

1 PLACE: Dobbs Building, Raleigh, North Carolina

2 DATE: Tuesday, September 27, 2011

3 DOCKET NO.: E-2, Sub 1002

4 TIME IN SESSION: 10:09 A.M. - 10:19 A.M.

5 BEFORE: Commissioner ToNola D. Brown-Bland, Presiding
6 Chairman Edward S. Finley, Jr.
7 Commissioner Lorinzo L. Joyner
8 Commissioner William T. Culpepper, III
9 Commissioner Bryan E. Beatty
10 Commissioner Susan W. Rabon
11 Commissioner Lucy T. Allen

12 IN THE MATTER OF:

13 Carolina Power & Light Company d/b/a Progress Energy
14 Carolinas, Inc.: Application for Approval of DSM and Energy
15 Efficiency Cost Recovery Rider Pursuant to G.S. 62-133.9 and
16 Commission Rule R8-69

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

18 FOR PROGRESS ENERGY CAROLINAS:

19 Kendal Bowman
20 Progress Energy Carolinas
21 410 South Wilmington Street
22 Raleigh, North Carolina 27602

23 FOR THE USING AND CONSUMING PUBLIC:

24 David T. Drooz, Staff Attorney
Public Staff - North Carolina Utilities Commission
4326 Mail Service Center
Raleigh, North Carolina 27699-4326

EXHIBITS IDENTIFIED/ADMITTED

	<u>PAGE</u>
Evans' Exhibit Nos. 1 through 10.	9
PEC Exhibit No. 1	9
PEC's Workpapers.	9
Evans' Supplemental Exhibit Nos. 1 through 10 . . .	9
PEC's Supplemental Workpapers	9

P R O C E E D I N G S

COMMISSIONER BROWN-BLAND: Good morning.

Let's come to order and proceed on the record with Docket E-2, Sub 1002. I am Commissioner ToNola D. Brown-Bland, presiding Commissioner for this hearing. With me are Chairman Edward S. Finley, Jr. and Commissioners Lorinzo L. Joyner, William T. Culpepper, III, Bryan E. Beatty, Susan W. Rabon and Lucy T. Allen.

I now call for hearing in Docket No. E-2, Sub 1002, in the Matter of Application of Carolina Power & Light Company doing business as Progress Energy Carolinas, Inc., Progress, for Approval of Demand-Side Management and Energy Efficiency Cost Recovery Rider Pursuant to G.S. 62-133.9 and Commission Rule R8-69.

North Carolina General Statute 62-133.9(d) provides for an annual demand-side management/energy efficiency rider for each electric public utility to recover all reasonable and prudent costs incurred for adoption and implementation of new demand-side management, DSM, and new energy efficiency, EE, measures and appropriate incentives.

Commission Rule R8-69(b) also provides for the establishment of a DSM/EE experience modification factor, EMF, rider to allow the utility to collect the difference between reasonable and prudently incurred costs

1 and the revenues that were actually realized during the test
2 period under the DSM/EE riders then in effect.

3 Rule R8-69(e) further provides that the
4 annual DSM/EE cost recovery rider hearing for each electric
5 public utility will be scheduled as soon as practicable
6 after the annual fuel and fuel-related charge adjustment
7 proceeding hearing held under Rule R8-55 and that each
8 electric public utility shall file direct testimony and
9 exhibits at the same time that it files the information
10 required by Rule R8-55.

11 Rule R8-69(f) provides that the utility shall
12 publish notice at least 30 days prior to the hearing.

13 Pursuant to the cited statute and rule, on
14 June 3, 2011, Progress^d filed its application for approval of
15 the DSM/EE cost recovery. Filed with the application were
16 direct testimony, exhibits and workpapers of witnesses
17 Robert P. Evans and Julie Hans.

18 On June 8, 2011, the Commission issued an
19 Order Scheduling Hearing, Establishing Discovery Guidelines
20 and Requiring Public Notice. That Order set this hearing on
21 DSM/EE cost recovery for today, September 27, 2011.

22 On June 21st, 2011, Progress filed an
23 amendment to the application revising Appendix D of PEC
24 Exhibit No. 1.

1 On July 20 -- 20th, 2011, the Commission
2 issued an Order granting Carolina Utility Customer
3 Association, Inc.'s petition to intervene in this docket.

4 The Public Staff's participation and
5 intervention is recognized pursuant to North Carolina
6 General Statute 62-15 and Commission Rule R1-19(e).

7 On August 23, 2011, Progress filed
8 supplemental direct testimony and exhibits of Robert P.
9 Evans. Progress filed the required affidavits of
10 publication on August 25, 2011.

11 On September 9, 2011, the Public Staff filed
12 the affidavits of Jack L. Floyd and Michael C. Maness.

13 In compliance with the requirements of
14 Chapter 138A of the State Government Ethics Act, I remind
15 the members of the Commission of their responsibility to
16 avoid conflicts of interest and I inquire whether any member
17 has a conflict of interest with respect to the matter now
18 coming before us?

19 (No response.)

20 COMMISSIONER BROWN-BLAND: Let the record
21 reflect that no such conflict has been identified.

22 I now call for appearances of counsel for the
23 record, beginning with the Applicant.

24 MS. BOWMAN: Good morning, Ms. Chairman and

1 Commissioners. I'm Kendal Bowman representing Progress
2 Energy Carolinas.

3 MR. DROOZ: Good morning. I am David Drooz
4 with the Public Staff representing the Using and Consuming
5 Public.

6 COMMISSIONER BROWN-BLAND: Good morning, Ms.
7 Bowman, Mr. Drooz. Have either of you heard from the -- the
8 intervenor -- intervenor's counsel?

9 MS. BOWMAN: I was not aware that there were
10 any intervenors in this docket.

11 COMMISSIONER BROWN-BLAND: I believe CUCA had
12 intervened.

13 MR. ANTHONY: I'm sorry. It's been a busy
14 week and I did not have a chance to talk with Ms. Bowman
15 like I should have. It's my fault. We did speak with
16 counsel for CUCA and they are not going to appear here
17 today.

18 COMMISSIONER BROWN-BLAND: Thank you for
19 that, Mr. Anthony.

20 Are there any preliminary matters which need
21 to be addressed prior to beginning the hearing?

22 MS. BOWMAN: Ms. Commission (sic), I believe
23 that the request was made to -- to stipulate that the
24 applicants agree to the recommendations made by Public

1 Staff, and if there are no questions of the Commissioners as
2 -- that there would be no questions of the intervenors, that
3 we would just enter into the record the witnesses' testimony
4 as if given orally from the stand and their exhibits. But
5 if there are questions, we're -- the witnesses are here and
6 we are free to put them up.

7 COMMISSIONER BROWN-BLAND: All right. Thank
8 you for that, Ms. Bowman. Is that your understanding as
9 well --

10 MR. DROOZ: Yes. We're in agreement.

11 COMMISSIONER BROWN-BLAND: -- Mr. Drooz?

12 MR. DROOZ: We are happy just to incorporate
13 the affidavits, testimony and exhibits into the record as if
14 read orally and stipulate to that without cross-examination.

15 COMMISSIONER BROWN-BLAND: All right. Well,
16 we'll come back to that after we inquire as to the public
17 hearing or after we finish with the public hearing portion.

18 Mr. Drooz, have you identified anyone wishing
19 to testify as a public witness in this matter?

20 MR. DROOZ: No. We are not aware of any
21 public witnesses.

22 COMMISSIONER BROWN-BLAND: Well, let us make
23 sure for the record. Is there anyone present in the hearing
24 room who wishes to give testimony as a member of the public?

1 (No response.)

2 COMMISSIONER BROWN-BLAND: Let the record
3 reflect that no one came forward to testify in the public
4 hearing portion of the proceeding.

5 Now, then, I will entertain motions regarding
6 the evidence.

7 MS. BOWMAN: Prog -- the applicants would
8 like to move the testimony of Mr. Robert Evans and
9 supplemental testimony and attached exhibits into the
10 record, and also we would like to move the testimony of Ms.
11 Julie Hans into the record.

12 COMMISSIONER BROWN-BLAND: All right. That
13 being stipulated and there being no objection, the testimony
14 of Robert Evans -- Robert P. Evans and the testimony -- that
15 will be his direct testimony and his supplemental?

16 MS. BOWMAN: And his supplemental and the
17 attached exhibits and workpapers.

18 COMMISSIONER BROWN-BLAND: The direct
19 testimony of Robert P. Evans consisting of 24 pages filed
20 June 3rd, 2011, with ten exhibits identified as -- as marked
21 when prefiled, and the supplemental direct testimony of
22 Robert P. Evans and the ten exhibits and workpapers
23 accompanying that supplemental testimony shall be admitted
24 into the record, and the testimony shall be received as if

1 given orally from the witness stand.

2 (Whereupon, the prefiled direct and
3 supplemental testimony of Robert P.
4 Evans will be reproduced in the
5 record at this point the same as if
6 the questions had been orally asked
7 and the answers orally given from
8 the witness stand.)

9
10 (Whereupon, Evans' Exhibit Nos. 1
11 through 10, PEC Exhibit No. 1,
12 PEC's workpapers, Evans'
13 Supplemental Exhibit Nos. 1 through
14 10 and PEC's supplemental
15 workpapers were marked for
16 identification and admitted into
17 evidence.)

18
19
20
21
22
23
24

NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1002

**DIRECT TESTIMONY OF ROBERT P. EVANS
ON BEHALF OF CAROLINA POWER & LIGHT COMPANY
D/B/A/ PROGRESS ENERGY CAROLINAS, INC.**

1 **Q. PLEASE STATE YOUR NAME, YOUR BUSINESS ADDRESS AND**
2 **POSITION WITH PROGRESS ENERGY CAROLINAS, INC.**

3 A. My name is Robert P. Evans and my business address is 100 E. Davie Street,
4 Post Office Box 1551, Raleigh, North Carolina 27602. I am employed by
5 Progress Energy Carolinas, Inc. ("PEC") as a Lead DSM Regulatory Specialist
6 in the Company's Efficiency and Innovative Technologies Department.

7 **Q. PLEASE BRIEFLY STATE YOUR EDUCATIONAL BACKGROUND**
8 **AND EXPERIENCE.**

9 A. I graduated from Iowa State University ("ISU") in 1978 with a Bachelor of
10 Science Degree in Industrial Administration and a minor in Industrial
11 Engineering. As a part of my undergraduate work, I completed both the
12 graduate level Regulatory Studies Programs sponsored by American Telephone
13 and Telegraph Corporation and graduate level study programs in Engineering
14 Economics. Following graduation from ISU, I received additional Engineering
15 Economics training at the Colorado School of Mines, completed the NARUC

1 Regulatory Studies program at Michigan State and completed the Advanced
2 AGA Ratemaking program at the University of Maryland. Upon graduation
3 from ISU, I joined the Iowa State Commerce Commission, now known as the
4 Iowa Utility Board ("IUB"), in the Rates and Tariffs Section of the Utilities
5 Division. During my tenure with the IUB, I held several positions, including
6 Senior Rate Analyst in charge of Utility Rates and Tariffs and Assistant
7 Director of the Utility Division. While with the IUB, I provided testimony in
8 gas, electric, water and telecommunications proceedings as an expert witness in
9 the areas of rate design, service rules, and tariff applications. In 1982, I
10 accepted employment with City Utilities of Springfield, Missouri, as an
11 Operations Analyst. In that capacity, I provided support for rate-related matters
12 associated with the municipality's gas, electric, water and sewer operations. In
13 addition, I worked closely with its load management and energy conservation
14 programs. In 1983, I accepted a position as Rate Engineer with the Rate
15 Services staff of the Iowa Power and Light Company, now known as
16 MidAmerican Energy. In this position, I was responsible for the preparation of
17 rate related filings and presented testimony on rate design, service rules, and
18 accounting issues before the IUB. In 1986, I accepted employment with
19 Tennessee-Virginia Energy Corporation, which is now known as the United
20 Cities Division of ATMOS Energy, as Director of Rates and Regulatory
21 Affairs. In this position, I was responsible for regulatory filings, regulatory

12

1 relations, and customer billing. In 1987, I joined the Virginia State Corporation
2 Commission as a Utilities Specialist in the Division of Energy Regulation. In
3 this capacity I worked with electric and natural gas issues and provided
4 testimony on cost of service and rate design matters. In 1988, I joined North
5 Carolina Natural Gas Corporation ("NCNG") as Manager of Rates and Budgets.
6 Subsequently, I was promoted to Director-Statistical Services in its Planning
7 and Regulatory Compliance Department. In that position, I performed a variety
8 of work associated with financial, regulatory and statistical analysis, and
9 presented testimony on several issues brought before the North Carolina
10 Utilities Commission. I held that position until the July 15, 1999 closing of the
11 NCNG merger with Carolina Power and Light Company, the predecessor of
12 Progress Energy Corporation.

13 From July 1999 through January 2008 I was employed in Principal and Senior
14 Analyst roles by Progress Energy Service Company, LLC. In these roles I
15 provided NCNG, Progress Energy Carolinas, Inc. and Progress Energy Florida,
16 Inc. with federal and state rate and regulatory support as well as financial
17 forecasting support.

18 **Q. WHAT ARE YOUR CURRENT RESPONSIBILITIES?**

19 **A.** I am responsible for financial analysis and support of PEC's Energy Efficiency
20 ("EE") and Demand-Side Management ("DSM") programs.

1 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

2 A. The purpose of my testimony is to explain and support PEC's proposed
3 DSM/EE cost recovery rider and Experience Modification Factor ("EMF") and
4 to provide the information required by Commission Rule R8-69. I am also
5 providing information requested by the Commission in its November 17, 2010
6 Order in Docket No. E-2, Sub 977 concerning the incorporation of indirect
7 costs into program cost effectiveness evaluations.

8 Q. ARE YOU SPONSORING PEC'S DSM/EE COST RECOVERY RIDER
9 APPLICATION?

10 A. Yes. In addition to this testimony and accompanying exhibits, I am sponsoring
11 PEC'S DSM/EE Cost Recovery Rider Application identified as PEC Exhibit
12 No. 1.

13 SUMMARY OF DSM/EE COSTS

14 Q. CAN YOU PROVIDE A SUMMARY OF THE COSTS FOR WHICH
15 THE COMPANY IS REQUESTING RECOVERY IN THIS
16 PROCEEDING?

17 A. Yes. The DSM/EE costs the Company is requesting to recover through this
18 proceeding are associated with the costs incurred or forecasted to be incurred
19 during three discrete time periods: 1) the test period; 2) the prospective period;

and, 3) the rate period. For the test period, April 1, 2010 through March 31, 2011, the North Carolina allocated share of recoverable DSM/EE costs is \$60,144,786. For the forecasted prospective period, encompassing April 1, 2011 through July 31, 2011, the North Carolina allocated share of these estimated DSM/EE costs is \$24,915,865. For the rate period, December 1, 2011 through November 30, 2012, the North Carolina allocated share of forecasted DSM/EE costs is \$98,468,248. The total North Carolina allocated share of DSM/EE costs for the three periods is \$183,528,899.

A summary of the costs associated with the Company's recovery request is provided in the following table by period and by DSM/EE program/measure.

Program / Measure	Test Period	Prospective Period	Rate Period
	4-1-10 thru 3-31-11	4-1-11 thru 7-31-11	12-1-11 thru 11-30-12
Demand-Side Management Programs			
CIG DR	\$ 1,023,386	\$ 840,397	\$ 2,843,486
EnergyWise™	8,975,569	3,507,958	11,886,267
Energy Efficiency Programs			
DSDR Implementation	\$ 14,802,391	\$ 6,971,743	\$ 29,923,216
Residential Home Advantage	1,238,686	484,351	2,262,867
Residential Home Energy Improvement	7,499,196	2,097,309	7,822,754
Residential Low Income - NES	1,855,712	680,265	2,233,313
CIG Energy Efficiency	8,587,788	3,016,018	12,806,093
Residential Solar Water Heating Pilot	169,701	56,614	0
Residential Lighting	9,051,474	3,642,846	14,501,939
Residential Appliance Recycling	1,331,059	654,771	2,468,456
Residential EE Benchmark	129,149	384,649	1,544,621
Pilot CFL Program	0	0	0
A&G and Carrying Costs			
A&G (Education and Awareness)	\$ 728,976	\$ 324,514	\$ 808,451
A&G (Other)	1,387,450	540,628	1,511,954
Carrying Cost on Balances	3,334,247	1,713,803	7,854,830
Total Cost	\$ 60,144,786	\$ 24,915,865	\$ 98,468,248

1 In addition to the summary table above, additional categorizations by cost
2 element are provided on attached Evans Direct Exhibit No. 1.

3 **Q. ARE THE COMPANY'S PROPOSED RATES DESIGNED TO**
4 **RECOVER THE TOTAL NORTH CAROLINA ALLOCATED SHARE**
5 **OF \$183,528,899?**

6 A. No, since many of the expenses incurred to develop and implement the
7 Company's DSM and EE programs produce benefits covering several years, a
8 significant portion of those expenses will be deferred, and recovered over
9 varying amortization periods. Program cost deferrals are recovered over ten-
10 year periods, except in the cases of the Residential Lighting Program, which the
11 Company has requested recovery over a five-year period, and the Residential
12 EE Benchmark Program, which is not subject to deferral. Administrative and
13 General ("A&G") costs are being recovered over three-year periods. In
14 addition to the aforementioned deferrals, PEC's proposal involves several other
15 adjustments, including the recognition and amortization of prior period
16 deferrals, the recognition of the prior year's prospective period costs, and the
17 estimated recovery of DSM/EE costs during the 2010-11 test and prospective
18 periods. In total, the EMF related calculations, based on test and estimated
19 prospective period costs, reflect an estimated under-recovery of \$1,469,414.
20 The DSM/EE rate calculations, associated with rate period estimates, are based

1 on a revenue requirement of \$66,133,520. The development of these amounts
2 is also provided in Evans Direct Exhibit No. 1. The total of the rate period
3 revenue requirement and the EMF result in a combined revenue requirement of
4 \$67,602,933.

5 **DSM/EE EMF REVENUE REQUIREMENT**

6 **Q. HOW WAS THE DSM/EE EMF UNDER-RECOVERY OF \$1,469,414**
7 **DETERMINED?**

8 A. The DSM/EE EMF under-recovery is a function of the sum of test period costs,
9 including amounts relating to the amortization of deferred costs from prior
10 periods, plus estimated prospective period costs (April 1, 2011 through July 31,
11 2011), less costs incurred in the prior prospective period (April 1, 2010 through
12 July 31, 2010) which were included in the determination of the 2010 Rule R8-
13 69 based EMF, and credits for actual and estimated DSM/EE Rate revenues for
14 the period August 1, 2010 through July 31, 2011. The following table
15 illustrates the relationship of these elements with respect to the determination of
16 the DSM/EE EMF.

Rate Element	Amounts
Test Period Revenue Requirement	\$ 31,413,657
Plus: Current Prospective Period Revenue Requirement	11,847,072
Less: Prior Prospective Period Revenue Requirement	6,047,850
Unadjusted EMF Revenue Requirement	\$ 37,212,879
Net DSM/EE Rate Revenue Estimate	\$ 35,836,567
Less: Other Adjustments	93,102
Total EMF Adjustments	\$ 35,743,465
Adjusted DSM/EE EMF Revenue Requirement	\$ 1,469,414

1 Additional details associated with the development of these amounts are
2 provided on Evans Direct Exhibit No. 7.

3 **Q. WHY IS IT NECESSARY TO SUBTRACT PRIOR PROSPECTIVE**
4 **PERIOD COSTS WHEN DETERMINING THE DSM/EE EMF**
5 **REVENUE REQUIREMENT?**

6 A. The costs incurred in the prior prospective period (April 1, 2010 through July
7 31, 2010) overlap with the current test period and were used in the
8 determination of the EMF revenue requirement in the Company's last annual
9 Rule R8-69 based filing, Docket E-2, Sub 977. The exclusion of these costs is
10 necessary in order to eliminate "double-counting."

11 **Q. WILL YOU DESCRIBE THE \$93,102 THAT HAS BEEN**
12 **CATEGORIZED AS "OTHER ADJUSTMENTS"?**

13 A. The \$93,102 in "Other Adjustments" is the sum of lines 4, 5 and 6 found on
14 Evans Direct Exhibit No. 7. The adjustment on line 4 of this exhibit reflects
15 actual and estimated uncollectible allowances in PEC's DSM/EE rates
16 associated with the twelve month period ending July 31, 2011. The adjustment
17 on line 5 represents the true-up between the actual and the estimated
18 uncollectible rates applicable to this same time period. The adjustment found
19 on line 6 of Evans Direct Exhibit No. 7 reflects the refund of the over-collected

1 Program Performance Incentives (PPIs) associated with PEC's Residential
2 Home Energy Improvement Program.

3 **Q. HOW MUCH VARIATION IS PRESENT BETWEEN PEC'S UPDATED**
4 **UNCOLLECTIBLE FACTORS AND THOSE DETERMINED IN THE**
5 **LAST DSM/EE PROCEEDING?**

6 A. The Company's estimated uncollectible factors, approved in Docket No. E-2,
7 Sub 977, were reasonably consistent with actual results. The actual residential
8 uncollectible rate for the test period was 0.5601%, which was somewhat higher
9 than the estimated value of 0.5334%. This difference resulted in an under-
10 collection of \$5,830.60. The actual general service uncollectible rate associated
11 with the test period was 0.0441%. This rate was slightly greater than the
12 estimated value, 0.0406%. This difference resulted in an under-collection of
13 \$363.76. These updated percentages are also employed as gross-up factors for
14 rate development in Evans Direct Exhibit No. 10.

15 **Q. WILL YOU PROVIDE ADDITIONAL INFORMATION RELATING TO**
16 **THE PPI OVERCOLLECTION AND REFUND?**

17 PEC's independent third party measurement and verification (M&V)
18 consultant, Navigant, recently completed its assessment of the 2009 Vintage
19 Period of PEC's Home Energy Improvement Program (HEIP). Using the data
20 from this assessment, PEC reran its cost effectiveness tests for the HEIP. The

1 levelized PPI recognized in the last test period was \$52,551. Based on the
2 verified assessment, this amount should have been \$10,405. The difference
3 between these amounts, \$42,146, plus interest is owed to customers. With
4 interest, a total of \$45,884 is being returned to customers through the
5 adjustment made on line 6 of Evans Direct Exhibit No. 7.

6 **Q. SINCE SOME OF THESE AMOUNTS ARE ESTIMATES, WILL**
7 **THOSE AMOUNTS BE UPDATED PRIOR TO THE HEARING TO**
8 **REFLECT ACTUAL COSTS?**

9 A. Yes, at least 30 days prior to the hearing PEC will file updates reflecting actual
10 costs. In addition, any interest on over-recoveries, determined to be applicable
11 pursuant to Commission Rule R8-69(b)(3), will be calculated at that time.

12 **DSM/EE REVENUE REQUIREMENT**

13 **Q. WILL YOU PLEASE DESCRIBE THE BASIS FOR THE RATE PERIOD**
14 **REVENUE REQUIREMENT?**

15 A. As previously indicated, the revenue requirement for the rate period is
16 \$66,133,520. This is amount reflects the anticipated costs and necessary
17 recoveries for the rate period, which extends from December 1, 2011 through
18 November 30, 2012. The \$66,133,520 revenue requirement includes: (1)
19 \$28,338,489 directly attributable to anticipated rate period program costs; (2)
20 amortizations of and carrying costs on deferred prior period costs totaling

1 \$17,911,557; (3) lost revenues for the rate period totaling \$15,851,143 from
2 portions of vintage 2009, vintages 2010 and 2011, and portions of vintage 2012
3 installed program measures; and (4) program incentives payments totaling
4 \$4,032,331 associated with vintage 2009, 2010 and 2011 program measures.

5 **JURISDICTIONAL COST ALLOCATION**

6 **Q. HOW ARE DSM AND EE PROGRAM COSTS ALLOCATED TO THE**
7 **NORTH CAROLINA RETAIL JURISDICTION?**

8 A. First, PEC reviews all costs to be recovered. These costs are then separated into
9 three categories: (1) EE-related costs, (2) DSM-related costs and (3) costs that
10 provide a system benefit in support of both EE and DSM programs. For each of
11 these categories, different allocation methods are employed to assign those
12 costs to the appropriate jurisdiction.

13 **Q. PLEASE ELABORATE ON THE METHODOLOGY USED TO**
14 **ALLOCATE DSM/EE COSTS THAT OFFER A SYSTEM BENEFIT.**

15 A. Common Administrative and General ("A&G") Costs, associated with the
16 programs provide a system benefit in support of both EE and DSM programs.
17 Since A&G costs relate to both EE and DSM, A&G amounts are included in
18 both categories. The division of these costs into either the EE or DSM category
19 is based upon the percentage of each type of expenditure anticipated during the
20 next forecast calendar year. For example, if 30% of these costs in the forecast

1 period are EE-related, then 30% of the A&G costs will be considered as EE-
2 related costs for allocation purposes. The use of a forecast period recognizes
3 the types of new programs PEC will offer in the immediate future that will be
4 supported by these administrative costs. The assignment of A&G costs as
5 either EE or DSM related is reviewed annually each May based upon forecasted
6 costs for the next calendar year. The A&G costs in this proceeding have been
7 assigned to these categories based upon forecasted DSM and EE costs for 2011.

8 **Q. IN EVANS DIRECT EXHIBIT 1, THE DSDR PROGRAM IS**
9 **SEPARATED FROM THE OTHER DSM AND EE PROGRAMS. HOW**
10 **IS THE DSDR PROGRAM CLASSIFIED?**

11 A. The DSDR Program has been classified, for purposes of ratemaking, as an EE
12 program. Due to the scope and nature of this program, its costs are being
13 tracked separately. This separate tracking includes both direct costs and A&G
14 costs associated with the program.

15 **Q. HOW ARE COSTS IDENTIFIED AS EE-RELATED ALLOCATED TO**
16 **NORTH CAROLINA?**

17 A. Any program costs that are identified as being EE-related, including A&G
18 costs, are allocated to NC retail based upon the ratio, of NC retail sales to PEC
19 system retail sales at the point of generation. The allocation percentage is
20 updated each May and is based on the prior calendar year usage data.

1 **Q. HOW ARE DSM-RELATED COSTS ALLOCATED TO NORTH**
2 **CAROLINA?**

3 A. Any program costs that are identified as being DSM-related, including assigned
4 A&G costs, are allocated to NC retail based upon the ratio of the NC retail
5 demand to the PEC system retail demand at the hour of the annual summer
6 system peak. The allocation percentage is updated each May, and is based on
7 the prior calendar year demand data.

8 **UTILITY INCENTIVES AND NET LOST REVENUES**

9 **Q. HOW WERE THE UTILITY INCENTIVES CALCULATED?**

10 A. The Program Performance Incentive ("PPI") is calculated pursuant to the
11 Agreement and Stipulation of Partial Settlement ("Agreement") filed with the
12 Commission on December 9, 2008, and is based on the savings achieved by
13 DSM/EE programs as measured by the Utility Cost Test ("UCT"). Under the
14 terms of the Agreement and using the UCT, the amount of the PPI initially to be
15 recovered for a given measurement unit and vintage year is eight percent of the
16 present value of the net benefits for DSM programs and measures and thirteen
17 percent for EE programs and measures. Estimated net savings are determined
18 by multiplying the number of measurement units projected to be installed for a
19 specific program or measure in a vintage year by the most current estimates of
20 the annual per installation kW and kWh savings over the measurement unit's

1 life and by the most current estimates of the annual kW and kWh avoided costs.
2 We then subtract the estimated utility costs over the measurement unit's life
3 related to the projected installations in that vintage year and discount the result
4 to determine a net present value.

5 The PPI for each program vintage is converted into a stream of up to ten (10)
6 levelized annual payments. PEC's overall weighted average net-of-tax rate of
7 return approved in the Company's most recent general rate case is used as the
8 appropriate discount rate. Pursuant to the Agreement, PPI recoveries are
9 subject to true-up on the basis of future measurement and verification results.
10 As a matter of reference, a true-up of the 2009 vintage of the Residential Home
11 Energy Improvement Program is an element of the PEC's current Rule R8-69
12 request.

13 The PPI calculations are based on calendar year vintages. The PPI vintage
14 associated with the test period encompasses calendar year 2010. These values
15 will be trued-up on the basis of future measurement and verification results.
16 The estimated PPI associated with calendar year 2011 will be initially deployed
17 during the rate period and will be revisited as a part of the Company's next Rule
18 R8-69 cost recovery proceeding.

19 **Q. IS THE COMPANY REQUESTING PPI FOR ALL OF ITS**
20 **PROGRAMS?**

1 A. No. The Company is not requesting PPI recovery for its Residential Low
2 Income Program or its Pilot Residential Solar Water Heating Program. In
3 addition, under the terms of the Agreement, the Company is not eligible for a
4 PPI for its Distribution System Demand Response (DSDR) Program.

5 **Q. HOW WERE THE NET LOST REVENUES DETERMINED?**

6 Net lost revenues, which are applicable to both DSM and EE programs, are
7 determined by multiplying the estimated reduction in kWh sales associated with
8 a measure by a margin-based net lost revenue rate. While subject to a few
9 nuances, the following formula embraces the essence of the adjustment.

10
$$\text{Net Lost Revenues (\$)} = \text{Lost Sales (kWh)} \times \text{Net Lost Revenue Rate (\$/kWh)}$$

11 Lost Sales are those sales that do not occur by virtue of employing the DSM/EE
12 measures. These values are initially based on engineering estimates and/or past
13 impact evaluations. Future periods are based on updated impact evaluations
14 conducted through the measurement and verification ("M&V") activities and
15 applied prospectively and in conjunction with applicable net lost revenue true-
16 ups. The Net Lost Revenue Rate represents the difference between the average
17 retail rate applicable to the customer class impacted by the measure and (1) the
18 embedded gross receipts taxes, (2) the related average customer charge
19 component of that rate, (3) the average fuel component of the rate, and (4) the
20 incremental variable O&M rate as approved in the Company's last CSP tariff.

1 This difference is adjusted by the impact of uncollectibles. When multiple
2 customer classes are impacted by a DSM/EE measures, as with the DSDR
3 program, a weighted or system wide net lost revenue rate is employed.

4 Pursuant to the Agreement, net lost revenues are recoverable for only the first
5 36-months of an installed measure's life and consistent with the PPI, recoveries
6 are subject to true-up on the basis on future measurement and verification
7 results. As with the PPI, the recovery of net lost revenues for PEC's
8 Residential Home Energy Improvement Program (HEIP) has been tried up to
9 recognize the results of the vintage 2009 HEIP M&V analysis.

10 **Q. IS THE COMPANY REQUESTING NET LOST REVENUE**
11 **RECOVERIES FOR ALL OF ITS PROGRAMS?**

12 **A.** No. The Company is not requesting Net Lost Revenue Recoveries for its Pilot
13 Residential Solar Water Heating Program. For PEC's event driven measures,
14 net lost revenue has only been requested for actual deployments not for
15 forecasted periods as this cannot be accurately predicted in advance.

16 **RATE DEVELOPMENT**

17 **Q. ONCE PEC'S DSM/EE COSTS ARE ALLOCATED BETWEEN NORTH**
18 **AND SOUTH CAROLINA AND IDENTIFIED AS BEING EITHER DSM**
19 **OR EE RELATED, HOW ARE RATES ESTABLISHED?**

A. As with rates currently in effect, PEC schedules are designed to establish three rate groups: Residential, General Service and Lighting.

Q. CAN YOU IDENTIFY THE RATE TARIFFS THAT FALL WITHIN EACH RATE CLASS?

A. Yes. The following table lists the schedules and riders proposed within each rate class:

Residential	GENERAL SERVICE			Lighting
	Small General Service	Medium General Service	Large General Service	
RES R-TOUD R-TOUE	SGS TSS TFS	MGS SGS-TOU SI GS-TES APH-TES CH-TOUE CSE CSG Riders 66 & SS (less than 1 MW)	LGS LGS-TOU LGS-RTP Riders 66 & SS (1 MW & Greater)	ALS SLS SLR SFLS

COST ALLOCATION METHODOLOGY

Q. HOW ARE EE AND DSM RELATED COSTS ALLOCATED TO EACH RATE CLASS?

A. Costs are assigned to customer classes based on program design and participation. In other words, costs are assigned to customer groups that directly benefit from the programs. Simply stated, residential program costs are allocated solely to residential customers, general service program costs are

1 allocated solely to general service customers, and lighting program costs are
2 allocated solely to lighting customers. Where programs benefit multiple
3 customer groups, the costs are allocated to groups receiving benefits using
4 appropriate annual energy and/or coincident peak demand based allocation
5 factors.

6 The manner in which the costs associated with a specific program have been
7 assigned to customer groups is provided in Evans Direct Exhibit Nos. 5, 6, 8
8 and 9.

9 **Q. HOW ARE SALES AND DEMAND ADJUSTED FOR THE IMPACT OF**
10 **"OPT-OUT" CUSTOMERS?**

11 **A.** Commercial customers with annual consumption of 1,000,000 kWh or greater
12 in the billing months of the prior calendar year and all industrial customers may
13 elect not to participate in PEC's demand-side management and energy
14 efficiency programs. PEC reviewed its customer records and identified that
15 commercial and industrial customers choosing to "opt-out" consumed
16 10,965,387,377 kWhs during the year ended March 31, 2011.

17 The Rate Class allocation factors were developed assuming that customers
18 electing to opt-out of the DSM/EE rider will continue to do so. If customers
19 decide to change their "opt-out" status, revenue gains or losses will be
20 recognized in subsequent DSM/EE EMF calculations.

1 Sales for the year ended March 31, 2011 for all customers electing to "Opt-Out"
2 of the DSM/EE rate are provided in Evans Direct Exhibit No. 2.

3 **Q. THE SALES FOR "OPT-OUT" CUSTOMERS ARE EASILY**
4 **IDENTIFIED, BUT HOW IS THE COINCIDENT PEAK OF THESE**
5 **CUSTOMERS ESTIMATED?**

6 A. Currently installed metering for a great number of these customers does not
7 provide sufficient detail to determine the opt-out customers' contribution to the
8 system coincident peak hour load. This impact is estimated based upon the
9 ratio of "opt-out" sales to total sales for the rate class times the rate class peak
10 demand. This approach should accurately approximate the demand of "opt-out"
11 accounts.

12 **Q. AFTER ADJUSTING ENERGY AND DEMAND FOR "OPT-OUT"**
13 **CUSTOMERS, ARE THE RESULTING ALLOCATION FACTORS**
14 **THEN USED TO DETERMINE REVENUE REQUIREMENTS FOR**
15 **EACH RATE CLASS?**

16 A. The energy and demand based allocators are used in cases where programs or
17 measures directly benefit multiple rate groups. When a DSM or EE program
18 benefits multiple rate groups, EE costs are multiplied by Rate Class energy
19 allocation factors and any associated DSM costs are multiplied by Rate Class
20 demand allocation factors for purposes of cost assignment.

1 Since usage for "opt-out" customers is not forecasted, the energy allocation rate
2 class factors were developed from the forecasted rate class usage, after
3 subtracting actual sales for "opt-out" customers for the year ended March 31,
4 2011. The energy allocation factors applicable to each rate class based upon the
5 forecast of rate class sales for the recovery period of December 2011 through
6 November 2012 are provided in Evans Direct Exhibit No. 3.

7 The demand allocation rate class factors are based on the summer coincident
8 peak demand for 2010, after subtracting the estimated demand for "opt-out"
9 customers as discussed above. The forecast does not provide rate class
10 coincident peak demands; therefore, the most recent historic data was deemed
11 to be representative of future demand impacts. The demand allocation factors
12 applicable to each rate class are provided in Evans Direct Exhibit No. 4.

13 **Q. WHICH OF THE COMPANY'S PROGRAMS OR MEASURES**
14 **BENEFIT MULTIPLE CUSTOMER CLASSES?**

15 A. The Company's DSDR EE program benefits multiple customer classes. To
16 allocate DSDR costs, Rate Class energy allocation factors are employed. These
17 allocation procedures are elements of Evans Direct Exhibit Nos. 5 and 8.

18 **Q. HOW ARE RATE CLASS DSM/EE RATES ESTABLISHED?**

19 A. The calculated rate class EE and DSM revenue requirements are divided by rate
20 class sales, after adjustment for "opt-out" customers, to establish the rate class

1 DSM/EE rate. Evans Direct Exhibit No. 5 provides the derivation of the
2 Energy Efficiency Rate. Evans Direct Exhibit No. 6 provides the derivation of
3 the Demand Side Management Rate.

4 **Q. HOW IS THE RATE FOR THE DSM/EE EXPERIENCE**
5 **MODIFICATION FACTOR IN THIS PROCEEDING ESTABLISHED?**

6 A. As with DSM/EE Rate determination, the calculated rate class EE and DSM
7 EMF revenue requirements, adjusted for cost recoveries, are divided by rate
8 class sales, after adjustment for "opt-out" customers, to establish the rate class
9 DSM/EE rate. Evans Direct Exhibit No. 8 provides the derivation of the
10 Energy Efficiency Rate. Evans Direct Exhibit No. 9 provides the derivation of
11 the Demand-Side Management Rate.

12 **Q. WHAT RATES ARE PROPOSED FOR EACH RATE CLASS?**

13 A. Evans Direct Exhibit No. 10 is populated with the DSM/EE rates and EMF
14 values proposed in this proceeding. The DSM/EE rates recover costs forecasted
15 to be incurred from December 1, 2011 through November 30, 2012. The
16 DSM/EE EMF is a true-up mechanism recognizing costs and recoveries for the
17 period August 1, 2010 through July 31, 2011. Projected costs and recoveries
18 during this period will be trued-up prior to the September hearing. PEC
19 proposes the following rates, exclusive of gross receipts taxes ("GRT") and
20 North Carolina Regulatory Fees, for each rate class (shown in cents per kWh):

Rate Class	DSM/EE Rate (¢/kWh)	DSM/EE EMF (¢/kWh)	DSM/EE Annual Rider (¢/kWh)
Residential	0.295	0.009	0.304
General Service	0.185	0.001	0.186
Lighting	0.093	-0.009	0.084

**Q. WHAT ARE THE RATES INCLUDING GRT AND NORTH CAROLINA
REGULATORY FEES?**

A. The proposed billing rates, including gross receipts taxes and NC Regulatory Fees for each class, are provided in the following table (shown in cents per kWh):

Rate Class	DSM/EE Rate (¢/kWh)	DSM/EE EMF (¢/kWh)	Annual DSM/EE Rider (¢/kWh)
Residential	0.305	0.009	0.314
General Service	0.191	0.001	0.192
Lighting	0.096	-0.009	0.087

**Q. HOW WILL PEC'S TARIFFS BE REVISED TO RECOVER THESE
RATES?**

A. The Company's Annual Billing Adjustment, Rider BA, will be updated to recognize these rates, adjusted for GRT and North Carolina Regulatory Fees.

1 Q. WITH REGARD TO THE INFORMATION REQUESTED BY THE
2 COMMISSION IN ITS NOVEMBER 17, 2010 ORDER IN DOCKET NO.
3 E-2, SUB 977 CONCERNING THE INCORPORATION OF INDIRECT
4 COSTS INTO PROGRAM COST EFFECTIVENESS EVALUATIONS, IS
5 IT APPROPRIATE TO INCORPORATE GENERAL EDUCATION AND
6 AWARENESS ("GEA") COSTS (AND ASSOCIATED A&G COSTS)
7 INTO THE COST-EFFECTIVENESS TESTS AND EVALUATIONS?

8 A. The Commission requested that the Company address the propriety of
9 incorporating these costs in its evaluations of both currently approved programs
10 and all future programs. Indirect GEA costs and A&G costs primarily represent
11 common or shared costs that cannot be directly assigned to an individual
12 program. While there may be a variety of methods to allocate these indirect
13 costs to individual programs, the selection of any one method would prove to be
14 (1) arbitrary - since there is no valid support for any of the methods and (2)
15 imprecise - since by definition they are not directly associated with any one
16 program and cannot be accurately assigned to any given program. These
17 indirect GEA and A&G costs support all program offerings and, therefore, only
18 exist at the portfolio level. As such these costs should also be accounted for at
19 the portfolio level rather than at the program level. Obviously, if such costs are
20 included in the individual program evaluations, the cost effectiveness of the
21 affected programs will decrease and some programs may no longer be cost

1 effective. As those programs are eliminated and the "orphaned" costs are
2 reallocated to the remaining programs, their cost effectiveness will further
3 deteriorate, and the process will continue.

4 **Q. IS THE COMPANY'S DSM/EE PORTFOLIO COST EFFECTIVE?**

5 **A.** Yes it is. The avoided costs associated with the Company's DSM/EE portfolio
6 exceed the sum of direct and indirect program costs including both A&G and
7 GEA costs in their entirety.

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

9 **A.** Yes.

NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-2, SUB 1002

SUPPLEMENTAL DIRECT TESTIMONY OF ROBERT P. EVANS

ON BEHALF OF CAROLINA POWER & LIGHT COMPANY

D/B/A/ PROGRESS ENERGY CAROLINAS, INC.

1 **Q. PLEASE STATE YOUR NAME, YOUR BUSINESS ADDRESS AND**
2 **THE BUSINESS RELATIONSHIP WITH PROGRESS ENERGY**
3 **CAROLINAS, INC.**

4 **A. My name is Robert P. Evans and my business address is 100 E. Davie Street,**
5 **Post Office Box 1551, Raleigh, North Carolina 27602. I am employed by**
6 **Progress Energy Carolinas, Inc. ("PEC") as a DSM Regulatory Specialist in**
7 **the Company's Efficiency and Innovative Technologies Department.**

8 **Q. ARE YOU THE SAME ROBERT P. EVANS THAT PREVIOUSLY**
9 **SUBMITTED TESTIMONY IN THIS PROCEEDING?**

10 **A. Yes I am. On June 3, 2011 I submitted direct testimony, exhibits and**
11 **workpapers in this proceeding.**

12 **Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL DIRECT**
13 **TESTIMONY?**

14 **A. The purpose of my supplemental direct testimony is to provide the**
15 **Commission with updated information and exhibits associated with PEC's**

1 Application for Approval of its DSM and Energy Efficiency Cost Recovery
2 Rider.

3 **Q. WHY IS THE COMPANY PROVIDING UPDATES TO ITS**
4 **ORIGINAL APPLICATION?**

5 A. As indicated in my direct testimony, the Company's prospective period
6 estimates for the period April 1, 2011 through July 31, 2011 would be
7 replaced with actual amounts prior to the hearing date in this proceeding.
8 This update is being filed pursuant to Commission Rule R8-69(b)(2) which
9 provides an electric utility the ability to incorporate actual over- or under-
10 recoveries of costs up to thirty (30) days prior to the date of the hearing in the
11 determination of the DSM/EE Experience Modification Factor ("EMF") rider.
12 Corrections to PEC's test period and updates to its forecasted rate period
13 revenue requirements along with interest due to its customers pursuant to
14 Commission Rule R8-69(b)(3) based on over-collections occurring during the
15 test and prospective periods are also being recognized.

16 **Q. WILL YOU DESCRIBE THE CORRECTIONS ASSOCIATED WITH**
17 **THE COMPANY'S TEST PERIOD REVENUE REQUIREMENT?**

18 A. Yes. Subsequent to the Company's June 3, 2011 filing, it was determined that
19 net lost revenues had been understated by \$3,225. The corrected value has
20 been recognized in PEC's updated DSM/EE EMF rate calculations.

1 Q. ARE THERE ANY ADDITIONAL CORRECTIONS ASSOCIATED
2 WITH THE TEST PERIOD?

3 A. No.

4 Q. WILL YOU DESCRIBE THE CHANGES ASSOCIATED WITH THE
5 COMPANY'S PROSPECTIVE PERIOD RESULTING FROM THE
6 REPLACEMENT OF ESTIMATED VALUES WITH ACTUAL
7 VALUES?

8 A. The estimated prospective period revenue requirement employed in the
9 Company's June 3, 2011 filing totaled \$11,847,072. The actual prospective
10 period revenue requirement, recognized in this update, is \$11,607,966. The
11 prospective period revenue requirement is \$239,106 less than that originally
12 filed. This difference has been reflected in PEC's revised DSM/EE EMF rate.

13 The DSM/EE revenue estimates for the prospective period have been replaced
14 with actual values. The original estimate of DSM/EE revenues for the
15 prospective period, \$14,017,398, has been replaced with actual revenues
16 totaling \$14,246,074. The difference, \$228,676, has also been recognized in
17 PEC's revised DSM/EE EMF rate calculations.

18 Q. ARE THERE ANY ADDITIONAL CHANGES ASSOCIATED WITH
19 THE PROSPECTIVE PERIOD?

20 A. There are no further adjustments to the prospective period itself; however,
21 with the availability of actual expenses and revenues for the twelve month

1 period ending July 31, 2011, the Company was able to finalize the
2 uncollectible revenue adjustments for the period as well as determine if it had
3 over-collected its DSM/EE Rider recoveries.

4 **Q. DID THE COMPANY OVER-COLLECT DSM/EE RIDER**
5 **RECOVERIES AND IS THE COMPANY PROPOSING TO REFUND**
6 **ANY SUCH AMOUNTS WITH INTEREST?**

7 A. Yes, the Company did over-collect DSM/EE revenues and it is proposing to
8 return the over-collections with interest. During the period August 1, 2010
9 through July 31, 2011, the Company over-collected \$35,256 from its Lighting
10 customers relative to its cost of service. Interest on this amount, calculated
11 using a ten percent rate of interest, from the mid-point of the collection period
12 through mid-point of the rate period, totals \$4,701. The over-recovered
13 amounts, with interest, will be returned to Lighting customers through the
14 Company's requested DSM/EE EMF rate.

15 **Q. WILL YOU DESCRIBE THE PROPOSED CHANGES TO THE**
16 **COMPANY'S FORECASTED RATE PERIOD REVENUE**
17 **REQUIREMENT?**

18 A. Yes. Updating the prospective period with actual values resulted in impacts
19 being carried forward into the forecasted rate period which begins on
20 December 1, 2011. As a result of these adjustments, the original rate period

1 revenue requirement supplied by the Company in its June 3, 2011 filing,
2 \$66,133,520, has been reduced by \$778,749 to \$65,354,771.

3 **Q. ARE YOU PROVIDING REVISED EXHIBITS RECOGNIZING THE**
4 **CHANGES IN REVENUE REQUIRMENTS?**

5 A. Yes. The ten Supplemental Direct Exhibits attached to my supplemental
6 direct testimony incorporate the aforementioned changes and mirror the
7 original ten Direct Exhibits that accompanied my original June 3, 2011
8 testimony filed in this proceeding. While some of the Supplemental Direct
9 Exhibits were unchanged in this process, I have included them as
10 Supplemental Exhibits in order to maintain continuity with my original
11 submission. The three exhibits not impacted by these updates have been
12 marked as "unchanged". In addition to the updated exhibits, updated
13 workpapers supporting the modified values were provided.

14 **Q. HOW HAVE THESE CHANGES IMPACTED RATES?**

15 A. Both the Residential and Lighting rates were impacted by these changes. Rate
16 impacts occurred in the DSM/EE EMF and/or DSM/EE rate elements. It is
17 important to note that billing rate precision is limited to five decimal points.
18 As such, changes in revenue requirements do not always lead to changes in
19 the billing rates.

20 The Residential DSM/EE EMF rate was impacted through the updating of test
21 and prospective period values. Table 1, which follows, provides a

1 compilation of changes in the DSM/EE EMF revenue requirements and the
2 resulting impact to the Residential DSM/EE EMF rate.

Table 1: Changes in DSM/EE EMF Rates – Test & Prospective Period Updates

	Residential	General Service	Lighting	NC Retail
Change in Costs (\$)				
O&M Recovery	\$ (65,655)	\$ 6,805	\$ 1,600	\$ (57,251)
Depreciation	(11,562)	(8,280)	(336)	(20,178)
Capital Costs	7,174	(16,821)	14	(9,634)
Taxes	2,654	(6,583)	2	(3,927)
Net Lost Revenue	(164,935)	20,044	-	(144,891)
Cost Increase (Decrease)	\$ (232,325)	\$ (4,835)	\$ 1,279	\$ (235,881)
Less: Change in Revenues	274,798	(43,358)	(2,764)	228,676
Plus: Change in Uncollectibles	1,539	(19)	-	1,520
Less: Interest Due to Customers	-	-	4,701	4,701
Overall Increase (Decrease)	\$ (505,584)	\$ 38,503	\$ (658)	\$ (467,739)
Increase (Decrease) / kWh	\$(0.00003)	-	-	\$(0.00001)

3 The changes in revenue requirements applicable to the rate period were
4 sufficient to impact both the Residential and Lighting DSM/EE rates. In
5 Table 2, which follows, a compilation of rate period revenue requirement
6 changes and changes to the Residential and Lighting DSM/EE rates is
7 provided.

Table 2: Changes in DSM/EE Rates— Rate Period Update

	Residential	General Service	Lighting	NC Retail
Change in Costs (\$)				
EE Programs	\$ (224,347)	\$ 89,658	\$ 1,600	\$ (133,089)
DSM Programs	29,990	(87,047)	-	(57,057)
Cost Increase (Decrease)	\$ (194,357)	\$ 2,611	\$ 1,600	\$ (190,146)
Change in Net Lost Revenue	\$ (586,483)	\$ (2,120)	-	\$ (588,603)
Overall Increase (Decrease)	\$ (780,839)	\$ 491	\$ 1,600	(778,749)
Increase (Decrease) / kWh	\$ (0.00005)	-	\$ 0.00001	\$ (0.00003)

1 Q. AS A RESULT OF THESE CHANGES, WHAT RATES ARE
2 PROPOSED FOR EACH RATE CLASS?

3 A. Evans Supplemental Direct Exhibit No. 10 contains PEC's requested
4 DSM/EE and DSM/EE EMF rates. Those proposed rates are presented below
5 on Table 3. These rates are depicted without gross receipts taxes ("GRT")
6 and North Carolina Regulatory Fees and are expressed in cents per kWh.

Table 3: Proposed DSM/EE Rates (exclusive of GRT and Regulatory Fee)

Rate Class	DSM/EE Rate (¢/kWh)	DSM/EE EMF (¢/kWh)	Adjustment* (¢/kWh)	DSM/EE Annual Rider (¢/kWh)
Residential	0.288	0.006	0.002	0.296
General Service	0.185	0.001	0.000	0.186
Lighting	0.094	(0.009)	0.000	0.085

* Adjustment for uncollectible billings

7 Q. WHAT ARE PEC'S PROPOSED RATES INCLUDING GRT AND
8 NORTH CAROLINA REGULATORY FEES?

9 A. The proposed billing rates, including gross receipts taxes and North Carolina
10 Regulatory Fees, are provided by customer class on Table 4, below, and are
11 expressed in cents per kWh.

Table 4: Proposed DSM/EE Rates (including GRT and Regulatory Fee)

Rate Class	DSM/EE Rate (¢/kWh)	DSM/EE EMF (¢/kWh)	Annual DSM/EE Rider (¢/kWh)
Residential	0.300	0.006	0.306
General Service	0.191	0.001	0.192
Lighting	0.097	(0.009)	0.088

Q. HOW DO THESE RATES COMPARE TO THE DSM/EE RATES CURRENTLY IN EFFECT?

A. Table 5, below, provides a comparison between the rates approved in Docket No. E-2, Sub 977 that are currently in effect and those incorporated in this updated request. These amounts do include GRT and North Carolina regulatory fees and are expressed in cents per kWh.

Table 5: Comparison Between Proposed and Current DSM/EE Rates

Rate Class	Sub 1002 Update	Rates in Effect	Change in Rates
Residential	0.306¢	0.198¢	0.108¢
General Service	0.192¢	0.127¢	0.065¢
Lighting	0.088¢	0.069¢	0.019¢

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes.

1 MS. BOWMAN: And then the direct testimony of
2 Ms. Julie Hans.

3 COMMISSIONER BROWN-BLAND: Thank you. And
4 the direct testimony of Ms. -- Ms. -- witness Julie Hans
5 that was filed on June 3, 2011, consisting of ten pages
6 shall also be received into evidence and accepted as if
7 given orally from the witness stand.

8 (Whereupon, the prefiled testimony
9 of Julie Hans will be reproduced in
10 the record at this point the same
11 as if the questions had been orally
12 asked and the answers orally given
13 from the witness stand.)
14
15
16
17
18
19
20
21
22
23
24

43

NORTH CAROLINA UTILITIES COMMISSION
DOCKET NO. E-2, SUB 1002

FILED
JUN 03 2011

Clerk's Office
N.C. Utilities Commission

DIRECT TESTIMONY OF JULIE HANS
ON BEHALF OF CAROLINA POWER & LIGHT COMPANY
D/B/A/ PROGRESS ENERGY CAROLINAS, INC.

1 **Q. PLEASE STATE YOUR NAME, YOUR BUSINESS ADDRESS AND**
2 **POSITION WITH PROGRESS ENERGY CAROLINAS, INC.**

3 **A.** My name is Julie Hans and my business address is 100 E. Davie Street, Post
4 Office Box 1551, Raleigh, North Carolina 27602. I am employed by Progress
5 Energy Carolinas, Inc. ("PEC") as its Manager - Efficiency and Innovative
6 Technologies Customer Experience for the Company's Efficiency and
7 Innovative Technologies Department.

8 **Q. PLEASE BRIEFLY STATE YOUR EDUCATIONAL BACKGROUND**
9 **AND EXPERIENCE.**

10 **A.** I have a Bachelor of Arts degree from North Carolina State University. My
11 major was Communications, and I minored in Journalism.

12 From 1997 to 2001, I worked as a Communications Assistant and, later, as
13 Deputy Press Secretary for two U.S. senators on Capitol Hill. From 2001 to
14 2002, I worked for a Public Relations agency in Raleigh. My career at
15 Progress Energy began in 2002 as a Communications Specialist and

44

1 spokesperson for PEC. I served in a similar role for approximately three years,
2 from 2005-2008, on-site at the Harris Nuclear Plant. In 2008 I began working
3 in PEC's Demand Side Management/Energy Efficiency (DSM/EE) group as a
4 Program Manager, developing energy education programs.

5 **Q. WHAT ARE YOUR CURRENT RESPONSIBILITIES?**

6 A. My responsibilities are to generate awareness of the DSM/EE programs,
7 awareness of the importance of energy efficiency in general, and primarily to
8 generate customer participation in the DSM/EE programs.

9 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

10 A. The purpose of my testimony is to provide the Commission with the
11 information it requested in its November 17, 2010 Order in Docket No. E-2,
12 Sub 977 concerning the Company's DSM/EE education and general
13 awareness initiatives.

14 **Q. WHAT INFORMATION DID THE COMMISSION REQUEST?**

15 A. The Commission requested that PEC continue to evaluate the effectiveness of
16 its general education and awareness initiatives in its application and testimony
17 associated with its next annual DSM/EE rider proceeding.

18 **Q. WILL YOU PROVIDE A BRIEF DESCRIPTION OF PEC'S**
19 **GENERAL EDUCATION AND AWARENESS INITIATIVES?**

45
1 A. Yes.

2 For the period of April 2010 through the end of March 2011, PEC's general
3 education and awareness expenses decreased 12.3 percent from the prior test
4 period (from \$830,811 to \$728,976). During that time, PEC implemented new
5 tactics for reaching customers, including online advertising and social media
6 outreach. The online advertising enabled PEC to quantify specific customer
7 response rates. More information about this new tactic and its measurement
8 are included later in my testimony.

9 Overall, PEC's general education and awareness initiatives included a mix of
10 print (newspaper) and online (display and search) advertising, social media
11 (Twitter), the Save the Watts website, Customized Home Energy Reports, the
12 Energy Efficiency World website for school-age children, the energy-
13 efficiency-focused Newspapers in Education newspaper insert, participation in
14 community events, and the distribution of informational flyers, and other
15 printed materials (about energy efficiency and programs) to customers.

16 Progress Energy Carolinas has a diverse mix of customers who have varying
17 preferences in how they wish to be contacted and how they respond to PEC's
18 educational outreach efforts. Typically, a customer outreach effort is more
19 effective when multiple types of outreach are employed. One such example is
20 an online ad running at the same time as a customer email contact initiative.

46

1 The exposure to multiple outreach attempts helps build awareness, generate
2 the recall needed to motivate the customer to take action, and result in the
3 broadest exposure (or customer reach).

4 **Q. CAN YOU PROVIDE THE COMMISSION WITH INFORMATION**
5 **REGARDING THE CUSTOMER REACH AND EFFECTIVENESS OF**
6 **THESE PROGRAMS?**

7 **A. Yes.**

8 **General Awareness Advertising**

9 During the test period, PEC's general education and awareness efforts
10 included newspapers and online advertising. No other paid media outlets
11 were used to promote the general education and awareness messages.

12 Newspaper print advertisements ran in publications in the PEC service
13 territory on the days of the highest circulation for each respective publication.

14 During the test period, the Save the Watts energy saving ad messages were
15 published 67 times, achieving nearly 2.8 million impressions, meaning that
16 the energy saving messages had the potential to be viewed in nearly 2.8
17 million instances by individuals. The circulation numbers represent all
18 subscribers to the respective publication, including individuals who may not
19 be PEC customers. To limit the number of non-customers who view PEC

1 advertising, PEC advertises only in publications where the vast majority of the
2 circulation overlays with the company's retail service territory.

3 Promotional materials printed in the newspapers listed below included
4 information for customers regarding how to save money on their electric bill,
5 and directly encouraged customers to complete Customized Home Energy
6 Reports (CHERs) with the purpose of identifying home energy improvements
7 and other actions that could be taken to save money on their electric bill.

8 Raleigh News & Observer

9 Asheville Citizen-Times

10 New Bern Sun Journal

11 Wilmington Star-News

12 Richmond Daily Journal

13 Goldsboro News-Argus

14 Sanford Herald

15 Florence Morning News

16 Asheboro Courier-Tribune

17 Fayetteville Observer

18 Greenville Daily Reflector

1 Henderson Daily Dispatch

2 Rocky Mount Telegram

3 Sumter Item

4 Online display ads (sometimes called banner ads) to promote the CHER are
5 placed by PEC's advertising agency on external websites (not Progress-
6 Energy.com) that are "geo-targeted" to deliver advertisements to customers
7 that are located in the markets where we have a significant number of
8 customers, such as Raleigh and Wilmington. The ads are placed on a wide
9 variety of websites to reach the type of customer that might be looking for
10 ways to save energy or money on their electric bill – such as those interested in
11 home improvements. Examples of websites included in the campaign are:
12 doityourself.com; citizen-times.com; thesimpledollar.com; starnewsonline.com

13 The ads are designed to engage the customer and to prompt them to click on a
14 link which then takes them to the CHER website. Once at our website,
15 customers are provided with more detail on the types of customized energy
16 saving tips and information they can receive after completing a CHER
17 questionnaire, and are encouraged to take action to complete the questionnaire.
18 Online display advertisements generated over 100 million impressions and
19 received nearly 100,000 clicks.

49

1 Search advertising was also part of the online advertising plan on the Google,
2 Yahoo! and Bing search engines. All keywords selected related to Progress
3 Energy and energy-efficiency and were targeted based on zip code to ensure
4 only customers within the service territory were served these search results.
5 Search advertising generated over 850,000 impressions – meaning, they had
6 the potential to be viewed by over 850,000 customers – and nearly 80,000
7 clicks (meaning the individual viewing the ad took action by clicking on the
8 link to learn more).

9 The advertising referenced above is related only to the general education and
10 awareness messages. Promotional activities related to specific DSM/EE
11 programs are charged directly to the respective program's budget.

12

13 Social Media

14 PEC created a Twitter profile called "Energy Advisors" to help educate
15 customers about energy efficiency and the programs available for customers.
16 The Energy Advisors account has almost 500 followers that range from
17 customers to new publications to industry experts. Over 220 tweets have been
18 sent out giving customers tips and advice on how they can save money on
19 their bill.

Save the Watts website

The Save the Watts website contains simple energy saving tips for customers to use in practical ways in their homes and businesses. The site also links customers with detailed information about approved PEC DSM/EE programs for homes and businesses.

The website received more than 200,000 first time and repeat visitors during the test period.

Customized Home Energy Reports (CHER)

CHER is a free information tool, available to all PEC residential customers, which is intended to educate consumers about their household energy usage and how to save money by reducing energy consumption. Customers answer a questionnaire either online, through the mail or with phone-based assistance, and then receive a report that details their energy usage. The customized report also educates customers on specific ways to reduce their energy consumption, and identifies the specific energy efficiency programs and rebates offered by PEC that are most relevant to the specific customer.

Bill communications, including inserts, messages printed on the bill and messages printed on the bill envelopes, were sent to customers in January

1 2010 to educate customers about the CHER and to direct them to visit the
2 CHER website and complete an energy audit. More than 837,000 customers
3 received information in their bill regarding how to complete a CHER survey.
4 This helped create an increase in participation by almost 80 percent over the
5 previous month.

6 Overall, from July 2009 (the month the tool was first made available) through
7 March 2011, more than 21,000 customers completed CHER questionnaires
8 and were provided with a variety of customer specific recommendations
9 ranging from low to no cost common sense energy efficiency tips to available
10 programs and rebates applicable to the individual customer .

11 **School-age children outreach**

12 More than 3,400 individuals visited one or more elements of the PEC Energy
13 Efficiency World website, which is a website that educates students on energy
14 efficiency, conservation and renewable energy online. It also offers
15 interactive activities for students to conduct in the classroom.

16 In addition to the Energy Efficiency World website, PEC designed and
17 authored an educational insert geared toward K-12 students, which includes
18 information about energy efficiency and renewable energy. This insert was
19 distributed to customers via the Raleigh News & Observer in spring 2010, and

52
1 was provided cost-free to more than 15,000 students in the PEC service area.

2 The inserts were also delivered to all News & Observer subscribers.

3 **Community events and customer education materials**

4 During the test period, PEC representatives participated in approximately 28
5 community events across the service territory to educate customers about
6 PEC's energy efficiency programs and rebates, and to share practical energy
7 saving tips. PEC energy experts attended events and forums to host
8 informational tables and displays, and distributed handout materials directly
9 encouraging customers to learn more about and sign up for approved DSM/EE
10 energy saving programs.

11 At these events, more than 5,000 flyers containing information about low-
12 cost/no-cost solutions and materials associated with energy efficiency rebate
13 programs were distributed. Additionally, more than 3,000 flyers containing
14 information about how to complete a CHER were distributed.

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

16 **A. Yes.**

1 MS. BOWMAN: That's all. Thank you.

2 COMMISSIONER BROWN-BLAND: Thank you, Ms.

3 Bowman. Does that conclude --

4 MS. BOWMAN: That concludes the Applicants'.

5 Thank you.

6 COMMISSIONER BROWN-BLAND: Thank you.

7 MR. DROOZ: And likewise, we would move for

8 admission into evidence the prefiled affidavits of Jack

9 Floyd and Michael Maness.

10 COMMISSIONER BROWN-BLAND: All right. Then
11 with that having been stipulated to, we will receive into
12 evidence the affidavit of Jack L. Floyd as if given from the
13 witness stand. That affidavit consisted of seven pages with
14 an Appendix A and was filed September 9, 2011. And we also
15 accept into evidence the affidavit of Michael C. Maness
16 consisting of six pages with an Appendix A, also filed on
17 September 9, 2011. It -- it will be received as if given
18 orally from the stand.

19 (Whereupon, the affidavits and
20 appendices of Jack L. Floyd and
21 Michael C. Maness will be
22 reproduced in the record at this
23 point the same as if the questions
24 had been orally asked and the

1 answers orally given from the
2 witness stand.)
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24

**STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH**

SEP 09 2011

**Clerk's Office
N.C. Utilities Commission**

DOCKET NO. E-2, SUB 1002

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of
Application by Carolina Power & Light)
Company, d/b/a Progress Energy Carolinas,)
Inc., for Approval of Demand Side)
Management and Energy Efficiency Cost)
Recovery Rider Pursuant to G.S. 62-133.9)
and Commission Rule R8-69)

**AFFIDAVIT OF
JACK L. FLOYD**

STATE OF NORTH CAROLINA

COUNTY OF WAKE

I, Jack L. Floyd, being first duly sworn, do depose and say:

I am an Engineer in the Electric Division of the Public Staff – North Carolina Utilities Commission representing the using and consuming public.

I have attached, as Appendix A, a summary of my education and experience.

In preparing this affidavit, I reviewed the application, testimony, and exhibits filed by Progress Energy Carolinas, Inc. (Progress) on June 3, 2011, pursuant to G.S. 62-133.9 and Commission Rule R8-69, as well as Progress' supplemental testimony filed on August 23, 2011, and responses to Public Staff data requests in developing my recommendations. In addition, I have reviewed previous Commission orders related to Progress' Demand Side Management (DSM) and Energy Efficiency (EE) programs and cost recovery rider proceedings. I also assisted Public Staff witness Maness with his review of the rider calculations and inputs.

The purpose of my affidavit is to present the Public Staff's analysis and recommendations with respect to: (1) the portfolio of EE and DSM programs included in the application of Progress for approval of its annual DSM/EE Cost Recovery Riders (DSM/EE Riders); (2) the cost effectiveness of each DSM and EE program; (3) the evaluation, measurement, and verification (EM&V) report filed by Progress for the Residential Home Energy Improvement Program (RHEIP) that is incorporated into calculations of its DSM/EE riders in this proceeding; and (4) the administrative and general (A&G) expenses associated with the DSM and EE programs, and in particular the A&G costs related to Progress' general education and awareness (GEA) initiatives.

DSM and EE Programs

Progress included the following programs in this proceeding:

- Residential EnergyWise Program
- Residential Home Advantage Program
- RHEIP
- Neighborhood Energy Saver (Low Income) Program;
- Commercial, Industrial, and Governmental (CIG) Energy Efficiency in Business Program, also known as the Energy Efficiency in Business Program
- Residential Solar Hot Water Pilot Program
- Residential Lighting Program
- Residential Appliance Recycling Program
- Residential Energy Efficiency Benchmarking Program
- Residential Compact Fluorescent Light bulb (CFL) Pilot Program
- Distribution System Demand Response (DSDR) Program

Each of these programs has previously received Commission approval as a new DSM or EE program and is eligible for cost recovery in the proceeding under G.S. 62-133.9, subject to certain program-specific conditions imposed by the Commission regarding the recovery of net lost revenues (NLRs) and program performance incentives (PPIs).

Progress indicates that most of its programs are meeting the expectations for participation and savings as originally envisioned. However, the Residential Home Advantage, CIG EE in Business, and the Residential Solar Hot Water Pilot programs have lower than expected participation, possibly due to current economic conditions. A more robust review of program performance may be conducted once an EM&V report is filed for a program. Progress filed an EM&V report for the RHEIP on May 3, 2011, in Docket No. E-2, Sub 936 (RHEIP Report), which proposed several program modifications designed to improve the cost effectiveness of particular measures. I will discuss these proposals in more detail later in my affidavit.

Cost Effectiveness

With the exception of the Neighborhood Energy Saver program, Progress included the results of its analysis for the Total Resource Cost (TRC) test and the Utility Cost Test (UCT) for each program in its filed application and workpapers, which indicate that these programs continue to be cost effective.

The result of the TRC for the RHEIP for 2010 is 1.007. Progress has discussed with the Public Staff several program adjustments to the RHEIP to improve its

participation and cost-effectiveness.¹ These adjustments include possible changes to the incentives, delivery of incentives, as well as elimination of specific measures from the program based on the RHEIP Report. I will discuss this report and its findings in more detail later.

It is a general industry practice that the cost effectiveness tests for specific programs include only direct costs associated with the particular programs. In Docket No. E-2, Sub 977, I testified that Progress should consider how common GEA and other A&G costs not directly associated with a specific DSM/EE program might be incorporated into the calculations of cost effectiveness. In its November 17, 2010, Order in that docket, the Commission required Progress to address the inclusion of GEA costs and other indirect A&G costs in the cost effectiveness tests and evaluations in its next DSM/EE rider filing, and required the Public Staff to evaluate this information.

In this affidavit, I use the term "indirect costs" to include any GEA or other A&G costs not specifically assignable to one of Progress' DSM or EE programs. This includes costs related to general advertising, public promotion of DSM/EE in general, efforts used to convey information about DSM/EE (energy audit reports, websites, community events, etc.), and the overhead related to these specific activities.

Progress witness Evans testifies that it would be difficult to accurately assign or allocate indirect costs to a specific program. I agree that if a portion of indirect costs were allocated to a program, those costs might have no relation to or bearing on the actual cost effectiveness of the program and yet would lower the result of the cost effectiveness calculation. Mr. Evans also indicates that it is more appropriate to include indirect costs in an evaluation of the cost effectiveness of the entire portfolio of DSM and EE programs. I concur with Mr. Evans regarding the use of indirect costs for calculation of cost-effectiveness of the entire portfolio of DSM/EE programs. Therefore, I recommend that the Commission require Progress to include in its next DSM/EE Rider application a portfolio level cost effectiveness evaluation using each of the standard cost effectiveness tests, and identify the amounts of avoided cost benefits and all direct and indirect costs included in the calculations.

I have confirmed that PEC allocated DSM- and EE-related costs to its North Carolina and South Carolina retail jurisdictions on the basis of retail peak demand and energy sales, respectively. Furthermore, PEC's calculation of its DSM/EE and DSM/EE Experience Modification Factor (EMF) riders included allocations of program costs, net lost revenues, and PPIs related to the specific customer classes that the programs were designed to serve. Costs related to the DSDR EE program have been allocated to all classes on the basis of retail energy sales. The energy sales related to customers who

¹ Paragraph 31 of the Cost Recovery and Incentive Mechanism for Demand-Side Management and Energy Efficiency Programs (Mechanism), approved by the Commission on June 15, 2009, in Docket No. E-2, Sub 931 (Sub 931 Order), states that programs with a TRC less than 1.00 may not be eligible for PPIs unless Progress can show that the results are adversely impacted by weather, a decline in avoided costs, uncontrolled market forces, etc.

have opted-out of participation in PEC's DSM and EE programs pursuant to G.S. 62-133.9(f) were not included in the class allocation factor calculations. Each of these allocations is consistent with previous DSM/EE rider proceedings and Commission orders.

GEA Initiatives and Costs

GEA initiatives are activities undertaken for the purpose of educating customers about DSM and EE, as well as raising customer awareness about DSM and EE programs. Progress' GEA initiatives include the Custom Home Energy Report, Energy Efficiency World, Save the Watts tips, various forms of advertising, and community events. Progress witness Hans' testimony and exhibits included a list of these initiatives and the volume of activity associated with each GEA initiative during the test year. I believe Progress' expenditures for these GEA initiatives are reasonable. I recommend that the Commission require Progress to continue providing a list of GEA initiatives and the volume of activity associated with each during the test year in future DSM/EE rider proceedings.

I have reviewed Progress' A&G costs, which include the GEA costs, in Evans Exhibit No. 1. Consistent with the last DSM/EE rider proceeding in Docket No. E-2, Sub 977, Progress allocated its A&G costs based on rate period revenue requirements, and amortized its A&G costs over a three-year period. Furthermore, in response to a Public Staff data request, Progress indicated that approximately 40% of its A&G costs are related to GEA initiatives. Progress witness Hans' testimony indicated that GEA expenditures for the test year period have decreased from \$830,811 to \$728,976 or by 12.3% since the last rider proceeding. It is appropriate for GEA expenditures to decrease as customers' awareness and education regarding EE and DSM has increased through repeated exposure to messaging from Progress and other channels.

GEA initiatives are more relevant to market transformation than to the installation of specific DSM or EE measures, and are generally a reasonable means to promote market transformation in support of specific DSM and EE programs. In addition to the metrics provided by Progress witness Hans, it may be appropriate to study the impact of these initiatives on market transformation, rather than the usual impact-oriented program evaluations performed on DSM and EE measures. It is difficult to understand the effectiveness of these initiatives simply by comparing the activities or number of "impressions" year to year. A market survey could be done to assess the number of customers who either enrolled in a Progress DSM or EE program as a result of the GEA initiatives, the types of actions customers took to implement EE outside of a Progress EE program, when they took the action, what knowledge of EE they gained from the GEA initiatives, whether contractors and trade allies observed increased business activity as a result of the GEA initiatives, and how the GEA initiatives contributed to the customer's action distinct from other causes. I do not object to the inclusion of GEA costs in this DSM and EE cost recovery rider proceeding. However, I recommend that the Commission require Progress to investigate the feasibility and cost of conducting such a market study and report its findings as soon as practicable.

EM&V

PEC indicated in its filing that specific measurement units for each program except the Residential Energy Efficiency Benchmarking program were in place during the test period. These measurement units accounted for an estimated 136,920 megawatt-hours (MWhs) of energy savings and 77 megawatts (MWs) of capacity savings in the test period. Progress has recently filed EM&V reports for its RHEIP, EnergyWise, and CIG EE in Business programs in Docket Nos. E-2, Subs 936, 927, and 938, respectively. Only the RHEIP Report is incorporated in this DSM/EE rider proceeding.

Navigant Consulting, Inc., conducted the EM&V analysis for Progress, and developed a set of recommendations in its RHEIP Report related to the initial vintage year for the RHEIP. The RHEIP Report concluded that approximately 50% of the reported gross energy savings and 61% of the reported peak demand savings were verified, or 2,494 MWhs and 2.37 MWs of savings, respectively. These findings are based on the sum of the savings from all measures within the RHEIP.

Unit savings for the individual program measures were also evaluated. The specific findings related to the unit savings of each measure are listed in Table 4-5 of the RHEIP Report and serve as the basis for the adjustments made to the PPI and net lost revenues. Progress used the findings from the RHEIP Report to adjust its calculation of net lost revenues and PPI for vintage year 2009, and to adjust prospective program savings for future vintage years.

The RHEIP Report primarily estimated the gross energy and peak demand savings from the program and updated the unit savings for each measure. However, for purposes of cost recovery rider proceedings, it is important to estimate the net energy and peak demand savings from the program. Progress conducted a limited analysis of free ridership², which is a major component for determining net savings, by using participant surveys and information from other states. No analysis of spillover³ was conducted.

The limited analysis of free ridership was based on participant survey data that allowed Navigant to better understand the intentions of the participants and how the RHEIP influenced the customer's EE participation. The levels of free ridership have been increased from the 20% assumed for all measures in the original program approval filings. Table 4-10 of the RHEIP Report illustrates the updated free ridership numbers.

² Free ridership is defined as a participant in an EE program who would have participated regardless of the program or incentive offered, and serves to reduce verified gross savings.

³ Spillover assesses additional EE measures the participant would have taken due to his participation in the EE program, and increases the net savings from an EE program.

60

With respect to the RHEIP Report, it appears that Navigant used acceptable protocols to: (1) formulate the analysis and calibrate the findings; and (2) develop the end-use data and calibrate that data to actual use. The Public Staff will continue to review the methodology used for analysis of free ridership and the determination of net-to-gross savings for vintage year 2009 in the RHEIP Report as Progress submits future EM&V analyses.

I recommend that future EM&V analyses incorporate a more detailed analysis, as appropriate for the program or measure being analyzed, of free ridership and spillover, as well as the persistence of savings and potential snapback. For example, on page 39 of the RHEIP Report, Navigant includes a footnote indicating it rejected North Carolina participant survey results for free ridership associated with the duct sealing measure, and maintained its use of the original 20% estimate. The Public Staff expects subsequent EM&V reports on the RHEIP to include additional analysis of net-to-gross inputs to confirm the levels of free ridership and spillover, or in the alternative, a showing that the analysis is too costly or inappropriate for the savings expected from the program or specific measure. An inadequate net-to-gross analysis could lead to erroneous cost effectiveness test results, with Progress receiving PPIs and NLRs to which it is not entitled and consumers paying a DSM/EE rider higher than justified.

I also make the following recommendations:

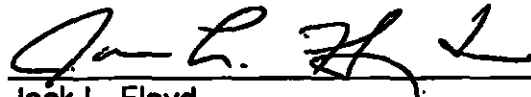
1. In developing the baseline energy and peak demand savings related to certain measures in the RHEIP, Progress used information from Florida and California to establish incremental savings projections associated with those measures. For future EE measures that are impacted by weather such as windows, insulation, and HVAC, it would seem more appropriate to use weather data from climate zones more similar to that of North Carolina. This would serve to reduce potential differences between initial estimates and actual savings from the EE measure.
2. When establishing the baseline energy and peak demand savings during development of EE measures, Progress should strive to develop baselines for EE measures that adequately represent the conditions, equipment, and installation of EE measures. For example, the RHEIP Report acknowledges shortcomings with the installation of ducts in crawlspaces and the amount of insulation serving as the baseline for energy and peak demand savings. While the RHEIP Report appropriately recognized discrepancies that increased the incremental savings associated with these two measures, a proper baseline of data would reduce the likelihood that large changes to savings estimates would be needed.
3. Future study of duct sealing and attic insulation measures in the RHEIP should include larger samples in the analyses.

61.

4. Progress should be required to file a schedule of all phases of EM&V activities for each program, including projected filing dates for EM&V reports.

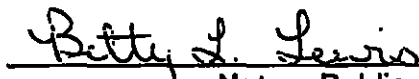
I have provided the information contained in this affidavit to Public Staff witness Maness for incorporation into his final DSM/EE rider calculation.

This completes my affidavit.

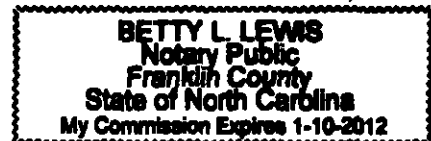


Jack L. Floyd

Sworn to and subscribed before me
on this the 9th day of September 2011.

 Betty L. Lewis

Notary Public



My Commission Expires: 1-10-2012

APPENDIX A

JACK L. FLOYD

I am a graduate of North Carolina State University with a Bachelor of Science Degree in Chemical Engineering. I am licensed in North Carolina as a Professional Engineer. I have more than seventeen years of experience in the water and wastewater treatment field, nine of which have been with the Public Staff's Water Division. In addition, I have been with the Electric Division for over eight years.

Prior to my employment with the Public Staff, I was employed by the North Carolina Department of Natural Resources, Division of Water Quality as an Environmental Engineer. In that capacity, I performed various tasks associated with environmental regulation of water and wastewater systems, including the drafting of regulations and general statutes.

In my capacity with the Public Staff's Water Division, I investigated the operations of regulated water and sewer utility companies and prepared testimony and reports related to those investigations.

Currently, my duties with the Public Staff include evaluating the operation of regulated electric utilities, including rate design, cost of service, and demand side management and energy efficiency resources. My duties also include assisting in the preparation of reports to the Commission; preparing testimony regarding my investigation activities; reviewing Integrated Resource Plans; and making recommendations to the Commission concerning the level of service for electric utilities.

DOCKET NO. E-2, SUB 1002

FILED
SEP 09 2011

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

**Clerk's Office
N.C. Utilities Commission**

In the Matter of
Application of Carolina Power & Light Company,)
d/b/a Progress Energy Carolinas, Inc., for)
Approval of DSM and Energy Efficiency Cost)
Recovery Rider Pursuant to G.S. 62-133.9 and)
Commission Rule R8-69)

AFFIDAVIT
OF
MICHAEL C. MANESS

STATE OF NORTH CAROLINA

COUNTY OF WAKE

I, Michael C. Maness, first being duly sworn, do depose and say:

I am an Assistant Director of the Accounting Division of the Public Staff - North Carolina Utilities Commission, which is charged by statute with intervening on behalf of the using and consuming public in Commission proceedings affecting public utility rates and service. My responsibilities with the Accounting Division include matters involving electric and water/sewer utilities. I have been employed by the Public Staff since July 12, 1982. A summary of my education and experience is attached to this affidavit as Appendix A.

I am responsible for the performance, supervision, and/or management of the following activities: (1) the examination and analysis of testimony, exhibits, books and records, and other data presented by utilities and other parties involved in Commission proceedings; and (2) the preparation and presentation to the Commission of testimony, exhibits, and other documents in those proceedings.

The purpose of my affidavit is to present the Public Staff's recommendation regarding the application for approval of Demand-Side Management / Energy Efficiency (DSM/EE) riders filed by Carolina Power & Light Company, d/b/a Progress Energy Carolinas, Inc. (PEC or the Company) in this docket on June 3, 2011 (Application), pursuant to G.S. 62-133.9 and Commission Rule R8-69, and as revised in the Supplemental Direct Testimony and Exhibits of Company witness Robert P. Evans, filed on August 23, 2011.

In its Application as originally filed, PEC filed for approval of DSM/EE riders that would result in a North Carolina retail revenue requirement of approximately

\$70,138,000 [including revenue adders for uncollectibles, gross receipts tax (GRT), and the North Carolina Regulatory Fee (NCRF)], an increase of approximately \$25,192,000 above the revenues produced by the riders currently in effect.

In its Application as revised by the Supplemental Direct Testimony and Exhibits of Company witness Evans, PEC is requesting approval of DSM/EE riders that would result in a North Carolina retail revenue requirement of approximately \$68,906,000 (including uncollectibles, GRT, and NCRF), an increase of approximately \$23,960,000. The specific riders being requested by the Company are as follows:

- (1) A Residential DSM/EE Rider increment, excluding GRT, NCRF, and uncollectibles, of 0.288 cents per kilowatt-hour (¢/kWh), calculated by dividing the sum of an EE cost total of \$37,921,369 and a DSM cost total of \$6,601,439 by projected rate period residential sales of 15,449,253,075 kWh. After adjustment for the revenue adders listed above, the proposed increment Rider is equal to 0.300 ¢/kWh.
- (2) A Residential DSM/EE EMF Rider increment, excluding GRT, NCRF, and uncollectibles, of 0.006 ¢/kWh, calculated by dividing the sum of an EE underrecovery total of \$784,521 and a DSM underrecovery total of \$138,034 by projected rate period residential sales of 15,449,253,075 kWh. After adjustment for the revenue adders listed above, the proposed increment Rider equals 0.006 ¢/kWh.
- (3) A General Service DSM/EE Rider increment, excluding GRT, NCRF, and uncollectibles, of 0.185 ¢/kWh, calculated by dividing the sum of an EE cost total of \$19,378,457 and a DSM cost total of \$1,033,135 by projected rate period general service sales of 11,060,984,152 kWh. After adjustment for the revenue adders listed above, the proposed increment Rider equals 0.191 ¢/kWh.
- (4) A General Service DSM/EE EMF Rider increment, excluding GRT, NCRF, and uncollectibles, of 0.001 ¢/kWh, calculated by dividing the sum of an EE underrecovery total of \$422,139 and a DSM overrecovery total of \$303,062 by projected rate period general service sales of 11,060,984,152 kWh. After adjustment for the revenue adders listed above, the proposed increment Rider equals 0.001 ¢/kWh.
- (5) A Lighting DSM/EE Rider increment, excluding GRT, NCRF, and uncollectibles, of 0.094 ¢/kWh, calculated by dividing the sum of an EE cost total of \$420,371 and a DSM cost total of \$0 by projected rate period lighting sales of 448,568,642 kWh. After adjustment for the revenue adders listed above, the proposed increment Rider equals 0.097 ¢/kWh.

- (6) A Lighting DSM/EE EMF Rider decrement, excluding GRT, NCRF, and uncollectibles, of 0.009 ¢/kWh, calculated by dividing the sum of an EE overrecovery total of \$39,957 and a DSM over/under recovery total of \$0 by projected rate period lighting sales of 448,568,642 kWh. After adjustment for the revenue adders listed above, the proposed decrement Rider equals 0.009 ¢/kWh.

These riders would be charged or credited to all participating North Carolina retail customers (those who have not opted out pursuant to G.S. 62-133.9(f)), as applicable, served during the rate period December 1, 2011, through November 30, 2012.

In his Supplemental Testimony, Company witness Evans stated that the purpose of the revisions to the proposed riders was (1) to update the original estimated values for April through July 2011 with actual values, (2) to correct certain test period net lost revenue amounts, (3) to finalize uncollectible revenue adjustments, and (4) to incorporate interest on the test and prospective period overcollections of cost for its Lighting customer class.

G.S. 62-133.9(d) allows a utility to petition the Commission for approval of an annual rider to recover (1) the reasonable and prudent costs of new DSM and EE measures and (2) other incentives to the utility for adopting and implementing new DSM and EE measures. Commission Rule R8-69, which was adopted by the Commission pursuant to G.S. 62-133.9(h), sets forth the general parameters and procedures governing approval of the annual rider, including (1) provisions for both a DSM/EE rider to recover the estimated costs and incentives applicable to the "rate period" in which that DSM/EE rider will be in effect, and a DSM/EE EMF rider to recover the difference between the DSM/EE rider in effect for a given test period and the actual recoverable amounts incurred during that test period; (2) allowance for inclusion in the DSM/EE EMF rider of the net under- or overrecovery experienced between the end of the test period and the date 30 days prior to the hearing in the annual proceeding, subject to review in the next year's proceeding; (3) consideration of the appropriateness of the recovery of net lost revenues as an incentive; (4) provision for deferral accounting for net under- and overrecoveries; and (5) provisions for interest or return on the deferral account and on refunds to customers.

The method by which PEC has calculated its proposed rates in this proceeding is the Cost Recovery and Incentive Mechanism for Demand-Side Management and Energy Efficiency Programs (Mechanism), approved by the Commission on June 15, 2009, in its Order Approving Agreement and Stipulation of Partial Settlement, Subject to Certain Commission-Required Modifications, in Docket No. E-2, Sub 931 (Sub 931 Order), and modified by the Commission's November 25, 2009, Order Granting Motions for Reconsideration in Part, in the same docket. The Mechanism includes the following components:

- (1) **Application for Approval of Programs** – This part of the Mechanism delineates certain steps and criteria PEC will follow when evaluating a potential DSM or EE program, including qualitative and cost-effectiveness screening, and sets forth requirements for continued monitoring of approved programs' cost effectiveness test results.
- (2) **Cost Recovery** – Pursuant to this portion of the Mechanism, PEC is allowed to recover reasonable and prudent DSM and EE program costs. PEC is allowed to defer incurred DSM/EE program operations and maintenance (O&M) and administrative and general (A&G) expenses, with amortization over periods of time not to exceed 10 and 3 years, respectively. Additionally, the Company is allowed to recover the capital costs of capitalized DSM and EE assets, as well as carrying costs related to deferred charges.
- (3) **Lost Revenues** - This section of the Mechanism allows PEC to recover Net Lost Revenues (NLR) as an incentive, but generally limits recovery to the first 36 months after an applicable DSM or EE measurement unit is installed. Additionally, certain general programs and measures, as well as research and development activities, are ineligible for recovery of NLR, along with pilot programs unless PEC requests and the Commission approves such recovery at the time of program approval. NLR recovery also ceases upon the implementation of new rates approved by the Commission in a general rate case or similar proceeding, and must be offset by any increase in revenue due to increased demand or energy consumption by PEC customers attributable to any activity by PEC's public utility operations.
- (4) **Program Performance Incentive (PPI)** - This section of the Mechanism provides for the recovery by PEC of a performance incentive for the implementation and operation of cost-effective new DSM and EE programs that achieve verified energy and peak demand savings. The same limitations regarding certain general programs and measures, research and development activities, and pilot programs as set forth in the Lost Revenues section are also applicable to the PPI, along with a restriction barring recovery of the PPI for programs that become non-cost-effective. The PPI is based on the net savings of each program or measure as calculated using the Utility Cost Test (UCT), and is equal to 8% of net savings for DSM programs and measures or 13% for EE programs and measures.

The Mechanism's terms and procedures are to be reviewed by PEC and other parties at least every three years to ensure that they continue to be appropriate; any changes in the terms and conditions shall only be applied prospectively.

The Public Staff's investigation of PEC's filing in this proceeding included determining whether the proposed DSM/EE riders were calculated in accordance with the Mechanism, and otherwise adhered to sound ratemaking concepts and principles. The Public Staff's investigation included a review of the Company's filing and relevant prior Commission proceedings and orders, and the selection and review of a sample of source documentation for test year costs included by the Company for recovery. Review of this sample, which is still ongoing, is intended to test whether the costs included by the Company in the Riders are valid costs of approved DSM and EE programs, or administrative costs supporting those programs. The Public Staff's investigation required the review of responses to written and verbal data requests, discussions with Company personnel, and site visits to the Company's offices to review documentation.

My investigation, including the Public Staff's sampling procedure, was concentrated primarily on costs and incentives related to the April 2010 – March 2011 test period, which are to be included in the DSM/EE EMF riders approved in this proceeding. Actual costs and incentives applicable to the rate period, as well as costs and incentives applicable to the April-July 2011 "prospective" period, which are also included in the DSM/EE EMF riders, will be subject to detailed review in future DSM/EE cost recovery proceedings. My investigation of PEC's filing indicates that the Company generally has calculated the proposed Riders in accordance with the methods set forth in the approved Mechanism for recovery of costs, Net Lost Revenues, and the PPI.

In this proceeding, PEC has adjusted its proposed PPI incentives to reflect the results of a recently completed Evaluation, Measurement, and Verification (EM&V) analysis of its Residential Home Energy Improvement Program (RHEIP) for the 2009 vintage year. Public Staff witness Floyd addresses this analysis in his affidavit filed in this proceeding. Based on the results of this analysis, PEC recalculated the PPI due on the RHEIP program for Vintage Year 2009; as recalculated, the annual levelized PPI amount related to RHEIP measures installed/implemented during the 2009 Vintage Year was reduced from \$52,551 to \$10,405. PEC is proposing to true-up the PPI previously approved in its 2010 proceeding (Docket No. E-2, Sub 977) for 2009 Vintage Year RHEIP measures to reflect this EM&V result. Based on my review, it appears that the adjustment to the PPI amount has been made in a reasonable manner. The Company has made analogous adjustments to its NLR calculations, which also appear to have been pursued in a reasonable manner; however, as discussed below, the Public Staff is still in the process of completing its review of certain information obtained very recently from the Company regarding the NLR calculation. It should also be noted that EM&V of the kW and kWh impacts and net savings associated with other vintage years and DSM/EE programs for which the Company is currently claiming NLR and PPI incentives has not yet been incorporated in a cost recovery proceeding. Thus, all of the NLR and PPI incentive amounts included in the riders approved in this proceeding (with the exception of those trued up in this proceeding related to the 2009 Vintage Year

RHEIP), including those within the EMF riders, remain subject to true-up in future proceedings.

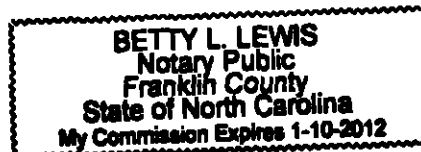
In the course of its review, the Public Staff has not to date found any material items in the Company's filing or rate calculations requiring adjustment. However, the Public Staff is continuing to review portions of the Company's calculations and responses to data requests, including support for the RHEIP EM&V impact on the NLR calculation and documentation of costs selected for review in the Public Staff's sampling. Subject to completion of this review, the Public Staff concludes that the Company has calculated its proposed riders consistent with the approved Mechanism. Should the Public Staff discover any material exceptions or necessary adjustments to the riders during the completion of its review, I will notify the Commission and the Company, and make a supplemental filing with the Commission.

This completes my affidavit.


Michael C. Maness

Sworn to and subscribed before me
this the 8th day of September, 2011.

Betty L. Lewis Betty L. Lewis
Notary Public



My Commission Expires: 1-10-2012

APPENDIX A**MICHAEL C. MANESS**

I am a graduate of the University of North Carolina at Chapel Hill with a Bachelor of Science degree in Business Administration with Accounting. I am a Certified Public Accountant and a member of both the North Carolina Association of Certified Public Accountants and the American Institute of Certified Public Accountants.

I am responsible for analyzing testimony, exhibits, and other data presented by parties before this Commission. I have the further responsibility of performing and supervising the examinations of books and records of utilities involved in proceedings before the Commission, and summarizing the results into testimony and exhibits for presentation to the Commission.

Since joining the Public Staff in July 1982, I have filed testimony or affidavits in several general and fuel rate cases of Duke Power Company, Carolina Power & Light Company (CP&L), and Virginia Electric and Power Company (Dominion North Carolina Power), as well as in several water and sewer general rate cases. I have also filed testimony or affidavits in other proceedings, including applications for certificates of public convenience and necessity for the construction of generating facilities, applications for approval of self-generation deferral rates, and applications for approval of cost and incentive recovery for demand-side management and energy efficiency programs.

I have also been involved in several other matters that have come before this Commission, including the investigation undertaken by the Public Staff into the operations of the Brunswick Nuclear Plant as part of the 1993 CP&L fuel rate case (Docket No. E-2, Sub 644), the Public Staff's investigation of Duke Power's relationship with its affiliates (Docket No. E-7, Sub 557), and several applications for business combinations involving electric utilities regulated by this Commission. Additionally, I was responsible for performing an examination of CP&L's accounting for the cost of Harris Unit 1 in conjunction with the prudence audit performed by the Public Staff and its consultants in 1986 and 1987.

1 COMMISSIONER BROWN-BLAND: Are there any
2 other matters or anything else to come before us in this
3 matter prior to dealing with post-hearing filings?

4 MS. BOWMAN: No.

5 COMMISSIONER BROWN-BLAND: All right. As in
6 the last case, it's my understanding the parties agree that
7 the post-hearing filings could be filed on or before
8 October 21st. And we expect that the transcript --
9 transcript would be ready by October 7th. Is that still
10 agreeable?

11 MS. BOWMAN: That's correct.

12 MR. DROOZ: That is agreeable to us.

13 COMMISSIONER BROWN-BLAND: So ordered. Any
14 post-hearing filings, briefs, anything of that nature, shall
15 be due on or before October 21st.

16 If there's nothing else to come before us at
17 this time, we -- we'll stand adjourned. Thank you.

18
19 Whereupon, the hearing was adjourned.

20

21

22

23

24

CERTIFICATE

The undersigned Court Reporter certifies that this is the transcription of notes taken by her during this proceeding and that the same is true, accurate and correct.



Candace Covington
Court Reporter II

FILED

OCT 05 2011

**Clerk's Office
N.C. Utilities Commission**