness Stanley testified, the Company is not trying to determine whether it acted prudently when it conducts RCEs. (T p. 295, ln. 19) Indeed, the RCEs seek to determine root causes, contributing causes, and contributing factors, with each of these terms having specific and specialized definitions prescribed by the Company and industry. See Stanley Cross Exhibits 1 and 2. The terms “root cause,” “contributing cause,” and “direct cause” may be used differently in RCEs than in common parlance or in legal proceedings. For instance, the definition of “contributing cause” used for purposes of RCEs is a “[c]ause important enough to be recognized as needing Corrective Action, but if corrected would not alone have prevented event. Contributing Causes result from analysis of Causal Factors.” (See Stanley Cross Exhibit 1, Procedure PI-AA-300, Revision 15, Section 5.3.12 Contributing Cause.) In contrast, Black’s Law Dictionary defines “contributing cause” as a “generic term used to describe any factor which contributes to a result, though its causal nexus may not be immediate.” Black’s Law Dictionary 297 (5th ed. 1979)

The Commission finds that the RCEs are business records of the Company that can be relied upon by the Commission. They contain relevant information about outages and identify appropriate documents useful to the Public Staff in its investigation. It is reasonable for the Public Staff to rely on the information contained in RCEs, taking into consideration the purpose for which the RCEs were

created, and the specific criteria and guidelines to which they must adhere. While the Company's determination of what constitutes a root, direct, or contributing cause in the RCEs should be given appropriate weight, the Commission is not bound by the Company's conclusions on what the cause or causes of an outage were. Regardless of whether prudence was assessed by the Company in preparing its RCEs, it is appropriate for the Commission to consider information presented to it from the RCEs in its review of the Company's prudence.

Turning to the issue of prudence, the Commission has stated the prudence standard as follows:

...the standard for determining the prudence of the Company's actions should be whether management decisions were made in a reasonable manner and at an appropriate time on the basis of what was reasonably known or reasonably should have been known at that time. The Commission agrees that this is the appropriate standard to be used in judging the various claims of imprudence that have been put forth in this proceeding...and adopts it as the standard to be applied herein. The Commission notes that this standard is one of reasonableness that must be based on a contemporaneous view of the action or decision under question. Perfection is not required. Hindsight analysis -- the judging of events based on subsequent developments — is not permitted.

78 North Carolina Utilities Commission Report, 238 at 251-52 (1988).

In his testimony, Mr. Metz recommended disallowances for the replacement power costs associated with four outages, two in the current test year and two in the Sub 534 test year. These four outages are: **[BEGIN CONFIDENTIAL]** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[illegible]

[illegible]

[illegible]

[REDACTED]

[REDACTED]

[REDACTED] **[END CONFIDENTIAL]** Mr. Metz concluded that these omissions were within the Company's control and avoidable and, but for the omissions, the outage would not have occurred. As such, Mr. Metz recommended that the Commission find that the Company failed to prudently, efficiently, and economically manage the project during the outage and that replacement power costs of \$113,645 should be excluded. (T. p. 99, ln. 13 – p. 100, ln. 8)

In regard to this outage, Company witness Rosenberger contended that

[BEGIN CONFIDENTIAL] [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED] [END

CONFIDENTIAL] rather than direct causes. Mr. Rosenberger stated that these actions (or inactions) were discovered as part of the RCE process, and that the leak could not have been anticipated. (T. p. 242, ln. 9-18) He argued that it was

[BEGIN CONFIDENTIAL] [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

[REDACTED] [END CONFIDENTIAL] The Commission agrees with Mr. Metz that these errors were avoidable given what was known or should have been known at the time, not only in hindsight. Further, the Commission finds that had the Company [BEGIN CONFIDENTIAL] [REDACTED]

[REDACTED] [END CONFIDENTIAL] it is likely that the four day outage at North Anna Unit 2 in July and August 2016 would have been avoided. These failures, in the aggregate, constitute management imprudence and the replacement costs of \$113,645 should be disallowed.

Four-Day Surry Unit 2 Outage, October 9 - 13, 2016

[BEGIN CONFIDENTIAL] [REDACTED]

[REDACTED]

[REDACTED] **[END CONFIDENTIAL]** the outage could have been avoided. He concluded that the outage could have been prevented under efficient management and economic operations and the replacement power costs associated with this outage of \$118,829 should be disallowed. (T. p. 105, ln. 1 - p. 106, ln. 13)

Company witness Rosenberger disagreed with Mr. Metz's conclusion and contended that Mr. Metz **[BEGIN CONFIDENTIAL]** [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [END CONFIDENTIAL] constitutes inefficient management. These errors were avoidable and should have been known by the Company at the time, not only in hindsight. Further, the Commission finds that had the Company [BEGIN CONFIDENTIAL] [REDACTED] [REDACTED] [END

CONFIDENTIAL] it is likely that the four day outage at Surry Unit 2 on October 9 - 13, 2016, would not have occurred. Therefore, the replacement costs of \$118,829 should be disallowed.

11-Day Surry Unit 1 Outage, July, 2015

[BEGIN CONFIDENTIAL]

[REDACTED]

[illegible]

■ [END CONFIDENTIAL]

Mr. Metz testified that the Company was aware of the risk of FME, because it included extra time for pipe flushing in its master outage schedule. However, he pointed out the importance of preventing foreign material from entering the system

⁶ Mr. Metz explained that in reference to a piping system, “non-recoverable” references the fact that after the piping work is complete and connected, it is impossible to inspect for or recover any foreign material that entered the system and removal of foreign material would necessitate a system flush. (T. p. 127, fn. 83)

in the first place, as opposed to flushing it out after it has entered the system. Mr. Metz noted that the flushing may cause foreign material to move within the piping system and cause damage. (T. p. 127, ln. 8 – p. 128, ln. 9)

[BEGIN CONFIDENTIAL] [REDACTED]

[REDACTED]

[REDACTED] **[END CONFIDENTIAL]** He testified

that in his experience with installing pipe, when there is cutting or welding, as occurred in this case, there is a high probability that remnants of or shavings from the pipe will get into the piping system. (T. p. 131, ln. 7 - p. 132, ln. 14) **[BEGIN**

CONFIDENTIAL] [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

⁷ Sections of pipe where there is no flow and are isolated from the piping system.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [END CONFIDENTIAL]

would not have occurred and constitutes inefficient management. Therefore, he recommended that the Commission disallow replacement power costs of \$369,184. (T. p. 152, ln. 5 - 19)

Company witness Rosenberger contended that [BEGIN CONFIDENTIAL]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] **[END CONFIDENTIAL]** The Commission concludes that if the Company had not committed these acts or omissions, the outage likely would not have occurred. The Commission finds that these acts or omissions constitute management inefficiency and that replacement power costs of \$369,184 should be disallowed.

OFFICIAL COPY

Dec 18 2017

48

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[END]

CONFIDENTIAL]

In summary, Mr. Metz stated that he believed that one or a combination of the causes he identified caused or exacerbated the outage. He further noted that all of these causes were within DENC's control and could have been avoided. Therefore, he found that the Company's acts or omissions in connection with this outage constituted management inefficiency and the costs of replacement power of \$1,003,635 should be disallowed. (T. p. 176, ln. 12 – p. 177, ln. 7)

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED] [END

CONFIDENTIAL] In sum, the Commission concludes that the Company did not

exhibit efficient management in regard to this outage and that the replacement power costs should be disallowed.

[BEGIN CONFIDENTIAL]

[REDACTED]

[REDACTED] [END CONFIDENTIAL] the extended outage at Surry Unit 2 would not have occurred. As a result, he recommended that the costs incurred for replacement power during the extended outage of Surry Unit 2 of \$202,603 be disallowed. (T. p. 177, ln. 13 – p. 178, ln. 9)

Company witness Rosenberger contended that the Company's actions in regard to the outage extension should be viewed as a stand-alone case, and noted that the Company's actions to restart Unit 1 as quickly as possible due to the exciter coupling outage reduced outage time by approximately 17.5 days and saved fuel costs. He concluded that the actions of the Company constituted prudent management. (Tr. p. 265, ln. 7 - 20)

The Commission cannot view the refueling outage extension at Surry 2 as a stand-alone incident when it would not have occurred unless the exciter coupling failure outage at Unit 1 had occurred. Certainly, the Company acted prudently in using the equipment from Surry Unit 2 to restart Surry Unit 1 after the outage due to the exciter coupling failure. This is an example of efficient management, a standard that the Company is expected to meet. However, these replacement power costs would have been incurred regardless of whether the Surry Unit 1 forced outage was shortened or this Surry Unit 2 refueling outage was extended. The Commission finds that as it has determined that the exciter coupling outage at Surry 1 occurred due to inefficient management so that the associated replacement power costs should be disallowed, the replacement power costs of \$202,603 associated with this outage extension at Surry Unit 2 should also be disallowed.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 9

The evidence for this finding of fact is contained in the direct testimony of Company witness Petrie, the rebuttal testimony of Company witnesses Stanley and Petrie, and the testimony and exhibits of Public Staff witness Metz.

Company witness Petrie testified in his direct testimony regarding the average equivalent availability of the Company's large coal-fired units, and in both his direct and rebuttal testimony about the capacity factors achieved by the Company's nuclear units. Company witness Stanley described the Company's

nuclear performance as “superior” and noted that this performance reduced fuel costs.

Public Staff witness Metz testified that in reviewing plant performance in Sub 546, he examined the Company’s reported outages in the test period and requested further details on several of the outages. After this further review, he determined that costs associated with the two Sub 546 outages discussed in the prior finding of fact should be disallowed. Besides these two outages, Mr. Metz did not note any other instances of management imprudence.

As discussed above in the prior finding of fact, the Commission has found that the four Sub 534 (and refueling outage extension) and Sub 546 outages could have been avoided and were due to imprudent management. Except for the specific outages at North Anna Unit 2 and Surry Units 1 and 2 addressed above, the Commission finds that Company’s baseload plants were managed prudently and efficiently so as to minimize fuel and fuel-related costs.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 10 - 11

The evidence for these findings of fact is contained in the rebuttal testimony of Company witness Petrie, the testimony and exhibits of Public Staff witness Metz, and the affidavit and exhibits of Public Staff witness Johnson.

Public Staff witness Metz testified that in this proceeding, the Company calculated its North Carolina replacement power costs for each unit by taking the difference between the variable costs for a unit in an outage and the actual market

price for power, then deducting 2% of the costs until a unit's forced outage allowance was met, and allocating the appropriate portion to North Carolina. As indicated by Mr. Metz, DENC establishes a cap for each unit, so that DENC recovers all replacement power costs for any number of outages for a particular unit until the unit's cap is met. Mr. Metz testified that while it was reasonable to use a 2% forced outage rate for planning, it is not reasonable for the Company to deduct a 2% forced outage allowance from its replacement power costs. He noted that the Company has the responsibility to operate its plants in a reasonable and prudent manner. If an outage is due to inefficient management, Mr. Metz argued that ratepayers should not bear the costs of the replacement power.

Mr. Metz calculated the costs of the replacement power associated with the Subs 534 and 546 outages discussed in Finding of Fact 8 without applying the 2% forced outage allowance and recommended that total replacement power costs of \$1,807,896 on a North Carolina retail basis be excluded from cost recovery. Public Staff witness Johnson incorporated Mr. Metz's recommendation into her calculations of Rider B.

In his rebuttal testimony, Company witness Petrie generally agreed with Public Staff witness Metz's description of replacement power costs and the Company's method of calculation. He presented the Company's calculations of replacement power costs for the Sub 534 and 546 outages with and without the 2% forced outage allowance. DENC's calculation of replacement power costs for these outages without application of the 2% forced outage allowance are \$55,567 lower than those calculated by Mr. Metz. In regard to the Sub 546 outages,

because of the application of the 2% forced outage allowance, DENC contended it had no replacement power costs, as the costs fell within the 2% cap for each unit. Mr. Petrie contends that without the 2% forced outage allowance, the Company would be held to a standard of perfection. Mr. Petrie notes that the forced outage allowance was used in the 2011 and 2013 fuel proceedings and was not challenged by the Public Staff.

It appears to the Commission that not only has DENC provided itself with a forced outage allowance over time without bringing the issue to the Commission's attention, much less seeking Commission approval, it has changed its methodology. Examination of Petrie Rebuttal Cross Exhibit 1, a chart of replacement costs for North Anna and Surry filed November 15, 2011, in Docket E-22, Sub 474, indicates that in that fuel proceeding, DENC's methodology was to determine the replacement costs for each non-weather related outage at each North Anna and Surry unit, deduct 2% across the board without application of a cap per unit, and then allocate the costs to North Carolina based on the jurisdictional allocation factor.

Mr. Petrie contends that Public Staff witness Metz believes that DENC's operations should be compared to perfect operations. As has been noted by the Commission, this is not the case. Mr. Metz testified that reviewed a number of forced outages for fossil and nuclear plants in Subs 534 and 546 and did not recommend disallowance of any replacement power costs beyond the four outages (and refueling outage extension) discussed *supra*. He did not apply a standard of perfection. The Commission agrees with Mr. Metz that DENC's use of

a 2% forced outage rate is a reasonable assumption for planning purposes, but an unreasonable assumption for cost recovery purposes. If the Commission finds that some replacement power costs were unreasonably or imprudently incurred, the Commission cannot put those costs into rates, regardless of whether they fall within the planned 2% forced outage rate. The Commission certainly may consider the forced outage rate attained by the Company in its deliberations on this point, but the Commission is not bound by and should not bind itself to any particular number, but should look at each case on its individual circumstances.

At the hearing through additional rebuttal testimony, DENC Petrie identified an affidavit (Petrie Rebuttal Exhibit 1) filed by Public Staff witness Kennie Ellis on November 4, 2013, in Docket No. E-22, Sub 502. On page 10 of that affidavit, Mr. Ellis states that “Public Staff Witness Johnson also has reviewed the 2% cap calculation pursuant to G.S. § 62-133.2 and also agrees with that calculation.” By submitting this affidavit, DENC was attempting to show that the Public Staff was aware of DENC’s method of applying a 2% forced outage allowance in its calculation of replacement power. In fact, this affidavit shows nothing of the sort. First, it is unclear what 2% cap calculation in G.S. 62-133.2 the affidavit references. G.S. 62-133.2 does not reference replacement power calculations, so it is unclear how DENC’s 2% forced outage allowance could be reviewed pursuant to this statute. Second, despite Mr. Ellis’ affidavit’s statement referring to Ms. Johnson’s review of the cap calculation and her agreement, the Affidavit of Sonja R. Johnson, which is also included in Petrie Rebuttal Exhibit 1, makes no mention of a 2% cap calculation, much less her agreement with it.

The Commission notes that on page 11 of Mr. Ellis' affidavit in Docket No. E-2, Sub 1001, filed on September 15, 2011, Mr. Ellis used almost the exact language as in Petrie Rebuttal Exhibit 1, stating, "Public Staff Witness Edwards also has reviewed the 2% cap calculation pursuant to G.S. § 62-133.2 and also agrees with that calculation." On pages 2 and 3 of Mr. Edwards' affidavit filed with Mr. Ellis' affidavit, Mr. Edwards discusses the "2% cap on cost recovery imposed by G.S. 62-133.2(a2)", not the calculation of replacement power costs. Mr. Ellis uses the same language on page 11 of his testimony filed in Duke Energy Progress, LLC's (DEP) 2012 fuel proceeding in Docket No. E-2, Sub 1018 (Sub 1018). Review of Mr. Edwards' affidavit filed in Sub 1018 references the 2% cap imposed by G.S. 62-133.2(a2), not replacement power cost calculations. The Commission further notes that the 2% cap on cost recovery imposed by G.S. 62-133.2(a2) is not applicable to DENC. Thus, it appears that Mr. Ellis' reference to a 2% cap in his affidavit in Docket No. E-22, Sub 502, was an error, and does not show that the Public Staff was aware of DENC's practice of applying a 2% forced outage allowance before the 2016 fuel proceeding.⁸

Further, while the Commission has found that the Public Staff was not aware of DENC's methodology for calculating the cost of replacement power before 2016, it is immaterial when the Public Staff first learned of the practice. The Public Staff is not estopped from challenging this methodology in this proceeding, nor is the Commission estopped from finding that this methodology is inappropriate

⁸ The Commission hereby takes judicial notice of Docket No. E-2, Subs 1001 and 1018.

for calculation of replacement power costs. Costs of replacement power that were not reasonably and prudently incurred should not be included in rates. G.S. 62-133.2(d) requires that “only that portion, if any, of a requested cost of fuel and fuel-related costs adjustment that is based on adjusted and reasonable cost of fuel and fuel-related costs prudently incurred under efficient management and economic operations” be allowed in rates. Therefore, the Commission finds that it is inappropriate for DENC to apply a 2% forced outage allowance for calculation of replacement power costs. DENC should calculate its replacement power costs by taking the difference between the variable costs for a unit in an outage and the actual market price for power (the Day-Ahead Dom Zone LMP).

The Commission finds that the replacement power costs for the Sub 534 and 546 outages as calculated by Mr. Metz are reasonable, along with the interest as calculated by Public Staff witness Johnson. Therefore, it is appropriate for DENC to forgo recovery of an N.C. retail allocated amount of \$232,474 of replacement power fuel expenses incurred during the test year due to outages at North Anna Unit 2 from July 30, 2016, through August 3, 2016, and at Surry Unit 2 from October 9, 2016, through October 13, 2016, \$1,575,422 of replacement power fuel expenses incurred during the test year due to outages at Surry Unit 1 from July 11 - 22, 2015, and October 13 - November 18, 2015, and at Surry Unit 2 from December 4 - 11, 2015.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 12

The evidence for this finding of fact is contained in the direct testimony of DENC witness Petrie and the testimony and exhibits of Public Staff witness Metz.

Company witness Petrie testified in his direct testimony that, for the 12 months ending December 31, 2018, the projected net capacity factor for each nuclear unit is as follows: North Anna Unit 1, 90.4%; North Anna Unit 2, 99.6%; Surry Unit 1, 93.1%; and Surry Unit 2, 91.1%. For the nuclear fleet, the projected nuclear generation during the upcoming rate year is expected to be slightly higher than the actual generation during the test period. Based on this projection, the Company has normalized expected nuclear generation and fuel expenses in developing the proposed fuel cost rider. DENC's projected fuel costs are based on a 93.54% nuclear capacity factor, which is what DENC anticipates for the twelve months from January 1, 2018 through December 31, 2018, the period the new rates will be in effect.

Based on the foregoing evidence, the Commission concludes that a projected normalized system nuclear capacity factor of 93.54% is reasonable and appropriate for use in this proceeding.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 13

The evidence for this finding of fact is contained in the direct testimony of DENC witness Merritt and the testimony of Public Staff witness Metz.

Witness Merritt testified that he was sponsoring the calculation of the adjustment to the Company's system sales for the twelve months ended June 30, 2017, due to changes in usage, weather normalization, and customer growth, in accordance with Commission Rule R8-55(d)(2). The Company's filing further stated that the methodology used for the normalization is the same as adopted by the Commission in Docket No. E-22, Sub 532, the Company's last general rate case. Witness Merritt adjusted total Company sales by 996,840,129 kWh. This adjustment is the sum of adjustments for changes in usage, weather normalization, and customer growth. The Public Staff reviewed and accepted these adjustments. No other party offered or elicited testimony on these adjustments.

Based on the foregoing, the Commission concludes that the adjustments for changes in usage, weather normalization, and customer growth are reasonable and appropriate adjustments for use in this proceeding. The adjusted system sales for the twelve months ended June 30, 2017, are 84,774,563,328 kWh.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 14

The evidence for this finding of fact is contained in the direct testimony of Company witness Petrie.

DENC witness Petrie presented an adjustment to per book MWh generation for the 12-month period ended June 30, 2017, to incorporate nuclear generation based upon the expected future operating parameters for each unit. Other sources of generation were then normalized, including an adjustment for weather, customer growth, and increased usage. This methodology for normalizing test period generation resulted in an adjusted generation level of 85,796,167 MWh. The Public Staff accepted this adjusted generation level, which includes various types of generation as follows:

<u>Generation Types</u>	<u>MWh</u>
Nuclear	27,442,508
Coal (Including wood & natural gas steam)	20,939,580
Heavy Oil	191,548
Combined Cycle and Combustion Turbine	29,207,250
Hydro – Conventional and Pumped Storage	3,106,119
Solar	49,093
Net Power Transactions	7,472,692
Less: Energy for Pumping	(2,563,530)

No other party offered or elicited testimony on the adjusted test period system generation for use in this proceeding. Thus, based on the foregoing, the Commission concludes that the adjusted test period system generation level of 85,796,167 MWh is reasonable and appropriate for use in this proceeding.

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 15

The evidence for this finding of fact is contained in the direct testimony of DENC witness Campbell and the affidavit of Public Staff witness Johnson.

Company witness Campbell explained that for dispatchable non-utility generators (NUGs) that do not provide actual fuel costs, the Company continues to include 85% of the reasonable and prudent energy and market-based energy costs in the EMF calculation through December 31, 2016. Beginning in 2017, the Company used the 78% marketer's percentage approved by the Commission in Sub 534.

Public Staff witness Johnson explained that during the test period, DENC purchased power through markets administered by PJM Interconnection, LLC (PJM), and from a dispatchable NUG that did not provide DENC with the actual fuel costs associated with the purchases. As a result, a proxy marketer percentage was determined and applied to the total energy costs of the purchases. Witness Johnson also explained that the use of a "proxy" has been accepted by this Commission as reasonable in every fuel proceeding since 1997. She explained that use of the 85% "marketer's percentage" was agreed to between the Company and the Public Staff and approved by the Commission in the Company's 2012 fuel factor proceeding, Docket No. E-22, Sub 485, and was maintained up through the 2015 fuel factor proceeding, Docket No. E-22, Sub 526. Beginning in 2017, the Company used the 78% marketer's percentage as approved by the Commission in the Company's 2016 general rate case in Docket No. E-22, Sub 532. The 78%

marketer percentage is to remain in effect until the sooner of DENC's next general rate case or the 2018 fuel charge adjustment proceeding. No party disputed the use of the 85% marketer percentage through December 31, 2016, or the use of the 78% marketer percentage thereafter in this proceeding or the use of actual fuel costs as described by the Company.

Based upon the foregoing, the Commission concludes that it is reasonable to apply an 85% marketer percentage through December 31, 2016, and a 78% marketer percentage thereafter to DENC's purchases from suppliers that do not provide the Company with actual fuel costs as the proxy for actual fuel costs associated with such purchases in this proceeding, and that the percentage should be reviewed in the context of DENC's next general rate case or its 2018 fuel charge adjustment proceeding, whichever occurs first.

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 16 - 17

The evidence for these findings of fact is contained in the direct testimony and exhibits of Company witnesses Petrie and Merritt, and the testimony and exhibits of Public Staff witness Metz.

Company witness Petrie presented the Company's system fuel expense for the test period and the normalized system fuel expenses projected for the calendar year 2018 rate period of \$1,758,608,978. He further testified that the fuel overrecovery experienced by the Company was driven by mild weather, moderate commodity prices, and the addition of new natural gas generation. He testified that he normalized fuel expenses using a methodology approved in previous North

Carolina fuel rate cases. More specifically, the expense rates for nuclear, coal, oil, and NUGs were based on the actual 12-month average expense rates incurred during the test period. Various adjustments were made, as itemized in witness Petrie's testimony.

Company witness Merritt presented the Company's calculation of the Fuel Cost Rider A applicable for each North Carolina retail jurisdiction customer class. He first determined the average system fuel factor of 2.077¢/kWh, based on system fuel expenses of \$1,758,608,978, and system sales of 84,774,563,328 kWh, that reflected adjustments for changes in usage, weather normalization, and customer growth. Mr. Merritt then used customer class expansion factors to determine the North Carolina retail jurisdictional voltage differentiated prospective fuel factors at the sales level applicable to each customer class. For each customer class, the appropriate factor was then compared to its corresponding base fuel factor to determine the appropriate Fuel Cost Rider A rate. In his testimony, Public Staff witness Metz stated that, based upon its investigation, the Public Staff determined that the projected fuel costs and the prospective components of the total fuel factor (Rider A), as set forth in the application, were calculated appropriately for this proceeding.

No other party offered or elicited testimony on the adjusted test period system fuel expense for use in this proceeding. Based upon the foregoing, the Commission concludes that the appropriate level of fuel expenses to be used to set the prospective, or forward-looking, fuel factor in this proceeding is \$1,758,608,978.

The Commission further concludes that the proper fuel factors (Rider A) for use in this proceeding, including the regulatory fee, are as follows:

<u>Customer Class</u>	<u>Rider A (in ¢/kWh)</u>
Residential	\$0.00006
SGS & PA	\$0.00006
LGS	\$0.00003
NS	\$0.00006
6VP	\$0.00006
Outdoor Lighting	\$0.00006
Traffic	\$0.00006

EVIDENCE AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 18 - 20

The evidence supporting these findings of fact is contained in the direct testimony and exhibits of DENC witnesses Merritt and Petrie, the testimony and exhibits of Public Staff witness Metz, and the affidavit and exhibits of Public Staff witness Johnson.

To determine the EMF (Rider B), Company witness Merritt testified that he took the total overrecovered fuel expense, for the period July 1, 2016, through June 30, 2017, of \$4,739,956, added \$710,993 in interest, and then divided this fuel costs overrecovery of \$5,450,950 by the adjusted jurisdictional test period sales of 4,299,466,351 kWh. He then used customer class expansion factors to differentiate the uniform factor by voltage to determine the North Carolina retail jurisdictional voltage differentiated EMF fuel factors at the sales level applicable to each customer class to arrive at the following rates:

<u>Customer Class</u>	<u>Rider B (in ¢/kWh)</u>
Residential	(\$0.00128)
SGS & PA	(\$0.00128)
LGS	(\$0.00127)
NS	(\$0.00123)
6VP	(\$0.00125)
Outdoor Lighting	(\$0.00128)
Traffic	(\$0.00128)

Public Staff witness Johnson testified that based on the recommendation of Public Staff witness Metz to disallow \$1,807,896 in replacement power costs associated with outages during the prior and current test periods, she calculated the fuel cost overrecovery to be \$6,547,853, with interest of \$982,178, for a total over-recovery of \$7,530,031. She did not propose any change to the Company's pro-forma North Carolina retail sales of 4,299,466,351 kWh proposed by DENC witness Merritt. The Public Staff's revision to account for the disallowance of replacement power costs and the applicable interest produces an EMF decrement rider (Rider B) of 0.00175 cents per kWh. As shown on Metz Exhibit 4a, the Public Staff's proposed North Carolina retail jurisdictional voltage differentiated EMF fuel factors at the sales level applicable to each customer class produce the following rates:

<u>Customer Class</u>	<u>Rider B (in ¢/kWh)</u>
Residential	(\$0.00177)
SGS & PA	(\$0.00177)
LGS	(\$0.00175)
NS	(\$0.00170)
6VP	(\$0.00172)
Outdoor Lighting	(\$0.00177)
Traffic	(\$0.00177)

Based upon the findings and conclusion herein, the Commission concludes that the appropriate North Carolina test period jurisdictional fuel expense overcollection is \$7,530,031 and that the adjusted North Carolina jurisdictional test period sales are 4,299,466,351 kWh for computing the EMF (Rider B). Therefore, as shown on Metz Exhibit 4a, the Public Staff's proposed North Carolina retail jurisdictional voltage differentiated EMF fuel factors at the sales level applicable to each customer class produce the following rates:

<u>Customer Class</u>	<u>Rider B (in ¢/kWh)</u>
Residential	(\$0.00177)
SGS & PA	(\$0.00177)
LGS	(\$0.00175)
NS	(\$0.00170)
6VP	(\$0.00172)
Outdoor Lighting	(\$0.00177)
Traffic	(\$0.00177)

In the 2014 fuel charge proceeding in Docket No. E-22, Sub 515, the Commission found that it was appropriate to accept the Company's mitigation proposal to have rates established in the 2014 proceeding to recover test period fuel expense undercollection in the 2015 and 2016 fuel years, without interest. The two-year term of Rider B2 expired at the end of 2016, therefore, the proposed fuel charges that were effective on January 1, 2017, did not have a Rider B2. However, the mitigation proposal provided that Rider B2 was subject to a final true-up to be determined in the 2017 fuel case and recovered over the 2018 fuel year.

In his Exhibits, Company witness Merritt set forth the appropriate fuel expense underrecovery trueup related to the approved mitigation plan in the amount of \$381,535, which was divided by the North Carolina jurisdictional test period sales of 4,299,466,351 kWh to determine the EMF Rider B2. Witness Merritt then used customer class expansion factors to differentiate the uniform factor by voltage to determine the North Carolina retail jurisdictional voltage differentiated EMF Rider B2 fuel factors at the sales level applicable to each customer class. For each class, the EMF Rider B2 fuel factor was calculated to be \$0.00009. No party disputed the Company's calculation of Rider B2. The Commission concludes that it is appropriate to implement the true up of any underrecovery of this mitigation proposal EMF Rider B2 in this docket.

The appropriate EMF Rider B for this proceeding, including the regulatory fee, is as follows:

<u>Customer Class</u>	<u>EMF Billing Factor</u>
Residential	(0.177) ¢/kWh
SGS & PA	(0.177) ¢/kWh
LGS	(0.175) ¢/kWh
NS	(0.170) ¢/kWh
6VP	(0.172) ¢/kWh
Outdoor Lighting	(0.177) ¢/kWh
Traffic	(0.177) ¢/kWh

The appropriate EMF Rider B2 for this proceeding, including the regulatory fee, is as follows:

<u>Customer Class</u>	<u>EMF Billing Factor</u>
Residential	0.009 ¢/kWh
SGS & PA	0.009 ¢/kWh
LGS	0.009 ¢/kWh
NS	0.009 ¢/kWh
6VP	0.009 ¢/kWh
Outdoor Lighting	0.009 ¢/kWh
Traffic	0.009 ¢/kWh

EVIDENCE AND CONCLUSIONS FOR FINDING OF FACT NO. 21

The evidence supporting this finding of fact is cumulative and is contained in the direct testimony and exhibits of DENC witnesses Merritt, Petrie, Campbell, Brookmire, and Workman, the testimony and exhibits of Public Staff witness Metz, and the affidavit and exhibits of Public Staff witness Johnson.

Based upon the above findings and conclusions, the Commission finds and concludes that the final net fuel factors (¢/kWh) are determined as follows (including the regulatory fee):

<u>Customer Class</u>	<u>Total Net Fuel Factor</u>
Residential	1.933 ¢/kWh
SGS & PA	1.931 ¢/kWh
LGS	1.916 ¢/kWh
Schedule NS	1.859 ¢/kWh
6VP	1.886 ¢/kWh
Outdoor Lighting	1.933 ¢/kWh
Traffic	1.933 ¢/kWh

OTHER MATTERS

In his testimony, Mr. Metz noted the shorter time for investigation of for review of DENC's fuel proceeding than those of Duke Energy Carolinas, LLC (DEC) and DEP, as well as delays experienced in the Public Staff's investigation of DENC's fuel case due to discovery disputes and unavailability of Company personnel due to refueling outages. To avoid delays, the Public Staff requested that the Commission require DENC to provide completed RCEs semi-annually, as do DEC and DEP. (T. p. 189, ln. 6 – p. 190, ln. 17).

The Commission finds this request to reasonable and will order the Company to provide completed RCEs to the Public Staff every six months, beginning on a date as agreed upon with the Public Staff. The Commission notes that the Public Staff should have access to DENC's business records as is reasonable pursuant to G.S. 62-51. This access should include review of RCEs.

IT IS, THEREFORE, ORDERED as follows:

1. That effective beginning with usage on and after January 1, 2018, DENC shall implement a Rider A increment as approved and set forth in the Evidence and Conclusions for Finding of Fact No. 17 above.

2. That an EMF Rider increment (Rider B) as approved and set forth in the Evidence and Conclusions for Findings of Fact Nos. 18 - 19 above, shall be instituted and remain in effect for usage from January 1, 2018, through December 31, 2018.

3. That an EMF Rider increment (Rider B2) related to the mitigation plan as approved and set forth in the Evidence and Conclusions for Findings of Fact No. 20 above, shall be instituted and remain in effect for usage from January 1, 2018, through December 31, 2018.

4. That DENC shall file appropriate rate schedules and riders with the Commission in order to implement the fuel charge adjustments approved herein no later than five working days from the date of receipt of this Order.

5. That DENC shall work with the Public Staff to prepare a joint proposed Notice to Customers of the rate adjustment ordered by the Commission, and the Company shall file such proposed notice for Commission approval as soon as practicable.

6. That DENC shall provide completed RCEs to the Public Staff every six months, beginning on a date as agreed upon with the Public Staff.

ISSUED BY ORDER OF THE COMMISSION.

This, the _____ day of December, 2017.

NORTH CAROLINA UTILITIES COMMISSION

M. Lynn Jarvis, Chief Clerk