

THE OFFICE OF REGULATORY STAFF

DIRECT TESTIMONY AND EXHIBITS

OF

MICHAEL L. SEAMAN-HUYNH

JUNE 2, 2011



DOCKET NO. 2011-1-E

**ANNUAL REVIEW OF BASE RATES FOR FUEL COSTS
OF CAROLINA POWER & LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.**

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DIRECT TESTIMONY OF
MICHAEL L. SEAMAN-HUYNH
ON BEHALF OF
THE SOUTH CAROLINA OFFICE OF REGULATORY STAFF
DOCKET NO. 2011-1-E
IN RE: ANNUAL REVIEW OF BASE RATES FOR FUEL COSTS OF
CAROLINA POWER AND LIGHT COMPANY
d/b/a PROGRESS ENERGY CAROLINAS, INC.

Q. PLEASE STATE YOUR NAME, BUSINESS ADDRESS AND OCCUPATION.

A. My name is Michael Seaman-Huynh. My business address is 1401 Main Street, Suite 900, Columbia, South Carolina 29201. I am employed by the State of South Carolina as a Senior Electric Utilities Specialist in the Electric Department for the Office of Regulatory Staff (“ORS”).

Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

A. I received a Bachelor of Arts Degree from the University of South Carolina in 1997. Prior to my employment with ORS, I was employed as an energy analyst with a private consulting firm. I joined ORS in 2006 as an Electric Specialist and was promoted to Senior Electric Specialist in 2010. I have testified on several occasions before this Commission in conjunction with fuel clause proceedings.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

A. The purpose of my testimony is to set forth ORS Electric Department’s findings and recommendations resulting from its review of Carolina Power & Light Company

1 d/b/a Progress Energy Carolinas, Inc.'s ("PEC" or "Company") fuel expenses and power
2 plant operations used in the generation of electricity to meet the Company's South
3 Carolina retail customer requirements during the review period. The review period
4 includes actual data for March 2010 through February 2011, estimated data for March
5 2011 through June 2011, and forecasted data for July 2011 through June 2012.

6 **Q. WHAT AREAS WERE ENCOMPASSED IN YOUR REVIEW OF THE**
7 **COMPANY'S FUEL EXPENSES?**

8 **A.** ORS examined various fuel and performance related documents as part of its
9 review. The information reviewed addressed various energy generation and power plant
10 maintenance activities. In preparation for this proceeding, ORS analyzed the Company's
11 monthly fuel reports including power plant performance data, unit outages and generation
12 statistics. ORS evaluated nuclear fuel, coal, natural gas, fuel oil, fuel transportation and
13 purchased power contracts and the reagent related contracts for ammonia and limestone.
14 ORS also evaluated the Company's policies and procedures for fuel procurement. All
15 information was reviewed with reference to the Company's existing Adjustment for Fuel
16 and Variable Environmental Costs Rider and the Fuel Clause statute.

17 **Q. WHAT ADDITIONAL STEPS WERE TAKEN IN ORS'S REVIEW OF THE**
18 **COMPANY'S REQUEST IN THIS PROCEEDING?**

19 **A.** ORS met with Company personnel from various departments including Power
20 System Operations, Regulated Fuels and Transportation, Natural Gas and Oil
21 Procurement, Nuclear Fuel Supply, Nuclear Engineering, and Fuel Forecasting. These
22 meetings occurred at ORS offices as well as the Company's headquarters in Raleigh, NC.
23 Also, ORS reviewed documentation of natural gas purchases for operation of the

1 Company's natural gas fueled generating facilities. In addition, ORS keeps abreast of the
2 coal and natural gas industries including transportation through industry publications on a
3 daily basis. During this review period, ORS attended the Nuclear Regulatory
4 Commission ("NRC") annual inspection meeting for the H.B. Robinson nuclear
5 generation station. ORS also conducted an on-site visit of the Company's Energy
6 Control Center in Raleigh.

7 **Q. DID ORS EXAMINE THE COMPANY'S PLANT OPERATIONS FOR THE**
8 **REVIEW PERIOD?**

9 **A.** Yes. ORS reviewed the Company's performance of its generating facilities to
10 determine if the Company made reasonable efforts to minimize fuel costs. ORS also
11 reviewed the availability and capacity factors of the Company's power plants. Exhibit
12 MSH-1 shows in percentages the monthly availability factors of the Company's major
13 generating units. The corresponding capacity factors in Exhibit MSH-2 indicate the
14 monthly utilization of each unit in producing power.

15 **Q. PLEASE EXPLAIN THE SIGNIFICANCE OF PLANT AVAILABILITY AND**
16 **HOW IT IS USED IN YOUR EVALUATION OF THE COMPANY'S PLANT**
17 **PERFORMANCE.**

18 **A.** Exhibits MSH-3 and MSH-4 show the Company's major fossil and nuclear units'
19 summary of outages for the review period, respectively. With reference to Exhibit MSH-
20 1, months where generation units show zero availability as well as those months showing
21 less than 100% availability led ORS to examine the reasons for such occurrences.
22 Exhibits MSH-1 through MSH-4 should be used in concert to evaluate the Company's
23 plant operations. As an example, Exhibit MSH-1 shows Roxboro Unit #2 had 0.0%

1 availability in April 2010. Exhibit MSH-2 shows that the capacity during that same time
2 period was also 0.0%. Exhibit MSH-3, page 1 of 2, indicates the reason for this as being
3 the scheduled Spring outage between March 20, 2010 and May 19, 2010; therefore, the
4 unit was not available to generate electricity during this time frame.

5 **Q. WOULD YOU EXPLAIN HOW THE OTHER OUTAGES ARE REPRESENTED**
6 **ON EXHIBITS MSH-3 AND MSH-4?**

7 **A.** Yes. Exhibit MSH-3 provides explanations for major fossil unit outages of 100
8 hours or greater. While not all plant outages were included in this exhibit, all outages
9 were reviewed by ORS. Exhibit MSH-4 provides explanations for all nuclear plant
10 outages during the review period.

11 **Q. PLEASE ADDRESS THE OUTAGES AT THE COMPANY'S THREE NUCLEAR**
12 **STATIONS.**

13 **A.** Exhibit MSH-4 shows the duration, type, and cause of the outages at the
14 Company's three nuclear stations. These include three refueling outages, two refueling
15 outage extensions, and four forced outages. Including these outages, the three nuclear
16 stations, consisting of four units, achieved an overall 81.0% availability factor and 83.0%
17 capacity factor for the review period.

18 **Q. DID ORS REVIEW THE COMPANY'S GENERATION MIX DURING THE**
19 **REVIEW PERIOD?**

20 **A.** Yes. Exhibit MSH-5 shows the megawatt-hour ("MWh") generation mix for the
21 review period by generation type. As shown in this exhibit, the baseload coal and nuclear
22 plants contributed 84.7% of the generation throughout the review period. The combined-
23 cycle and combustion turbine natural gas-fired plants contributed 7.8% of the generation.

1 The remainder of the generation was met through a mix of hydro-electric and purchased
2 power.

3 **Q. DID ORS EXAMINE THE COMPANY'S FUEL COSTS ON A PLANT-BY-
4 PLANT BASIS?**

5 **A.** Yes. Exhibit MSH-6 shows the Company's average fuel costs by generating plant
6 on the Company's system for the review period and the MWhs produced by these plants.
7 ORS's review revealed the lowest average fuel cost of 0.605 cents per kilowatt-hour
8 ("kWh") at the Brunswick Nuclear Station, and the highest average period fuel cost of
9 4.809 cents per kWh at the Weatherspoon coal-fired units. The Company utilizes
10 economic dispatch which generally requires that the lower cost units are dispatched first.

11 **Q. HAS ORS REVIEWED THE COMPANY'S HEDGING PRACTICES FOR
12 NATURAL GAS?**

13 **A.** Yes, ORS annually reviews the monthly gains and losses from PEC's natural gas
14 hedging programs. ORS also reviews the Company's policies and procedures on natural
15 gas hedging. During the review period, PEC hedged approximately 40% of the natural
16 gas purchased.

17 **Q. WHAT IS THE IMPACT OF THE COMPANY'S NATURAL GAS HEDGING
18 PROGRAMS TO CONSUMERS?**

19 **A.** To determine the impact of the Company's natural gas hedging, ORS examined
20 several factors. First, ORS determined the average percentage of the Company's
21 generation that is fueled by natural gas. As seen in Exhibit MSH-5, generation from
22 natural gas attributed less than 8% of the Company's generation on average. Of this 8%
23 of natural gas generation, PEC hedged approximately 40% of the fuel purchased.

1 Secondly, ORS reviewed the impact of fuel costs in relation to the customer's
2 overall bill. The Company's current approved residential fuel factor is \$0.02787/kWh.
3 For a residential customer using 1,000 kWh a month, this equates to \$27.87 monthly.
4 Currently, that same residential customer's average monthly bill is \$99.15. Therefore,
5 the fuel used in generation makes up approximately 28% of a residential customer's
6 monthly bill.

7 Considering the aforementioned factors, ORS determined that during the review
8 period, PEC hedged the natural gas fuel costs for roughly three percent of its overall
9 system generation. Since fuel makes up approximately 28% of the customers overall bill,
10 this means the Company's natural gas hedging had an impact on approximately 0.896%
11 of the customer's bill. Given this small percentage, ORS concluded that PEC's natural
12 gas hedging had a diminutive impact to the typical customer overall.

13 **Q. DOES ORS HAVE ANY RECOMMENDED CHANGES TO THE COMPANY'S**
14 **HEDGING PROGRAMS?**

15 **A.** No, ORS does not recommend any changes to the Company's hedging programs
16 at this time. However, ORS recommends that the Company continue to monitor and
17 evaluate its hedging programs and make adjustments to these programs as market
18 conditions change.

19 **Q. HAS ORS REVIEWED THE ACCURACY OF THE COMPANY'S FORECAST?**

20 **A.** Yes. As shown in Exhibit MSH-7, the Company's actual MWh sales versus
21 estimated sales were 3.91% higher than expected during the review period. In addition,
22 Exhibit MSH-8 shows the monthly variance between projected and actual fuel cost for

1 the review period. This exhibit shows the cumulative average projected fuel cost level
2 for the period was 6.49% above the actual resulting cost level.

3 **Q. WHAT OTHER REVIEWS HAS ORS UTILIZED IN MAKING ITS**
4 **DETERMINATIONS IN THIS PROCEEDING?**

5 **A.** Exhibit MSH-9 shows the actual ending balances of over and under- collections
6 of fuel costs beginning December 1979. The Company has experienced over-recovery
7 and under-recovery balances since December 1979. As of February 2011, the Company
8 recorded a cumulative under-recovery of (\$10,418,111).

9 **Q. WHAT OTHER SOURCES DOES ORS USE IN DETERMINING THE**
10 **REASONABLENESS OF THE COMPANY'S REQUEST?**

11 **A.** ORS routinely 1) reviews private and public industry publications as well as those
12 available on the Energy Information Administration's ("EIA") website; 2) conducts
13 meetings with Company personnel; 3) attends industry conferences; and 4) reviews fuel
14 information as filed monthly by electric generating utilities with the Federal Government.
15 An example of EIA data reviewed is included on Exhibits MSH-10 and MSH-11.
16 Exhibit MSH-10 provides spot coal price data for a three-year period and includes the
17 steady rise in prices since mid-2009 for both Northern and Central Appalachian Coal.
18 PEC generally obtains its coal from the Central Appalachia region. Exhibit MSH-11
19 provides uranium price data for the previous fifteen-year period and shows a significant
20 increase in the price of uranium since 2006.

21 **Q. HAS ORS DETERMINED THE CORE CAUSES OF THE COMPANY'S**
22 **REQUEST FOR AN INCREASE IN THE FUEL FACTOR ASSOCIATED WITH**
23 **THIS PROCEEDING?**

1 A. Yes. Through the review process, ORS concluded the primary drivers causing the
2 increase in the fuel factor are increases in the price of coal and coal transportation and the
3 recovery of the Company's under-collected balance, as shown in Exhibit MSH-9.

4 **Q. WHAT IMPACT WILL THE COMPANY'S PROPOSED INCREASE HAVE ON**
5 **A RESIDENTIAL CUSTOMER'S BILL?**

6 A. The fuel factor proposed by the Company would increase the average monthly bill
7 for a residential customer using 1000 kWh from \$99.15 to \$102.86, or approximately
8 3.73%.

9 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

10 A. Yes, it does.

**Office of Regulatory Staff
Power Plant Performance Data Report
Availability Factors (Percentage) for
Progress Energy Carolinas, Inc.
Docket # 2011-1-E**

PLANT	UNIT	MW RATING	HISTORICAL DATA			REVIEW PERIOD (ACTUAL) DATA												Average Review Pd.	
			YEAR 2008	YEAR 2009	YEAR 2010	MAR 2010	APR 2010	MAY 2010	JUN 2010	JUL 2010	AUG 2010	SEP 2010	OCT 2010	NOV 2010	DEC 2010	JAN 2011	FEB 2011		
BRUNSWICK	1 ¹	938	84.1	95.9	81.3	0.0	6.8	86.4	98.6	98.8	99.6	100.0	98.1	100.0	97.4	100.0	98.7	82.0	
	2 ²	920	95.0	78.0	97.4	99.2	100.0	96.2	100.0	100.0	100.0	97.6	99.9	99.2	98.7	99.8	99.9		99.2
	1 ³	900	97.1	91.6	87.5	100.0	99.6	100.0	100.0	100.0	100.0	99.4	2.8	49.2	99.9	99.5	98.7		
	2	724	83.3	98.6	55.2	89.6	0.0	0.0	32.2	100.0	82.5	19.4	39.4	100.0	100.0	100.0	100.0		55.3
NUCLEAR TOTALS			3482	89.9	91.0	80.3	72.2	51.6	70.7	74.6	82.8	99.9	94.8	55.0	71.9	99.0	99.8	99.3	81.0
ASHEVILLE	1	191	87.0	96.7	91.9	89.5	99.4	97.4	90.4	99.9	93.9	76.8	84.6	90.7	91.0	99.9	100.0	92.8	
	2	185	88.2	96.3	91.2	97.0	74.0	70.5	89.8	98.4	99.5	97.7	91.0	92.4	88.6	98.9	99.1		91.4
	1 ⁴	727	95.3	88.3	94.7	99.9	53.3	100.0	100.0	88.8	95.7	100.0	100.0	100.0	99.2	96.9	100.0		
	1	369	84.2	94.6	90.2	99.8	76.4	72.3	99.1	100.0	99.6	75.6	93.3	95.8	98.6	86.6	95.7		91.1
	2	662	91.4	86.2	73.9	61.2	0.0	25.7	81.9	97.6	86.1	93.9	84.9	86.7	79.4	88.3	13.9		
	3	693	89.1	92.2	97.9	99.9	100.0	87.0	99.9	99.3	99.7	99.7	99.9	99.9	92.8	94.1	98.6		97.6
	4 ⁵	698	96.0	93.6	93.2	94.3	93.6	100.0	99.9	96.2	99.9	99.5	100.0	45.2	91.9	100.0	99.8		
	FOSSIL TOTALS			3525	90.2	92.6	90.4	91.7	71.0	79.0	94.4	97.2	96.3	91.9	93.4	87.2	91.6		95.0
RICHMOND	7	148	91.5	84.9	90.6	100.0	26.8	99.5	100.0	98.4	94.8	80.0	89.0	100.0	100.0	6.8	82.0	81.4	
	8	149	91.6	84.6	88.8	100.0	23.5	100.0	100.0	93.7	91.1	79.4	89.0	89.5	100.0	100.0	100.0		88.8
	9	173	93.6	85.2	91.0	100.0	29.8	100.0	100.0	98.4	94.6	80.0	89.0	100.0	100.0	100.0	100.0		
CC TOTALS⁶			470	92.2	84.9	90.1	100.0	26.7	99.8	100.0	96.8	93.5	79.8	89.0	96.5	100.0	68.9	94.0	87.1

¹ Brunswick Unit 1: North Carolina Eastern Municipal Power Agency No. 1 (18.33%) and Progress Energy Carolinas (81.67%)

² Brunswick Unit 2: North Carolina Eastern Municipal Power Agency No. 1 (18.33%) and Progress Energy Carolinas (81.67%)

³ Harris Unit 1: North Carolina Eastern Municipal Power Agency No. 1 (16.17%) and Progress Energy Carolinas (83.83%)

⁴ Mayo Unit 1: North Carolina Eastern Municipal Power Agency No. 1 (16.17%) and Progress Energy Carolinas (83.83%)

⁵ Roxboro Unit 4: North Carolina Eastern Municipal Power Agency No. 1 (12.94%) and Progress Energy Carolinas (87.06%)

⁶ CC designates Combined-Cycle units

**Office of Regulatory Staff
Power Plant Performance Data Report
Capacity Factors (Percentage) for
Progress Energy Carolinas, Inc.
Docket # 2011-1-E**

PLANT	UNIT	MW RATING	HISTORICAL DATA				REVIEW PERIOD (ACTUAL) DATA												Average Review Pd.		
			LIFE ¹ TIME	YEAR 2008	YEAR 2009	YEAR 2010	MAR 2010	APR 2010	MAY 2010	JUN 2010	JUL 2010	AUG 2010	SEP 2010	OCT 2010	NOV 2010	DEC 2010	JAN 2011	FEB 2011			
BRUNSWICK	1	938	72.4	85.2	97.6	82.9	0.0	6.4	88.4	100.2	100.4	100.8	102.0	101.2	103.6	101.1	103.9	102.3	84.2		
	2	920	70.2	95.4	79.5	99.1	102.2	102.5	97.6	100.7	100.6	100.4	98.6	102.0	101.8	101.5	102.5	101.4		101.0	
	1	900	86.8	99.0	93.9	89.9	104.1	102.8	102.3	101.0	101.1	101.2	100.9	1.8	51.9	104.4	103.9	103.0			89.9
	2	724	76.6	87.1	104.1	56.9	94.3	0.0	0.0	0.0	31.0	99.7	82.5	19.0	39.8	105.2	105.3	105.0			
NUCLEAR TOTALS			76.5	91.9	93.6	91.9	73.5	55.4	76.0	79.7	86.2	100.6	96.8	58.6	76.5	102.9	103.8	102.8	83.0		
ASHEVILLE	1	191	n/a	67.8	70.9	73.7	68.4	84.7	80.0	80.5	74.5	70.0	62.3	58.2	67.9	83.6	83.1	64.9	73.2		
	2	185	n/a	64.9	59.4	69.5	70.6	61.2	52.2	79.7	74.4	73.1	74.1	55.9	64.7	80.8	79.4	57.1		68.6	
	1	727	n/a	62.7	62.4	76.6	78.8	41.5	80.5	89.1	76.4	77.3	62.6	68.5	74.7	89.0	78.4	68.1			73.8
	1	369	n/a	69.8	79.4	82.6	93.8	75.2	62.8	93.9	94.5	90.1	65.1	76.5	80.5	95.3	79.8	63.5			
ROXBORO	2	662	n/a	78.4	73.6	67.0	56.8	0.0	20.0	76.9	92.2	72.4	78.7	71.1	76.9	76.6	82.7	11.3	59.6		
	3	693	n/a	66.0	62.8	80.2	79.1	88.9	72.4	89.1	89.4	80.6	77.1	68.2	72.4	85.0	82.9	73.5		79.9	
	4	698	n/a	70.3	71.3	72.8	66.5	72.2	79.0	85.7	84.1	77.0	71.8	64.6	23.9	76.9	76.7	66.2			70.4
	FOSSIL TOTALS			n/a	54.5	52.9	54.5	72.9	56.0	63.9	85.7	85.1	77.7	71.1	67.8	64.3	83.4	80.2			
RICHMOND	7	148	n/a	37.9	58.6	71.0	65.8	25.5	86.5	89.2	86.1	88.3	71.7	74.1	76.7	75.8	0.0	61.5	66.8		
	8	149	n/a	40.7	55.8	69.6	67.2	22.8	93.1	88.3	82.4	84.6	67.1	73.5	68.1	74.5	66.4	60.3		70.7	
	9	173	n/a	39.7	58.6	76.2	76.6	27.2	89.4	91.5	85.3	87.1	70.6	84.1	81.0	87.0	36.9	69.5			73.8
CC TOTALS²			n/a	39.5	56.6	39.5	70.2	25.3	89.6	89.7	84.6	86.7	69.8	77.6	75.5	79.5	34.6	64.1	70.4		

¹The lifetime nuclear unit capacity factors are through February 2011

²CC designates Combined-Cycle units

**Office of Regulatory Staff
Fossil Unit Outage Report
(100 Hrs or Greater Duration) for
Progress Energy Carolinas, Inc.
Docket # 2011-1-E**

UNIT	DATE OFF	DATE ON	HOURS	TYPE	EXPLANATION OF OUTAGE
Asheville #1	9/24/10	10/1/10	153.73	Planned	Unit was taken offline for scheduled Fall Outage.
Asheville #2	4/23/10	5/9/10	377.47	Planned	Unit was taken offline for scheduled Spring Outage.
Mayo #1	4/3/10	4/16/10	319.17	Planned	Unit was taken offline for scheduled Spring Outage.
Roxboro #1	4/24/10	5/8/10	346.15	Planned	Unit was taken offline for scheduled Spring Outage.
Roxboro #2	3/20/10	5/19/10	1,445.58	Planned	Unit was taken offline for scheduled Spring Outage.
Roxboro #2	11/26/10	12/6/10	225.32	Planned	Unit was taken offline for scheduled Fall Outage.
Roxboro #2	2/4/11	6/29/2011 ¹	3,458.98	Planned	Unit was taken offline for scheduled Spring Outage.
Roxboro #4	11/5/10	11/22/10	394.38	Planned	Unit was taken offline for scheduled Fall Outage.

¹ Roxboro 2 completed this outage after the review period.

**Office of Regulatory Staff
 Fossil Unit Outage Report
 (100 Hrs or Greater Duration) for
 Progress Energy Carolinas, Inc.
 Docket # 2011-1-E**

UNIT	DATE OFF	DATE ON	HOURS	TYPE	EXPLANATION OF OUTAGE
Richmond #7	4/8/10	4/28/10	492.60	Planned	Unit was taken offline for scheduled Spring Outage.
Richmond #7	9/25/10	10/4/10	226.00	Planned	Unit was taken offline for scheduled Fall Outage.
Richmond #7	1/3/11	2/5/11	795.77	Maintenance	Unit was taken offline for borescope inspection
Richmond #8	4/8/10	4/29/10	517.17	Planned	Unit was taken offline for scheduled Spring Outage.
Richmond #8	9/25/10	10/4/10	226.00	Planned	Unit was taken offline for scheduled Fall Outage.
Richmond #9	4/8/10	4/29/10	505.72	Planned	Unit was taken offline for scheduled Spring Outage.
Richmond #9	9/25/10	10/4/10	226.00	Planned	Unit was taken offline for scheduled Fall Outage.

**Office of Regulatory Staff
Nuclear Unit Outage Report for
Progress Energy Carolinas, Inc.
Docket # 2011-1-E**

UNIT	DATE OFF	DATE ON	HOURS	TYPE	EXPLANATION OF OUTAGE
Brunswick #1	2/27/2010 ¹	4/10/2010	960.00	Planned	Unit was taken offline due to scheduled refueling.
Brunswick #1	4/10/2010	4/27/2010	411.03	Extension	Scheduled refueling was extended primarily due to issues with the variable frequency drive.
Brunswick #1	5/5/10	5/9/10	85.50	Forced	Unit was forced offline due to reactor feed pump turbine trip.
Harris #1	10/2/10	11/13/10	1013.10	Planned	Unit was taken offline due to scheduled refueling.
Robinson #2	3/28/10	4/17/10	461.15	Forced	Unit was forced offline due to an electrical fire caused by an electrical ground fault.
Robinson #2	4/17/10	5/26/10	936.00	Planned	Unit was taken offline due to scheduled refueling.
Robinson #2	5/26/10	7/19/10	1319.10	Extension	Scheduled refueling was extended.
Robinson #2	9/9/10	9/14/10	117.90	Forced	Unit was forced offline due to a faulty circuit board.
Robinson #2	10/7/10	11/18/10	1021.38	Forced	Unit was forced offline due to the failure of a reactor coolant pump motor.

¹ Brunswick 1 began this outage prior to the review period.

**Office of Regulatory Staff
Generation Mix Report for
Progress Energy Carolinas, Inc.
Docket # 2011-1-E**

(March 2010 – February 2011)

MONTH	PERCENTAGE					
	COAL	NUCLEAR	COMBINED CYCLE	COMBUSTION TURBINE	HYDRO	PURCHASED POWER
2010						
March	52.3	37.4	5.4	0.5	2.4	2.0
April	52.2	31.9	2.2	4.4	2.1	7.2
May	45.2	38.1	6.1	3.4	1.5	5.7
June	47.5	31.7	4.8	6.4	0.9	8.7
July	47.7	34.2	4.5	5.9	0.5	7.3
August	43.2	40.1	4.7	4.8	0.6	6.7
September	41.7	43.8	4.3	3.4	0.5	6.4
October	49.0	33.5	6.7	1.4	0.7	8.7
November	43.7	40.4	6.1	2.7	0.9	6.4
December	45.9	40.3	4.7	2.5	0.9	5.7
2011						
January	47.0	42.2	2.3	1.5	0.8	6.2
February	38.3	49.1	4.7	0.6	1.0	6.2
Average	46.1	38.6	4.7	3.1	1.1	6.4

**Office of Regulatory Staff
Generation Statistics for Plants for
Progress Energy Carolinas, Inc.
Docket # 2011-1-E**

(March 2010 – February 2011)

PLANT	TYPE FUEL	AVERAGE FUEL COST¹ (CENTS/kWh)	GENERATION (MWh)
Brunswick	Nuclear	0.605	12,289,029
Harris	Nuclear	0.637	5,932,574
Robinson 2	Nuclear	0.662	3,590,287
Roxboro	Coal	3.322	14,804,198
Mayo	Coal	3.438	3,948,482
Cape Fear	Coal	3.833	1,956,042
Lee	Coal	3.848	2,253,033
Asheville	Coal	3.871	2,363,607
Robinson 1	Coal	3.934	996,017
Richmond	Natural Gas	4.648	3,107,339
Sutton	Coal	4.652	2,484,244
Weatherspoon	Coal	4.809	553,363

¹The average fuel costs for coal-fired plants include oil and/or gas cost for start-up and flame stabilization.

Office of Regulatory Staff
SC Retail Comparison of Estimated to Actual Energy Sales
for Progress Energy Carolinas, Inc.
Docket # 2011-1-E

	2010												2011		
	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	TOTAL		
[1] ESTIMATED SALES [MWh]	491,384	476,071	484,438	552,106	599,299	632,498	575,295	504,337	458,875	515,213	586,145	521,059	6,396,721		
[2] ACTUAL SALES [MWh]	578,230	476,776	439,155	563,320	631,828	630,998	597,860	501,386	473,729	526,664	687,095	549,697	6,656,738		
[3] AMOUNT DIFFERENCE [1]-[2]	-86,846	-705	45,283	-11,214	-32,529	1,500	-22,565	2,951	-14,854	-11,451	-100,950	-28,638	-260,017		
[4] PERCENT DIFFERENCE [3]/[2]	-15.02%	-0.15%	10.31%	-1.99%	-5.15%	0.24%	-3.77%	0.59%	-3.14%	-2.17%	-14.69%	-5.21%	-3.91%		

Office of Regulatory Staff
SC Retail Comparison of Estimated to Actual Fuel Cost
for Progress Energy Carolinas, Inc.
Docket # 2011-1-E

	2010	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	2011	PERIOD
													AVERAGE
[1] ORIGINAL PROJECTION (¢/kWh)	2.852	2.907	2.782	2.895	3.165	2.934	2.450	2.756	2.596	2.692	2.558	2.436	2.752
[2] ACTUAL EXPERIENCE (¢/kWh)	2.678	3.115	3.405	3.694	3.240	2.961	2.477	2.753	2.620	3.421	2.696	2.253	2.943
[3] AMOUNT IN BASE (¢/kWh)	3.002	3.002	3.002	3.002	2.723	2.723	2.723	2.723	2.723	2.723	2.723	2.723	2.723
[4] VARIANCE FROM ACTUAL [1-2]/[2]	6.50%	-6.68%	-18.30%	-21.63%	-2.31%	-0.91%	-1.09%	0.11%	-0.92%	-21.31%	-5.12%	8.12%	-6.49%

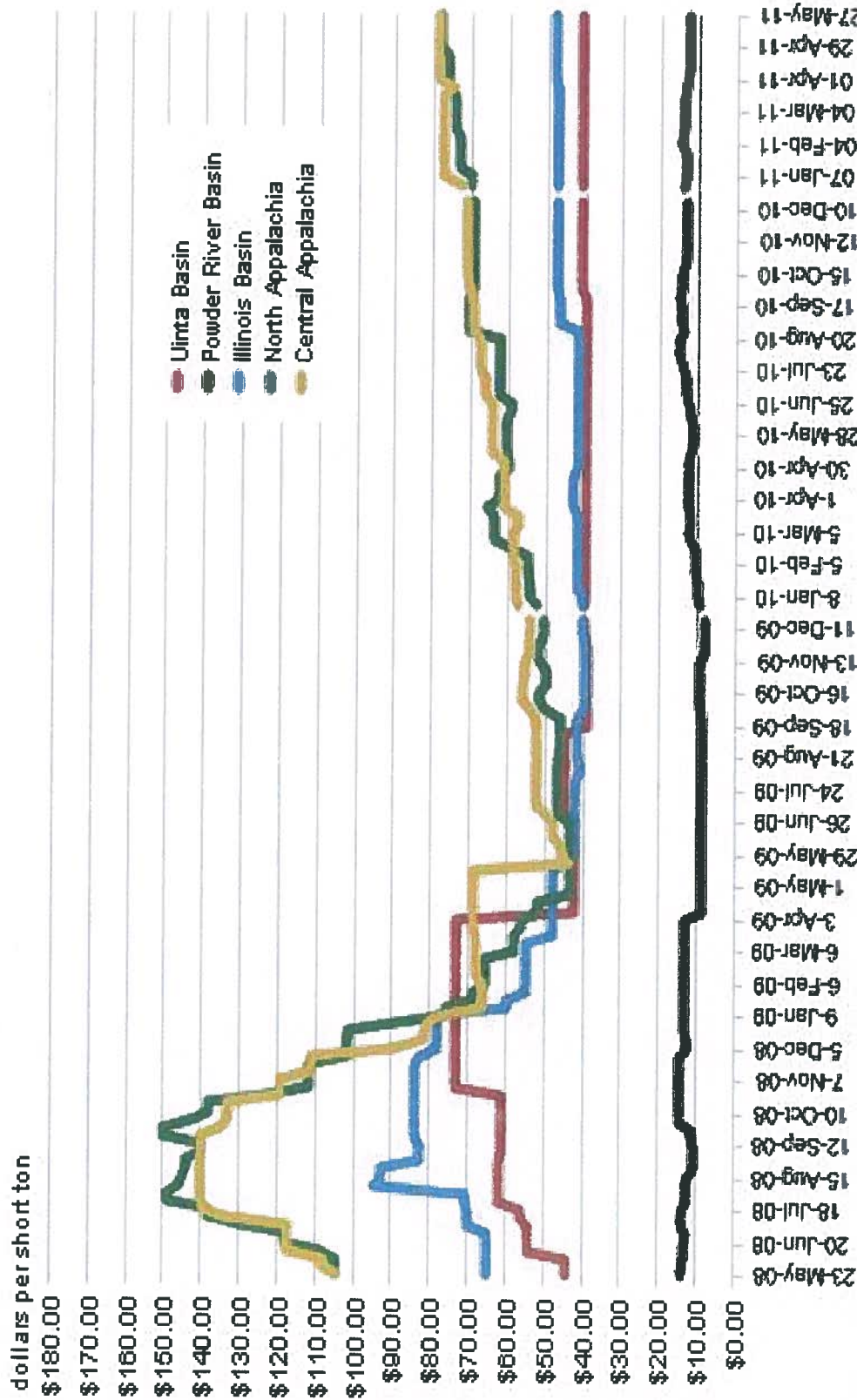
Office of Regulatory Staff
History of Cumulative Recovery Account Report for
Progress Energy Carolinas, Inc.
Docket # 2011-1-E

<u>PERIOD ENDING</u>	<u>OVER (UNDER)</u> \$
December-79	\$ 1,104,730
September-80	\$ (12,000,131)
March-81	\$ (4,060,364)
August-81	\$ (12,113,832)
March-82	\$ (935,412)
September-82	\$ (6,881,796)
March-83	\$ (2,259,114)
September-83	\$ (3,264,694)
March-84	\$ 109,270
September-84	\$ 2,172,859
March-85	\$ (2,317,008)
September-85	\$ 745,913
March-86	\$ 1,972,280
September-86	\$ (696,805)
March-87	\$ 2,408,354
September-87	\$ 3,310,059
March-88	\$ (3,964,888)
September-88	\$ (5,737,541)
March-89	\$ (8,125,496)
September-89	\$ (5,875,641)
March-90	\$ (9,311,149)
September-90	\$ (658,614)
March-91	\$ 1,403,023
September-91	\$ 4,661,988
March-92	\$ 5,201,112
September-92	\$ (6,712,920)
March-93	\$ (9,563,180)
September-93	\$ - ¹
March-94	\$ (1,010,684)
September-94	\$ 1,975,939
March-95	\$ 7,408,161
September-95	\$ 2,011,489
December-96	\$ 186,139
December-97	\$ (6,212,396)
December-98	\$ (14,334,022)
December-99	\$ (17,967,157) ²
December-00	\$ (18,627,471)
December-01	\$ (9,906,921)
December-02	\$ (7,393,266)
December-03	\$ (6,038,891)
March-05	\$ (27,537,237)
March-06	\$ (32,368,520)
March-07	\$ (22,834,137)
February-08	\$ (14,452,319)
February-09	\$ (9,966,147)
February-10	\$ (3,413,120)
February-11	\$ (10,418,111)

Note 1: Eliminated \$14,011,263 per Commission Order No. 93-865

Note 2: Reduced by \$6,500,000 per Commission Order No. 1999-324

EIA Average Weekly Coal Commodity Spot Prices
Business Week Ended May 27, 2011



Key to Coal Commodities by Region¹

Central Appalachia: Big Sandy/Kanawha 12,500 Btu, 1.2 lb SO₂/mmBtu Powder River Basin: 8,800 Btu, 0.8 lb SO₂/mmBtu
 Northern Appalachia: Pittsburgh Seam 13,000 Btu, <3.0 lb SO₂/mmBtu Uinta Basin in Colo.: 11,700 Btu, 0.8 lb SO₂/mmBtu
 Illinois Basin: 11,800 Btu, 5.0 lb SO₂/mmBtu

¹ Coal prices shown are for a relatively high-Btu coal selected in each region, for delivery in the "prompt quarter." The prompt quarter is the quarter following the current quarter. For example, from January through March, the 2nd quarter is the prompt quarter. Starting on April 1, July through September define the prompt quarter.

EIA Weighted-Average Price of U.S. and Foreign-Origin Uranium Purchased by Owners and Operators of U.S. Civilian Nuclear Power Reactors, 1994-2009 Deliveries

