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**OFFICIAL COPY**

**FILED**

**JUN 19 2009**

Clerk's Office  
N.C. Utilities Commission

June 19, 2009

Ms. Renné C. Vance, Chief Clerk  
North Carolina Utilities Commission  
4325 Mail Service Center  
Raleigh, North Carolina 27699-4325

RE: Docket No. E-7, Sub 831

Dear Ms. Vance:

Enclosed for filing are the original and thirty (30) copies of Duke Energy Carolinas, LLC's Settlement Testimony of J. Danny Wiles, Theodore E. Schultz and Stephen M. Farmer in the above referenced docket.

Sincerely,

*Robert W. Kaylor*  
Robert W. Kaylor

Enclosures

cc: Parties of Record

(ST)  
AG  
7-Comm  
Bennink  
Kirby  
Wicks  
Homer  
Sessions  
Kite  
Grisen  
Jones  
Gruen  
3-ps Legal  
3-ps ACWg  
2-ps ECPs  
3-ps Electric

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 831

**FILED**

**JUN 19 2009**

Clerk's Office  
N.C. Utilities Commission

In re:	)	
Application of Duke Energy Carolinas, LLC	)	SETTLEMENT TESTIMONY OF
For Approval of Save-a-Watt Approach,	)	J. DANNY WILES FOR
Energy Efficiency Rider and Portfolio of	)	DUKE ENERGY CAROLINAS
Energy Efficiency Programs	)	

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1                                   **I. INTRODUCTION AND PURPOSE**

2   **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3   A. My name is J. Danny Wiles and my business address is 526 South Church Street,  
4       Charlotte, North Carolina.

5   **Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

6   A. I am employed by Duke Energy Business Services LLC as Vice President,  
7       Franchised Electric & Gas Accounting. I am an officer of Duke Energy  
8       Carolinas, LLC (“Duke Energy Carolinas” or the “Company”).

9   **Q. DID YOU PREVIOUSLY CAUSE TO BE PRE-FILED IN THIS DOCKET**  
10       **CERTAIN DIRECT AND REBUTTAL TESTIMONIES ON BEHALF OF**  
11       **DUKE ENERGY CAROLINAS?**

12   A. Yes, I did.

13   **Q. WHAT IS THE PURPOSE OF YOUR SETTLEMENT TESTIMONY IN**  
14       **THIS PROCEEDING?**

15   A. The purpose of my testimony is to describe changes to the accounting and  
16       reporting treatment requested by the Company in my direct testimony as a result  
17       of the Agreement and Joint Stipulation of Settlement (the “Agreement”) entered  
18       into between Duke Energy Carolinas, LLC (“Duke Energy Carolinas” or the  
19       “Company”) and the Southern Alliance for Clean Energy, Environmental Defense  
20       Fund, Natural Resources Defense Council, and the Southern Environmental Law  
21       Center (collectively, the “Environmental Intervenors”).

1    **Q.    MR. WILES, WHAT HAS BEEN THE FOCUS OF YOUR TESTIMONIES**  
2           **IN THIS PROCEEDING?**

3    A.    My testimonies in this proceeding have focused on the proposed deferral of  
4           program costs and amortization of such costs over the life of the applicable  
5           program and the proposal to treat the earnings stream produced under the “save-a-  
6           watt” Energy Efficiency Plan similarly to that which would have been produced  
7           by a generating plant investment for reporting purposes.

8                           **II.    REPORTING AND ACCOUNTING ISSUES**

9    **Q.    AS A RESULT OF THE AGREEMENT REACHED WITH THE**  
10           **ENVIRONMENTAL INTERVENORS AND THE COMMISSION’S**  
11           **ORDER, DATED FEBRUARY 26, 2009, PLEASE EXPLAIN HOW THE**  
12           **COMBINED RECOVERY OF PROGRAM COSTS AND THE**  
13           **MANAGEMENT INCENTIVE WILL BE HANDLED IN FUTURE ES-1**  
14           **REPORTS.**

15    A.    In accordance with the Commission’s *Order Resolving Certain Issues, Requesting*  
16           *Information on Unsettled Matters, and Allowing Proposed Rider to Become*  
17           *Effective Subject to Refund*, dated February 26, 2009, the Company will (1)  
18           include actual program revenues<sup>1</sup> and actual program costs for purposes of  
19           calculating and reporting its regulated earnings to the Commission in its quarterly

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<sup>1</sup> The management incentive (or, level of profit) that the Company ultimately will realize under the Agreement is not fixed or known in advance, but rather, is dependent on a number of variables and factors. The Company will be compensated based solely on its ability to achieve verified avoided cost savings on behalf of customers. The maximum rate of return on program costs that may be earned (*i.e.*, earnings cap) declines as the Company’s achievement of avoided cost savings relative to target declines. Although the level of revenues collected by the Company can be reported on a quarterly basis, the determination of the level of management incentive that may be retained by the Company will not be known for certain until the measurement and evaluation study is completed, which will not occur until after the four-year settlement term has ended.

1 ES-1 reports; (2) provide supplementary schedules setting forth the Company's  
2 jurisdictional earnings excluding the effects of its energy efficiency and demand-  
3 side management programs; and (3) provide schedules separately stating the costs  
4 associated with each program or activity, and actual revenues received from the  
5 demand-side and energy efficiency programs. Duke Energy Carolinas will also  
6 provide detailed calculations supporting the foregoing, including schedules or  
7 calculations that show (a) actual revenues (as qualified by footnote 1 above), (b)  
8 expenses, (c) taxes, (d) operating income, (e) rate base, including components,  
9 and (f) applicable capitalization ratios and cost rates, including overall rate of  
10 return and return on common equity. *Order* at 60 (Feb. 26, 2009).

11 **Q. PLEASE EXPLAIN ANY PERTINENT FINANCIAL ACCOUNTING**  
12 **ISSUES THAT RELATE TO THE ENERGY EFFICIENCY PLAN.**

13 A. Accounting rules and regulations require that the Company monitor, on an  
14 ongoing basis, the difference between financial results applicable to the save-a-  
15 watt programs that are expected ultimately to be realized based on the terms of the  
16 Agreement and the financial results recorded on the Company's books that result  
17 from the recovery of costs via Rider EE (NC). The Company will record a  
18 regulatory asset on its books, subject to the guidelines included in promulgated  
19 accounting literature, if it appears that the level of revenues that will ultimately be  
20 recoverable based on the terms and provisions of the Agreement, are greater than  
21 the level of revenues billed via Rider EE (NC). On the other hand, the Company  
22 will record a regulatory liability if the level of revenues billed customers is in  
23 excess of the level of revenues that is estimated to be ultimately recoverable.

1   **Q.    DOES THIS ACCOUNTING TREATMENT FOLLOW GENERALLY**  
2       **ACCEPTED ACCOUNTING PRINCIPLES (“GAAP”)?**

3   **A.    Yes. Guidance on this issue can be found in various accounting pronouncements,**  
4       **most notably, Emerging Issues Task Force (“EITF”) Issue No. 92-7 (Accounting**  
5       **by Rate-Regulated Utilities for the Effects of Certain Alternative Revenue**  
6       **Programs). Practically speaking, there is little need to address the accounting for**  
7       **situations in which the Company owes customers. In those situations, the**  
8       **Company will record a reduction to revenues in recognition of the fact that the**  
9       **Company has an obligation to return the over-collected amounts to customers.**  
10      **EITF 92-7 addresses the issue of accounting for amounts owed the utility (as**  
11      **opposed to amounts owed customers) under alternative rate recovery plans**  
12      **including demand-side management and similar energy efficiency plans.**  
13      **Basically, the EITF reached consensus that once specific events have occurred**  
14      **that provide for future customer billings, then, the utility can recognize the**  
15      **additional revenues if the following conditions are met:**

16           1.     **The program is established by an order from the utility’s regulatory**  
17                    **commission that allows for the automatic adjustment of future**  
18                    **rates. Verification of the adjustment to future rates by the**  
19                    **regulatory commission would not preclude the adjustment from**  
20                    **being considered automatic.**

21           2.     **The amount of additional revenues for the period is objectively**  
22                    **determinable and is probable of recovery.**

23           3.     **The additional revenues will be collected within 24 months**

1 following the end of the annual period in which they are  
2 recognized.

3 **Q. WILL THE COMPANY REQUIRE ANY COMMISSION ASSURANCES**  
4 **OR ACTIONS IN ORDER TO IMPLEMENT THE ACCOUNTING**  
5 **GUIDELINES PRESENTED ABOVE?**

6 A. Arguably, the terms of the Agreement meet the requirement of EITF 92-7.  
7 However, a Commission order approving the Agreement should acknowledge  
8 clearly that future rates may be adjusted in accordance with the provisions set out  
9 in paragraph one of my prior answer.

10 **Q. WILL THE COMPANY'S REQUEST THAT IT BE AUTHORIZED TO**  
11 **DEFER PROGRAM COSTS STILL BE NEEDED?**

12 A. No. The terms of the Agreement are intended to provide for the recovery of  
13 program costs as they are incurred; therefore, the request for program cost  
14 deferral is not needed from a GAAP accounting practice viewpoint. However,  
15 because of Commission rule R8-27(a)(2), Duke Energy Carolinas does request  
16 that the Commission include in its order in this proceeding an ordering paragraph  
17 for regulatory accounting purposes authorizing the Company to use a regulatory  
18 asset and a regulatory liability account for the purposes mentioned above.

19 **Q. DOES THIS CONCLUDE YOUR PRE-FILED SETTLEMENT**  
20 **TESTIMONY?**

21 A. Yes.

**FILED**

**JUN 19 2009**

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 831

Clerk's Office  
N.C. Utilities Commission

In re:	)	
Application of Duke Energy Carolinas, LLC	)	SETTLEMENT TESTIMONY
For Approval of Save-a-Watt Approach,	)	OF THEODORE E. SCHULTZ
Energy Efficiency Rider and Portfolio of	)	FOR DUKE ENERGY
Energy Efficiency Programs	)	CAROLINAS
	)	

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**I. INTRODUCTION AND PURPOSE**

1   **Q.    PLEASE STATE YOUR NAME, ADDRESS, AND POSITION WITH DUKE**  
2       **ENERGY BUSINESS SERVICES, LLC.**

3    A.   My name is Theodore E. Schultz, and my business address is 526 South Church  
4       Street, Charlotte, North Carolina. I am Vice President – Energy Efficiency for Duke  
5       Energy Business Services, LLC, a service company affiliate of Duke Energy  
6       Carolinas, LLC (“Duke Energy Carolinas” or the “Company”) and am responsible for  
7       leading energy efficiency initiatives across all retail markets served by Duke Energy  
8       Corporation (“Duke Energy”), including Duke Energy Carolinas’ service territory. I  
9       am also responsible for Duke Energy’s customer strategy and the development and  
10      implementation of new products and services for the retail market.

11   **Q.    ARE YOU THE SAME THEODORE E. SCHULTZ THAT PREVIOUSLY**  
12       **SPONSORED TESTIMONY IN THIS PROCEEDING?**

13   A.   Yes, I am.

14   **Q.    WHAT IS THE PURPOSE OF YOUR SETTLEMENT TESTIMONY?**

15   A.   The purpose of my testimony is to: (1) provide an overview of the Agreement and  
16       Joint Stipulation, dated June 12, 2009 (the “Agreement” or the “Settlement  
17       Agreement”) entered into by and among Duke Energy Carolinas and Southern  
18       Alliance for Clean Energy, Environmental Defense Fund, Natural Resources Defense  
19       Council, and Southern Environmental Law Center (collectively, the “Environmental  
20       Intervenors”), and the Public Staff of the North Carolina Utilities Commission (the  
21       “Public Staff”) (collectively, the “Settling Parties”); (2) explain certain features of the  
22       Agreement in detail; (3) compare and contrast those features to our initial proposal as

1 presented in previously filed testimony; and (4) provide my view as to why this  
2 Agreement is in the public interest.

## 3 II. THE AGREEMENT AND JOINT STIPULATION TERMS

3 Q. PLEASE DESCRIBE SCHULTZ SETTLEMENT EXHIBIT NO.1.

4 A. Schultz Settlement Exhibit No. 1 is a copy of the Agreement.

5 Q. PLEASE DESCRIBE THE PROVISIONS OF THE AGREEMENT.

6 A. Exhibit C to the Agreement provides a “road map” of the positions of Duke Energy  
7 Carolinas as filed in its Application and direct testimony and exhibits in this  
8 proceeding, the positions of the Environmental Intervenors and the Public Staff as  
9 represented in their direct testimony and exhibits, and the resulting resolution of the  
10 issues between the Company and the Environmental Intervenors and the Public Staff.  
11 The substantive provisions of the comprehensive Agreement reached by the Settling  
12 Parties are contained in the Settlement Terms (Exhibit B to the Agreement). In  
13 summary, the Agreement proposes to provide even greater benefits to consumers than  
14 the Company’s original filing by offering:

15 1. More energy savings – By increasing the energy efficiency targets within  
16 a number of programs, the Company expects total energy savings to be more  
17 than 50% higher than the original proposal.

18 2. Greater transparency – The Company will recover lost revenues separate  
19 from the percentage of avoided cost payment.

20 3. Lower percentage of avoided cost – To address the Environmental  
21 Intervenors’ and the Public Staff’s concerns about profitability as well as to  
22 reflect the carve-out of net lost revenue recovery, the Company will be  
23 compensated on the basis of a lower percentage of avoided cost for energy  
24 efficiency and demand-side management programs. Under this modified  
25 save-a-watt proposal, the Company’s compensation will vary for demand-side  
26 management and energy efficiency programs as follows:

Demand-Side Management % of Avoided Costs	Energy Efficiency % of Net Present Value ("NPV") of Avoided Costs
75%	50%

4. Performance targets and earnings caps – Under the settlement, the Company is eligible to receive a higher level of incentive based on how well it performs. In addition, the Company's earnings opportunity is capped and is tied to the percentage of the target energy and capacity savings achieved. The performance targets and earnings caps are as follows:

% of Target Achievement	Earnings Cap (after taxes)
≥ 90%	15%
80% to 89%	12%
60% to 79%	9%
<60%	5%

5. Greater stakeholder involvement – The Agreement provides for the creation of a Regional Efficiency Advisory Committee to review the measurement and verification process, collaborate on new program ideas, and review changes to existing programs.

**Q. HAVE ESSENTIAL ELEMENTS OF THE COMPANY'S ORIGINAL PROPOSAL BEEN PRESERVED?**

**A.** Yes. The Agreement continues several core concepts embodied in the Company's save-a-watt plan as filed in its original Application and direct testimonies and exhibits. First, the Agreement preserves the important goal of providing an incentive to the Company and its customers to be aggressive in developing new energy efficiency and demand-side management programs. The result is that the "saved watts" from the Company's Energy Efficiency Plan will enable the Company to address a portion of its capacity and energy requirements while simultaneously reducing environmental impacts and lowering customer bills. Second, the Agreement

1 continues the basic premise that the Company will only get paid for implementing  
2 programs that produce actual energy and capacity savings, as measured and verified  
3 by an independent third party. Under the Settlement Agreement, Duke Energy  
4 Carolinas continues to assume the risk of recovering its energy efficiency and  
5 demand-side management program costs or any management incentive based upon its  
6 performance. Finally, the Agreement reflects the concept that compensation for  
7 successful implementation of energy efficiency programs will be predicated on a  
8 discount to the “avoided costs” of a power plant to place energy efficiency and  
9 demand-side management on a level playing field with supply-side resources. Under  
10 the Settlement Agreement, Duke Energy Carolinas continues to assume the risk of  
11 recovering its energy efficiency and demand-side management program costs or any  
12 management incentive based upon its performance.

13 **Q. MR. SCHULTZ, IN YOUR OPINION IS THE SETTLEMENT AGREEMENT**  
14 **IN THE PUBLIC INTEREST?**

15 **A.** Yes. The Agreement provides increased energy savings for customers, reduces green  
16 house gas emissions, and offers a fair earnings opportunity for shareholders for  
17 investments in energy efficiency and demand-side management investments. Further,  
18 the Agreement creates greater transparency to the Company’s earnings opportunity by  
19 making lost revenues a direct recovery component of the rider and true-up  
20 calculations. Finally, there are performance targets tied to earnings caps that will  
21 ensure the Company’s profits are just and reasonable. Duke Energy Carolinas  
22 believes the Agreement is an important step forward in transforming North Carolina  
23 to a more energy efficient economy.

1           **III.   AVOIDED COST-BASED COMPENSATION FOR RESULTS**

2   **Q.   PLEASE EXPLAIN THE CALCULATION OF AVOIDED COSTS IN THE**  
3       **SETTLEMENT AGREEMENT, AND COMPARE THAT CALCULATION TO**  
4       **THE COMPANY'S INITIAL PROPOSAL.**

5   A.   The basic calculations of avoided capacity and energy costs are the same as initially  
6       proposed. Avoided capacity costs will be based on Duke Energy Carolinas' filed  
7       avoided cost rate, as the Company initially proposed, with one modification. Instead  
8       of updating the avoided costs with the bi-annual filed avoided cost rates, the avoided  
9       capacity costs under the Agreement will remain fixed using the 2007 approved  
10      avoided costs in Docket No. E-100, Sub 106. The calculation of the avoided energy  
11      costs will be the same as initially proposed by the Company. The avoided energy  
12      costs will be based on the avoided energy costs per the Company's Integrated  
13      Resource Plan, as described in the direct testimony of Company Witness Dr. Stevie.  
14      The avoided cost rates will not be otherwise updated during the term of the  
15      Agreement unless the filed biennial avoided capacity and energy cost rates change by  
16      more than 25%.

17   **Q.   PLEASE DESCRIBE THE CHANGES MADE TO THE AVOIDED COST**  
18       **PERCENTAGES USED FOR THE REVENUE REQUIREMENTS AND THE**  
19       **ULTIMATE COMPENSATION TO THE UTILITY.**

20   A.   The Company initially proposed that revenue requirements reflect 90% of the avoided  
21       capacity and energy costs produced by both demand-side management and energy  
22       efficiency programs – as compensation for program costs, lost revenues, and a  
23       management incentive. Three primary changes were made in the Settlement

1 Agreement to the avoided cost percentage originally proposed by the Company.  
2 First, separate avoided cost percentages were developed for demand-side  
3 management and energy efficiency programs to ensure that the Company would be  
4 indifferent to implementation of either kind of program relative to the portfolio's  
5 overall profitability. Second, the recovery of lost revenues was carved out of the  
6 avoided cost compensation and treated as a direct recovery cost. And third, the  
7 percentages were lowered from 90% to 75% (avoided capacity costs) for demand-side  
8 management achievements, and to 50% (NPV of avoided lifetime capacity and  
9 energy costs) for energy efficiency programs. These percentages were lowered to  
10 address the Environmental Intervenors' and the Public Staff's concerns about  
11 profitability as well as to reflect the carve-out of net lost revenue recovery.

12 **IV. PERFORMANCE TARGETS AND EARNINGS CAPS**

13 **Q. PLEASE EXPLAIN THE SETTLEMENT AGREEMENT'S PERFORMANCE**  
14 **TARGETS AND EARNINGS CAPS, AND COMPARE THOSE TO THE**  
15 **COMPANY'S INITIAL PROPOSAL.**

16 **A.** The initial proposal contained neither performance targets nor earnings caps,  
17 reflecting the Company's belief that compensation for energy efficiency results, *i.e.*  
18 pay for performance, based on discounted avoided costs was a "win-win" proposition  
19 for both customers and the utility, and that such a model would sufficiently provide  
20 incentives to the utility to both control costs and achieve significant demand and  
21 energy savings. The Agreement, however, contains both performance targets and  
22 earnings caps, as additional assurances for customers. In addition, the Agreement  
23 reflects substantially increased efficiency results. The targeted savings achievement

1 of \$754 million (nominal system dollars) from programs implemented during the four  
2 year term of the Agreement is based on the following targeted MW and cumulative  
3 MWh savings:

<b>System Portfolio Impacts</b>					
100% Participation					
Year	1	2	3	4	Beyond Year 4
MWh	234,132	490,634	872,548	1,439,742	6,833,078
MW	368	548	736	844	259
Note: Beyond Year 4 is just the EE impacts associated with Vintages 1 - 4					

4 Based on these targeted portfolio savings, the Agreement contains tiered earnings  
5 caps based upon varying levels of performance. Specifically:

% of Target Achievement	Earnings Cap
≥ 90%	15%
80% to 89%	12%
60% to 79%	9%
<60%	5%

6 Program costs will include marketing and advertising expenses, incentives paid to  
7 customers, and the costs of impact evaluation studies. The return on program costs  
8 will be simply a calculation of the percent return on investment on such portfolio  
9 program costs on a nominal dollar basis after tax.

## **V. REGIONAL EFFICIENCY ADVISORY COMMITTEE**

10 **Q. PLEASE EXPLAIN THE SETTLEMENT AGREEMENT PROVISIONS**  
11 **RELATING TO THE REGIONAL EFFICIENCY ADVISORY COMMITTEE.**

12 **A.** As in our initial proposal, the Agreement recognizes that the successful development  
13 and implementation of energy efficiency programs requires constant monitoring and  
14 modification, and that an advisory group is helpful in that regard. Specifically, the  
15 Agreement specifies that a Regional Advisory Committee will be established for the

1 term of this Agreement. The role of the advisory group is to collaborate on new  
2 program ideas, review modifications to existing programs, ensure greater public  
3 understanding of the programs and funding, and review the measurement and  
4 verification process. The regional efficiency advisory group will meet at least twice  
5 each year and may establish working groups on specific topics. The Settling Parties  
6 envision that the advisory group will be comprised of a broad spectrum of regional  
7 stakeholders that represent balanced interests in the programs, as well as national  
8 energy efficiency advocates and experts. A third party will facilitate the advisory  
9 group's discussions.

## 10 VI. CONCLUSION

11 **Q. PLEASE SUMMARIZE WHY YOU BELIEVE THE SETTLEMENT**  
12 **AGREEMENT IS GOOD FOR CUSTOMERS AND SHOULD BE ACCEPTED**  
13 **BY THE COMMISSION.**

14 **A.** The Agreement is good for customers for a number of reasons. First and foremost,  
15 the Agreement sets an aggressive target for the Company to deliver \$754 million of  
16 avoided future generation costs. This is a dramatic increase in results from energy  
17 efficiency and demand-side management programs for the Carolinas. Energy  
18 efficiency and demand-side management programs (1) create avoided future  
19 generation costs for all customers, (2) meet customer demand for electricity with a  
20 zero-emission resource, and (3) lower usage and bills for customers who participate  
21 in Duke Energy Carolinas' programs. These results reflect Duke Energy's core save-  
22 a-watt vision – a utility-sponsored approach to energy efficiency and demand-side  
23 management that will stimulate investment and innovation in products and services,



1 on the one hand, and widespread customer participation on the other. The Settlement  
2 Agreement maintains incentives for the Company to pursue energy efficiency and  
3 demand-side management comparable to the incentives utilities have to pursue  
4 supply-side investments; a revenue stream based on discounted avoided supply-side  
5 costs; and pay for performance, based on independently verified results. At the same  
6 time, through negotiation and compromise, the Agreement contains a number of  
7 customer protections, such as performance targets and earnings caps. For these  
8 reasons, I believe the Settlement Agreement is in the public interest and should be  
9 accepted by the Commission as a fair and reasonable resolution of the issues in this  
10 proceeding.

11 **Q. IS THE COMPANY PRESENTING TESTIMONY OF OTHER WITNESSES**  
12 **IN SUPPORT OF THE SETTLEMENT?**

13 A. Yes, Duke Energy Carolinas' Witnesses Farmer and Wiles also are presenting  
14 testimony in support of the settlement. Witness Farmer discusses changes to Rider  
15 EE (NC) necessitated by the settlement and Witness Wiles discusses the accounting  
16 and reporting implications of the settlement on the Company's original filing.

17 **Q. DOES THIS COMPLETE YOUR SETTLEMENT TESTIMONY?**

18 A. Yes, it does.

LAW OFFICE OF  
**ROBERT W. KAYLOR, P.A.**  
3700 GLENWOOD AVENUE, SUITE 330  
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(919) 828-5250  
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June 12, 2009

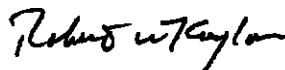
Ms. Renné C. Vance, Chief Clerk  
North Carolina Utilities Commission  
4325 Mail Service Center  
Raleigh, North Carolina 27699-4325

RE: Docket No. E-7, Sub 831

Dear Ms. Vance:

Enclosed for filing are the original and thirty (30) copies of an Agreement and Joint Stipulation of Settlement by and between Duke Energy Carolinas, LLC ("Duke Energy Carolinas"), Southern Alliance for Clean Energy, Environmental Defense Fund, Natural Resources Defense Council, and the Southern Environmental Law Center (collectively, the "Environmental Intervenors"), and the Public Staff of the North Carolina Utilities Commission ("Public Staff"), collectively referred to as the Stipulating Parties. The Stipulating Parties will file testimony supporting the Agreement and Joint Stipulation of Settlement on June 19, 2009. The Stipulating Parties request the Commission to issue a new procedural order so that this matter can be concluded as quickly as possible.

Sincerely,



Robert W. Kaylor

Enclosures

cc: Parties of Record

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, Sub 831

In re:	)	
Application of Duke Energy Carolinas, LLC	)	<b>AGREEMENT AND</b>
For Approval of Save-a-Watt Approach,	)	<b>JOINT STIPULATION</b>
Energy Efficiency Rider and Portfolio of	)	<b>OF SETTLEMENT</b>
Energy Efficiency Programs	)	
	)	

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This Agreement and Joint Stipulation of Settlement (the "Settlement Agreement") is made by and between Duke Energy Carolinas, LLC ("Duke Energy Carolinas" or the "Company"), and Southern Alliance for Clean Energy, Environmental Defense Fund, Natural Resources Defense Council, and the Southern Environmental Law Center (collectively, the "Environmental Intervenors"), and the Public Staff of the North Carolina Utilities Commission ("Public Staff") together referred to herein as the Stipulating Parties.

**RECITALS**

**WHEREAS**, on May 7, 2007, Duke Energy Carolinas filed an Application for Approval of Save-a-Watt Approach, Energy Efficiency Rider and Portfolio of Energy Efficiency Programs (the "Energy Efficiency Plan") with the North Carolina Utilities Commission (the "Commission"). Exhibit A hereto sets forth a summary of the procedural history of this matter.

**WHEREAS**, the Stipulating Parties are parties of record in the above-captioned docket. The other parties of record in the above-captioned proceeding that are not parties to this Settlement Agreement are: Attorney General Roy Cooper; Carolina Industrial Group for Fair Utility Rates III; Wal-Mart Stores East, LP; Public Service Company of

North Carolina, Inc.; Carolina Utility Customers Association, Inc.; Air Products and Chemicals, Inc.; North Carolina Waste Awareness and Reduction Network, Inc.; Piedmont Natural Gas, Incorporated; Virginia Electric and Power Company d/b/a Dominion North Carolina Power; Progress Energy Carolinas, Inc.; North Carolina Sustainable Energy Association, Inc.; the City of Durham; and North Carolina Municipal Power Agency Number 1.

**WHEREAS**, after (1) the filing of testimony and exhibits; (2) participation in a fully litigated hearing; and (3) substantial discovery by, the Stipulating Parties, the Stipulating Parties have engaged in discussions to determine if a settlement of the issues would be in their best interests.

**WHEREAS**, the Stipulating Parties believe that a settlement that appropriately balances the interests of customers, the environment, and Duke Energy Carolinas would be in the public interest.

**NOW THEREFORE**, following their discussions, the Stipulating Parties have each determined that their interests and the public interest would best be served by settling issues pending in the above-captioned case under the terms and conditions set forth below:

#### **AGREEMENT**

1. This Settlement Agreement comprehensively resolves all issues between the Stipulating Parties associated with Docket No. E-7, Sub 831, including Duke Energy Carolinas' Energy Efficiency Plan and the Company's proposed compensation model, except for certain cost allocation issues set forth in Paragraphs H.8 and H.9 and certain interest rate determination issues set forth in Paragraphs H.4 and H.6 of Exhibit B to this

agreement, which the Stipulating Parties request the Commission to decide in this proceeding. The terms of the Settlement Agreement represent a fair, just and reasonable resolution of the issues as a result of negotiation and compromise by the Stipulating Parties.

2. This Settlement Agreement retains many important features of Duke Energy Carolinas' initial save-a-watt proposal, including:

- Compensation to Duke Energy Carolinas for successful implementation of demand-side management and energy efficiency programs on the basis of a discount to the "avoided costs" of a power plant rather than on the basis of what the utility spends on demand-side management and energy efficiency programs;
- Pay for performance. The Company's compensation is based exclusively upon actual demand-side management and energy efficiency savings achieved, measured and verified by an independent third party;
- Duke Energy Carolinas remains at risk, based upon its actual performance, for recovery of its demand-side management and energy efficiency program costs, as well as any management incentive.

3. This Settlement Agreement incorporates a number of provisions that are important to the Environmental Intervenors, including:

- Performance targets. Duke Energy Carolinas is eligible to receive a higher level of incentive based on how well it performs in achieving demand-side management and energy efficiency savings that result in bill savings for customers;

- Increased energy efficiency. Duke Energy Carolinas has increased the amount of energy efficiency avoided cost savings it will target to achieve for customers;
- Earnings caps. To protect consumers and encourage strong performance, Duke Energy Carolinas' earnings opportunity is capped at varying percentages of return on investment on program costs depending upon the Company's performance.

4. Along with certain of the provisions listed above, the Settlement Agreement also incorporates additional provisions that are important to the Public Staff, including:

- Limited term pilot. The Company proposes the modified save-a-watt regulatory model as a four year limited term pilot, subject to the conditions contained in the Settlement Agreement. This four year pilot limits the exposure of the parties to unintended consequences that can sometimes occur with a new regulatory approach.
- Limited incentive amounts. The Company's revenues recovered on the basis of percentages of avoided costs are limited to the amount necessary to produce an after-tax return on program costs between 5% and 15%, depending on its success in reaching a targeted aggregate energy efficiency and demand-side management avoided cost savings level. In addition, the amount of net lost revenues that the Company may recover is also limited to those incurred within 36 months of implementation of any particular measure and is offset by revenues from the Company's public

utility operations that result in an increase in demand or consumption by customers.

- **Transparency.** The Settlement Agreement provides for the separate recovery of 36 months of net lost revenues, as defined by Commission Rule R8-68. As initially filed, the save-a-watt model did not provide for the transparent recovery of program costs, net lost revenues, and additional utility incentives through the rider.
- **Locking in Avoided Cost.** The Settlement Agreement shields ratepayers from the risk of tying revenue recovery for energy efficiency and demand-side management programs to unknown and variable supply-side costs by locking in the per MWH and per MW-year avoided costs except as set forth in the Settlement Agreement.
- **Revenue Cap.** The Settlement Agreement shields ratepayers from the risk of overcollection by providing for the return, with interest, to them of any revenues collected in excess of what is allowed under the Settlement Agreement.

5. The Stipulating Parties agree to support this settlement in any evidence and proposed orders they submit to the Commission in this proceeding. To the extent that the testimony and exhibits of Duke Energy Carolinas previously submitted in this docket are inconsistent with the terms of this Settlement Agreement, Duke Energy Carolinas agrees to submit further testimony revising its previous position to make it clear that the Company supports this settlement.

6. As a compromise to positions advanced by Duke Energy Carolinas, Environmental Intervenors, and the Public Staff, the Stipulating Parties hereto agree to the settlement terms set forth in Exhibit B, attached hereto. Exhibit B is a term sheet that sets forth specific provisions of the settlement that are intended by the Stipulating Parties to resolve all pending issues relating to Docket No. E-7, Sub 831, except as set forth in Paragraphs H.4, H.6, H.8, and H.9 of Exhibit B. Exhibit B is incorporated herein by reference and constitutes the essential terms of the Stipulating Parties' agreement. The Settlement Agreement terms shall be effective upon approval by the Commission.

7. Attached hereto for information purposes only, as Exhibit C, is a chart summarizing (1) Duke Energy Carolinas' initial save-a-watt proposal, (2) the major issues raised by the Environmental Intervenors and the Public Staff in their testimony filed in this proceeding, and (3) how the Settlement Terms address those issues raised by the Environmental Intervenors and the Public Staff, resulting in a comprehensive compromise that forms the basis for this Settlement Agreement.

8. The Stipulating Parties shall jointly move to have this Agreement presented to and approved by the Commission.

9. *This Settlement Agreement is solely the result of compromise in the settlement process.*

10. The evidence presented by the Stipulating Parties in this proceeding, including testimony offered in support of the settlement, constitutes substantial evidence sufficient to support this Settlement Agreement and provides an adequate evidentiary basis upon which the Commission can make any findings of fact and conclusions of law necessary for the approval of this Settlement Agreement.



11. This Settlement Agreement shall be effective upon execution of the Stipulating Parties and shall be interpreted according to North Carolina law.

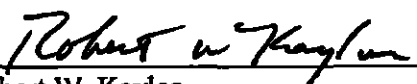
12. This Settlement Agreement shall bind and inure to the benefit of each of the signatories hereto and their representatives, predecessors, successors, assigns, agents, shareholders, officers, directors (in their individual and representative capacities), subsidiaries, affiliates, parent corporations, if any, joint ventures, heirs, executors, administrators, trustees, and attorneys.

13. This written Settlement Agreement contains the complete agreement of the Stipulating Parties with respect to issues associated with Docket No. E-7, Sub 831. The Stipulating Parties agree that by signing this Settlement Agreement, it will not constrain, inhibit or impair their arguments or positions held in other proceedings. Each Stipulating Party acknowledges its consent and agreement to this Settlement Agreement by authorizing its counsel to affix his or her signature to this document where indicated below. Counsel's signature represents his or her representation that his or her client has authorized the execution of the Settlement Agreement. Facsimile signatures and e-mail signatures shall be as effective as original signatures to bind any party. This document may be signed in counterparts, with the various signature pages combined with the body of the document constituting an original and provable copy of this Settlement Agreement.

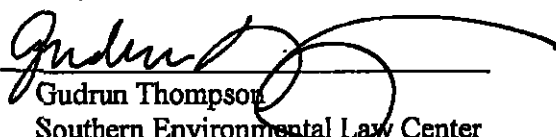
The foregoing is agreed and stipulated to this \_\_\_\_ day of June, 2009.

(Signature Pages Follow)

Representing and binding Duke Energy Carolinas, LLC

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Kendrick Fentress

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## PROCEDURAL HISTORY

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On May 7, 2007, Duke Energy Carolinas filed a petition in this docket proposing its Energy Efficiency Plan (the save-a-watt petition). By this filing, Duke Energy Carolinas requested approval of a new save-a-watt approach to energy efficiency (EE) programs; a portfolio of EE programs; and an EE rider (Rider EE) to compensate and reward it for verified energy efficiency results and to recover the amortization of, and a return on, 90% of the costs avoided by the save-a-watt approach. More specifically, Duke Energy Carolinas requested that the Commission, after hearing, issue an order approving (1) the implementation of the proposed save-a-watt approach for EE; (2) the portfolio of proposed EE programs; (3) the implementation of proposed Rider EE, including the proposed initial charges for customers; (4) the deferral of program costs and amortization of such costs over the life of the applicable program, with an acknowledgment that the revenues established in Rider EE based on avoided costs specifically include the recovery of incurred program costs; (5) the closing of designated existing programs; and (6) the proposed manner of accounting for the impacts of the save-a-watt approach in the Company's Quarterly Surveillance Reports (NCUC Form ES-1 Reports) to the Commission.

After receiving comments on how to proceed, the Commission issued an Order Consolidating Issues for Hearing, on August 2, 2007. Such Order consolidated the present save-a-watt docket with three pending dockets, Docket Nos. E-7, Subs 828 and 829 and Docket No. E-100, Sub 112, which the Commission had earlier consolidated to be heard as a general rate case. Save-a-watt was consolidated with the aforesaid dockets

because issues had been raised as to the Commission's jurisdiction to consider the save-a-watt proposal outside the context of a general rate case. However, the Commission reserved the right to reconsider consolidation should changed circumstances make a different procedure more appropriate.

Circumstances in fact changed when Session Law 2007-397, Senate Bill 3 (SB 3) was enacted and became law on August 20, 2007. This legislation included provisions bearing on the Commission's authority to consider and authorize proposals such as the save-a-watt approach. The Commission therefore issued an Order Bifurcating Proceedings on August 31, 2007. In that Order, the present save-a-watt docket was bifurcated from the general rate case, except for certain specified issues which, although somewhat related to the save-a-watt petition, were more appropriately litigated in the rate case. The Order Bifurcating Proceedings further provided that, after completion of the rulemaking proceeding to implement SB 3, which was then pending in Docket No. E-100, Sub 113 (Rulemaking Docket), an order would be issued scheduling a hearing in 2008 to consider the merits of the save-a-watt petition. The general rate case was decided by an Order Approving Stipulation and Deciding Non-Settled Issues, dated December 20, 2007. That Order, among many other things, authorized an adjustable Existing DSM Program Rider (EDPR) and provided that the EDPR and Duke Energy Carolinas's Demand-Side Management (DSM) deferred account would be subject to modification or elimination in either the Rulemaking Docket or the current proceeding. The Rulemaking Docket was decided by an Order Adopting Final Rules, issued on February 29, 2008.

Interventions were filed and granted for the Environmental Defense Fund, Natural Resources Defense Council, Southern Alliance for Clean Energy, and Southern

Environmental Law Center (collectively, the Environmental Intervenors); North Carolina Justice Center, AARP, North Carolina Council of Churches, and Legal Aid of North Carolina (collectively, the Public Interest Intervenors); Carolina Utility Customers Association, Inc. (CUCA); Carolina Industrial Group for Fair Utility Rates III (CIGFUR); Piedmont Natural Gas Company, Inc. (Piedmont); North Carolina Waste Awareness & Reduction Network (NC WARN); Progress Energy Carolinas, Inc.; Dominion North Carolina Power; Public Service Company of North Carolina, Inc. (PSNC); North Carolina Sustainable Energy Association; City of Durham; Wal-Mart Stores East, LP; North Carolina Municipal Power Agency I; and Air Products and Chemicals, Inc. (Air Products). The intervention of the Attorney General was noted pursuant to G.S. 62-20, and the participation of the Public Staff was noted pursuant to G.S. 62-15. On February 29, 2008, the Commission issued an Order Scheduling Hearing in this matter. On April 4, 2008, Duke Energy Carolinas filed the direct testimony and exhibits of James E. Rogers, Ellen T. Ruff, Judah Rose, Jane Sadowsky, Charles J. Cicchetti, Theodore E. Schultz, Janice D. Hager, Richard G. Stevie, Nick Hall, Stephen M. Farmer, and J. Danny Wiles. On May 9, 2008, the Commission issued an Order Rescheduling Hearing and Extending Filing Deadlines. On June 24, 2008, the Environmental Intervenors filed the testimony of Brian M. Henderson and Donald Gilligan and the testimony and exhibits of J. Richard Hornby; the Public Interest Intervenors filed the testimony and exhibits of Roger D. Colton; Air Products filed the testimony of James Butz; CIGFUR filed the testimony and exhibits of Nicholas Phillips, Jr.; Wal-Mart Stores East, LP filed the testimony and exhibits of James T. Selecky; the Public Staff filed the testimony and exhibits of Richard F. Spellman, Michael C. Maness,

and Jack Floyd; CUCA filed the testimony of Kevin W. O'Donnell; and NC WARN filed the testimony of John O. Blackburn. The City of Durham filed comments on the same date that were received as a prehearing brief. On June 24, 2008, Duke Energy Carolinas filed a Request for Acceptance and Approval of Stipulation of Settlement with PSNC and a Motion for a Pre-Hearing Order. On June 26, 2008, Duke Energy Carolinas filed a similar Request and Motion in regard to its stipulation with Piedmont. On July 21, 2008, Duke Energy Carolinas filed the rebuttal testimony of Charles J. Cicchetti, Richard A. Morgan, Stephen M. Farmer, J. Danny Wiles, Richard G. Stevie, Judah Rose, Janice D. Hager, and Theodore E. Schultz. On August 18, 2008, NC WARN filed a Motion requesting that the Commission establish an independently administered energy efficiency program in North Carolina to be known as NC SAVE\$. On August 20, 2008, the Commission issued an Order opening a generic docket to consider the NC WARN proposal in Docket No. E-100, Sub 120. On December 2, 2008, the Commission issued an Order denying the motion.

This matter came on for an evidentiary hearing on July 28, 2008, as scheduled. The Commission took judicial notice of Docket Nos. E-100, Subs 109, 113, and 114. Progress Energy Carolinas, Inc., Dominion North Carolina Power, PSNC, North Carolina Sustainable Energy Association, and North Carolina Municipal Power Agency I did not participate in the hearing. The parties submitted briefs and/or proposed orders on October 7, 2008.

Proposed orders were submitted by Duke Energy Carolinas, the Public Staff, and the Public Interest Intervenors. Briefs were filed by Duke Energy Carolinas, the Public



Interest Intervenors, the Environmental Intervenors, CUCA, jointly by CIGFUR and Air Products (collectively, the CIGFUR Intervenors), NC WARN, and the Attorney General. On February 26, 2009, the Commission issued its Order and Errata Order, requiring in part for Duke Energy Carolinas to file additional information. Duke Energy Carolinas filed the requisite data on March 31, 2009. On April 29, 2009, the Attorney General requested an extension of time for parties to file comments on the data filed by Duke Energy Carolinas. The Commission granted the Attorney General's request on May 6, 2009, setting May 22, 2009 as the revised deadline for comments. On May 21, the Public Staff filed a motion seeking a further extension of time to May 29, 2009 for parties to file comments. On May 22, 2009, the Commission granted the Public Staff's request and extended the period for Duke Energy Carolinas to reply to any filed comments to June 19, 2009. NC WARN filed comments on May 26, 2009. On May 28, 2009, Public Staff and the Environmental Intervenors filed a joint motion for a third extension of time to June 8, 2009 for parties to file comments, which the Commission granted the same day. On June 8, Public Staff requested, and the Commission granted, a fourth extension of time to file comments by June 12, 2009. Duke Energy Carolinas' reply comments are due July 6, 2009.

## SETTLEMENT TERMS

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### A. Overview of Approach

1. The Modified Save-a-Watt Approach is a framework under which Duke Energy Carolinas ("the Company") will deliver energy efficiency and demand-side management<sup>1</sup> programs to its customers and be compensated for successful programs. Under this approach, the Company will be compensated based on predetermined percentages of the Company's capacity- and energy- related "avoided cost," an estimate of the cost of supplying electricity. The Company will recover in revenues over a four year period, percentages of "avoided costs" associated with the verified impact of energy efficiency and demand-side management programs implemented over a four-year plan period. Through these revenues, the Company must recover the actual costs of programs, which includes marketing, implementing, and administering energy efficiency and demand-side management programs and impact evaluation studies. The Company assumes the risk that the percentage of avoided cost it retains may not cover all of the actual costs of programs or provide any additional financial incentive during the four-year period.
2. The Company will be paid percentages of its estimated energy and capacity-related avoided costs, as defined in Section D.3.a. for its planned energy efficiency and demand-side management programs starting in year 1 of the four-year plan. After the measurement and verification of actual energy and peak demand savings, the North Carolina Utilities Commission (the "Commission") will determine the final amount of this payment level that the Company may retain. This regulatory review will include a true-up process that considers the Company's actual performance in delivering demand-side management and energy efficiency reductions relative to the performance targets established in the Modified Save-a-Watt Approach.
3. The percentage of avoided costs that the Company may recover for verified reductions in energy use (MWh) and system capacity (MW) shall be set separately for demand-side management and energy efficiency programs, at levels that are estimated to result in aggregate earnings approximately equal to an earnings cap, assuming achievement of the maximum performance target set forth in Paragraph D.6. The percentage-of-avoided-cost payment levels approved by the Commission may be modified only as provided in Sections D.4 and D.5 of this Exhibit.
4. Reductions in energy use (MWh) resulting from energy efficiency programs may impair the Company's ability to recover sufficient revenues to cover its fixed costs. In the near term, the reduction in electricity sales resulting from energy

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<sup>1</sup> The terms "energy efficiency" and "demand-side management" are used herein consistent with the definitions in N.C. Gen. Stat. § 62-133.8.

efficiency programs will result in "net lost revenues," which present a financial disincentive to the Company to implement energy efficiency programs. To reduce this disincentive, the Company may recover a reasonable amount of net lost revenues resulting from its energy efficiency programs for a limited period of time. Recovery of net lost revenues will be separate from the percentage-of-avoided-cost payments. As explained further in Section G, net lost revenues are as defined in Commission Rule R8-68 and may be recovered for a period of 36 months for each vintage year, but recovery shall cease upon Commission approval of (a) an alternative recovery mechanism or (b) the implementation of new rates in a general rate case or comparable proceeding to the extent the rates approved are set to recover net lost revenues. A vintage year is the twelve month period in which a specific demand-side management or energy efficiency measure is installed for an individual participant or a group of participants.

5. Nothing in this agreement relieves the Company from its obligation to comply with Commission Rule R8-68 and R8-69.

#### **B. Term**

The term of the pilot Settlement Agreement and the Company's Energy Efficiency Plan shall be four years; however, cost recovery shall continue through year 6 as necessary to enforce its terms.

#### **C. Compensation for Results**

1. The percentages of avoided costs retained by the Company to determine the revenues recovered, are set forth below:

Demand-Side Management % of Avoided Costs During 4-Year Term of Settlement	Energy Efficiency % of Net Present Value ("NPV") of Avoided Costs over Lives of Measures Installed during the 4-year term of the settlement
75%	50%

*Revenue* = Demand-Side Management: 75% of avoided capacity costs +  
Energy Efficiency: 50% of NPV of avoided energy costs +  
50% of NPV of avoided capacity costs

2. The Company shall use the same values for per MWh and per MW for avoided costs rates when determining targeted avoided cost savings and actual avoided cost savings.

#### **D. Performance Targets for Energy Savings and for Customer Monetary Savings**

1. The Company's earnings will depend on both its ability to achieve monetary savings for its customers, and the level of those savings relative to a performance

target. In this way, the Company will be compensated based on its actual performance in implementing energy efficiency and demand-side management programs that produce economic savings to customers. The proposed performance target is expressed as "total avoided cost savings," or in other words, the targeted monetary savings to customers.

2. The Company's performance target establishes a goal for producing total avoided cost savings (nominal dollars) as a result of energy efficiency and demand-side management programs implemented during the four-year plan. In comparison with the Company's original proposal, the performance target reflects a substantial increase in projected efficiency results.

The total avoided cost savings target will be calculated (in nominal dollars) based on the following principles and approach. This total avoided cost savings target is calculated to reflect the impact of both (a) energy efficiency programs in avoiding both electric energy usage by customers and acquisition of additional capacity resources by the Company to serve incremental load and (b) demand-side management programs in avoiding acquisition of additional capacity resources by the Company to serve incremental load. For purposes of this agreement, avoided cost savings related to energy efficiency programs incorporate savings through the entire life of measures installed during the 4 year term of the agreement; avoided cost savings related to demand-side management measures include only savings experienced during the same term.

3.
  - a. *Energy Efficiency* – The energy efficiency component is aimed at producing a forecasted amount of energy- and capacity-related avoided power production cost savings based on a set of programs that achieves a Four-year Energy Savings Target.

Program Year	Energy Savings
--------------	----------------

Vintage Year 1	0.31%
Vintage Year 2	0.34%
Vintage Year 3	0.50%
Vintage Year 4	0.75%

Energy Savings are the "first year" impacts of measures implemented in the respective Vintage Year measured as a percent of total North Carolina and South Carolina retail sales (MWh). Measures implemented in each vintage year are expected to continue to operate and produce energy savings throughout the term of this agreement. For example, the measures implemented in Vintage Year 1 and producing energy savings in settlement year 1 equal to 0.31% of settlement year 1 retail sales, are expected to continue to operate and produce comparable energy savings in each of the

remaining years during the term of this agreement. Thus, the overall energy savings percentage for each settlement year during the 4 year term is cumulative; which results in the energy savings percentage for the fourth year of the settlement being equal to the sum of the energy savings from all four of the vintage year measures operating in that year; namely 1.9% of retail sales forecast for Year 4.

In establishing the energy savings target (in reduced retail sales), each vintage year's energy savings goal was determined based on the Company's 2009 Spring Load Forecast and shall be adjusted only as provided in Section D.5 of this agreement. The Company may adjust the start date of Vintage Year 1 to align with its annual planning process and coordinate program data reporting for North Carolina and South Carolina. Vintage Year 1 may be more than 12 months as a result.

This energy savings (MWh) target is then converted to a sum of monetary savings that reflects the cost of energy and capacity avoided as a result of the energy efficiency measures, over the life of each measure. The resulting "avoided cost savings" is determined by multiplying the savings by year (MWh and MW) by the full avoided cost (\$/MWh and \$/MWyear), which includes generation capacity, fuel, and fixed and variable operations and maintenance savings.

In establishing the target amount of "avoided cost savings" for each year, the avoided energy costs and avoided capacity costs (\$/MWh and \$/MW-Year) shall be those in effect at the time the proposal is approved by the Commission. The avoided per MWh and MW-Year energy and capacity costs shall be adjusted only as provided in Section D.4 of this agreement. These avoided per MWh and MW-Year energy and capacity costs shall be used in association with the programs proposed by Duke Energy Carolinas in its original proposal and with new programs filed for approval.

- b. *Demand-Side Management* – The target amount of capacity savings and "avoided cost savings dollars" for the demand-side management component will be calculated based on an assumed amount of capacity (MW-Year) avoided through the demand-side management programs proposed by the Company and the avoided costs in effect at the time this agreement is approved by the Commission. The avoided per MW-Year avoided capacity costs used to calculate the target may only be adjusted as provided in Section D.4. The assumed capacity avoided (MW) target may only be adjusted as provided in Section D.5.
4. To address any concern that the avoided-cost savings target could be met merely through an increase in per MWh and per MW-Year avoided energy costs and capacity costs rather than through energy and capacity savings, the per MWh and per MW-Year avoided energy costs and avoided capacity costs will be fixed at the

outset of the plan for its four-year term. If the Company's combined avoided energy and capacity costs increase or decrease by more than 25%, due to changes in the per MWh and per MW-Year avoided energy or capacity costs, the programs may be re-analyzed to determine whether a modification of the portfolio of programs is warranted to maximize cost-effectiveness. Based on the re-analysis, the Company or any of the Stipulating Parties may request the Commission to allow a revision to its percentage-of-avoided-cost payment levels, avoided costs (in \$/MW and \$/MWh), and avoided cost savings target (in total dollars) following the appropriate methods as described in this agreement. Any revisions to rates and targets proposed by the Company shall be consistent with the underlying basis described in Section D (i.e., the four-year Energy Savings Target and the anticipated participation rate in demand-side management programs).

5. To the extent that industrial and large commercial customers exercise any legal option to "opt out" of the plan, the forecasted retail sales and the anticipated participation rate in demand-side management and energy efficiency programs will be adjusted. The initial calculation of an avoided cost savings target and avoided cost percentages assume that all customers eligible to participate in Company programs will do so and that factors beyond the Company's control will not significantly limit participation by eligible customers. The right to opt out of participation in (and payment for) energy efficiency and demand-side management programs may undermine the Company's ability to achieve the performance targets. To adjust for this factor, the Company's avoided cost savings target (in total dollars) will be reduced to compensate for customers who choose to opt out. As the market is reduced by those customers who opt out (i.e., less MW and MWh available for demand-side management and energy efficiency), the targets will be reduced to maintain the same market penetration rate. Consistent with the Commission Rule R8-69(d)(2), 90 days after the approval of this agreement, the Company shall provide the Stipulating Parties and the Commission with notification of those industrial and large commercial customers that have opted out of participating in the new demand-side management and energy efficiency measures for which the Company seeks cost and incentive recovery. The Company will reconcile that list of customers opting out with any reductions in the avoided cost savings target at the annual participation true-up.
6. The Company's avoided cost target is \$754 million (nominal system dollars) based on programs implemented during the four-year term of this agreement and is tied to the following targeted MW and cumulative MWh savings:

System Portfolio Impacts					
100% Participation					
Year	1	2	3	4	Beyond Year 4
MWh	234,132	490,634	872,548	1,439,742	6,833,078
MW	368	548	736	844	259
Note: Beyond Year 4 is just the EE impacts associated with Vintages 1 - 4					

7. The targets set forth above assume 100% participation.

**E. Long Term Performance Goals**

In addition to the four-year performance target set forth in Section D above, the Company intends to pursue all cost-effective energy efficiency and to commit to an overall energy efficiency target to achieve on-going annual electricity savings resulting from the Company's energy efficiency programs of at least 1% of 2009 weather-normalized retail electricity kWh sales by 2015 (i.e., 1% kWh savings in 2015 and an additional 1% in 2016, to total 2% of weather-normalized retail electricity kWh sales in 2016, and so on), with savings each year over the 2009-2014 period ramping up to this incremental 1% per year target. The ability to ramp up to this goal will give the Company time to develop and expand its energy efficiency program offerings. Program cost-effectiveness will be determined using the Utility Cost Test.

**F. Earnings Cap**

1. Under the modified save-a-watt approach, the Company only gets paid for the actual energy and peak demand reductions delivered. Any incentive earned by the Company will depend on the Company's ability to achieve actual savings on behalf of customers.

The earnings to the Company that result from the incentive compensation will be capped at a percentage of incurred program costs. The specific percentage applied to programs costs to determine the earnings cap will be based on the percentage of the target avoided cost savings (as discussed in Section D) actually achieved, as set out in the table below.

The performance targets and earnings caps are related as follows:

% of Target Achievement	Earnings Cap
≥ 90%	15%
80% to 89%	12%
60% to 79%	9%
<60%	5%

"Target" reflects the total amount of anticipated monetary savings set forth in Section D. "Earnings" shall be calculated as an after-tax rate of return on actual program costs incurred by the Company over the four-year plan period on a net present value basis.

2. No more than 35% of the target may be met by demand-side management programs. Although the Company may pursue more demand-side management programs that exceed the 35% cap, any avoided cost savings resulting from demand-side management programs representing over 35% of the target will not

count towards the achievement of the performance target for purposes of the earnings cap determination and calculations.

- At the end of the four-year plan period, the Company's earnings shall be calculated on a net present value basis measured as of the beginning of year one of this agreement. To the extent that Company earnings for its entire portfolio of programs exceed the capped earnings level set out above, such excess earnings shall be refunded to customers with interest, at a rate to be determined by the Commission.

#### G. Net Lost Revenues

- Net lost revenues mean revenue losses, net of marginal costs avoided at the time of the lost kilowatt-hour sale(s) incurred by the Company's public utility operations as the result of a new demand-side management or energy efficiency measure. Net lost revenues shall also be net of any increases in revenues resulting from any activity by the Company's public utility operations that cause a customer to increase demand or energy consumption, whether or not that activity has been approved pursuant to R8-68. When authorized by Commission Rule R8-69, net lost revenues shall be recovered for 36 months for each vintage year, except that the recovery of net lost revenue will end upon Commission approval of (1) an alternative recovery mechanism, or (2) the implementation of new rates in a general rate case or comparable proceeding to the extent that rates set in a rate case or comparable proceeding are set to explicitly or implicitly recover those net lost revenues.
- The estimated net lost revenues for the four-year plan are:

<b>Net Lost Revenues By Vintage</b>							
<i>Estimated based on 85% Achievement, 3-year term, 4 vintages, Includes Gross Receipts &amp; regulatory fee</i>							
North Carolina Only	1	2	3	4	5	6	Sum Total
First Year Vintage	\$7.7	\$7.9	\$8.0				\$23.6
Second Year Vintage		\$8.6	\$8.8	\$8.9			\$26.4
Third Year Vintage			\$13.1	\$13.5	\$13.5		\$40.1
Fourth Year Vintage				\$20.0	\$20.4	\$20.5	\$60.9
<b>Total</b>	<b>\$7.7</b>	<b>\$16.5</b>	<b>\$29.9</b>	<b>\$42.3</b>	<b>\$33.9</b>	<b>\$20.5</b>	<b>\$151.0</b>

#### H. Revenue Requirements and True-Up Process

- This proposal is designed to recover the Company's full revenue requirements during the four-year term of the plan, with the exception of any outstanding balance of net lost revenues to be collected by the Company or revenue credit to be refunded to the customers.



2. The revenue requirement will not be increased through the addition of avoided transmission and distribution costs through the term of the agreement. The transmission and distribution avoided costs component is omitted from this agreement.
3. The estimated revenue requirements for the four-year term of this agreement are projected to be:

<b>Total Revenue Requirements</b>							
<i>Based on 85% Achievement, \$ in Millions, Residential &amp; Non-Residential Revenue requirements, includes gross receipts tax &amp; regulatory fee, Revenues do not include possible true up</i>							
North Carolina Only	1	2	3	4	5	6	Sum Total
Estimated Revenues at 100% Achievement	\$36.9	\$46.2	\$72.3	\$101.3	\$0.0	\$0.0	
Estimated Revenues at 85% Achievement	\$31.4	\$39.3	\$61.5	\$86.1	\$0.0	\$0.0	\$218.2
Rate \$/kWh	\$0.00069	\$0.00073	\$0.00112	\$0.00160	\$0.00000	\$0.00000	
Rate Change (based on 2008 rev)	0.8%	1.0%	1.6%	2.3%	0.0%	0.0%	
Estimated Net Lost Revenues at 100% Achievement	\$9.1	\$19.4	\$35.2	\$49.8	\$39.0	\$24.1	
Estimated Net Lost Revenues at 85% Achievement	\$7.7	\$16.5	\$29.9	\$42.3	\$33.9	\$20.5	\$151.0
Rate \$/kWh	\$0.00014	\$0.00031	\$0.00055	\$0.00078	\$0.00063	\$0.00038	
Rate Change (based on 2008 rev)	0.2%	0.4%	0.8%	1.1%	0.9%	0.5%	
Total Revenue Requirement at 85% Achievement	\$39.1	\$55.8	\$91.4	\$128.4	\$33.9	\$20.5	\$369.2
Rate \$/kWh	\$0.00073	\$0.00103	\$0.00167	\$0.00238	\$0.00063	\$0.00038	
Rate Change (based on 2008 rev)	1.0%	1.5%	2.4%	3.4%	0.9%	0.5%	

4. An annual true-up process will be conducted to update revenue requirements based on actual customer participation results. Revenues will be collected from customers based on the annual participation true-up results plus an updated forecast of customer participation to the energy efficiency plan. The assumed level of avoided cost savings achievement will be determined under the provisions of Section H.4. Any overcollection resulting from a difference between amounts billed and amounts due the Company will be returned to the customers with interest, at a rate to be determined by the Commission in the first annual true-up proceeding in which an overcollection occurs.
5. Revenues collection from customers during the term of the agreement shall be based on the expected avoided costs to be achieved during the four-year term at an 85% level of achievement of the avoided cost savings target. The revenue requirement will be true'd up to actual results at the end of the agreement. Any of the Stipulating Parties may, in a rider proceeding during the term of this agreement, recommend that the percentage achievement level be modified prospectively based on the actual level of achievement, in order to minimize the over-or under-collection of revenues at the end of the term.
6. A final true-up process based on measured and verified results will take place after the evaluation of the program results when the four-year period is complete. Any difference between amounts billed customers or amounts due the Company shall be returned to customers with interest, at a rate to be determined by the

Commission in the first such true-up proceeding in which an overcollection occurs.

7. Net lost revenues are included in the final true-up process at the end of the four-year plan. The outstanding balance of net lost revenues will be adjusted based on actual measured and verified lost revenues.
8. The North Carolina retail revenue requirement applicable to demand-side management, energy efficiency programs, and net lost revenues will be determined by allocating the various inputs to the revenue calculation (avoided costs, program costs, net lost revenues, etc.) to the North Carolina retail jurisdiction and then applying the percentages and other revenue requirement determinants set forth in this agreement.

The Stipulating Parties will present the issue of the appropriate jurisdictional allocation method to the Commission through testimony in this matter. For purposes of determining the North Carolina retail revenue requirement, Duke Energy Carolinas and the Environmental Intervenors agree that (1) for demand-side management programs, inputs will be allocated between the North Carolina and South Carolina retail jurisdictions based on contributions to system retail peak demand by all system retail customers based on the cost of service study, and (2) for energy efficiency programs and net lost revenues, inputs will be assigned to the North Carolina and South Carolina retail jurisdictions based on kWh sales to system retail customers from the cost of service study. The program costs allocated under this methodology will be used to calculate the earnings cap.

The Public Staff does not agree with the allocation methodology proposed by Duke and the Environmental Intervenors and instead proposes that (1) for demand-side management programs, inputs will be allocated to the North Carolina retail jurisdiction based on contributions to total system peak demand by all system customers, retail and wholesale, and (2) for energy efficiency programs, inputs should be allocated to the North Carolina retail jurisdiction based on kWh sales to all system customers, retail and wholesale.

9. Within the North Carolina retail jurisdiction, customer group revenue requirements applicable to demand-side management and energy efficiency programs will be determined by assigning or allocating the North Carolina retail revenue requirement to the various customer groups. The appropriate allocation or assignment method to be used for these purposes will be determined by the Commission in this proceeding.

#### **I. Measurement & Verification**

1. Measurement and verification (M&V) of programs, conducted by an independent third-party using a nationally-recognized protocol, will be performed to ensure programs remain cost-effective. This protocol may be modified with approval of the North Carolina Utilities Commission to reflect evolution of best practices.

2. The results of the M&V process at the end of the term will be used to determine the actual energy (MWh) and capacity (MW) savings achieved. The M&V study shall be submitted to the Commission as part of the four-year true-up proceeding.
3. The measurement of units (*e.g.*, number of lights or HVAC units installed, capacity under contract, etc.) multiplied by the achieved kW and kWh savings from each unit as determined in the M&V process, will determine the actual MW and MWh achievements during the term of the plan.
4. In addition to updating the estimated energy and capacity savings, the M&V study will also update the free ridership estimates for programs and measures. All the updated information will be used in evaluating the continued cost-effectiveness of existing programs, but updates to free ridership estimates will not be applied retrospectively to measures that have already been installed or programs already completed. The initial estimates of load impacts and free ridership (gross to net) will be utilized up until the first set of impact evaluations is completed. The results from those impact evaluation studies will then be used prospectively until the next set is completed. If it becomes apparent during the implementation of a program that free ridership is substantially higher than anticipated, the Company will file appropriate program adjustments with the Commission.
5. The final true-up process will be based on changes in participation combined with verified MW and MWh savings as set forth above.

#### **J. Program Management**

1. To achieve maximum results, the Company will continuously monitor the portfolio of energy efficiency programs, and periodically modify the portfolio and/or programs in order to make the programs more successful, more cost-effective, and/or responsive to market conditions.
2. Consistent with the North Carolina Utilities Commission's February 26, 2009 Order in this docket, the Company will submit all new programs and major program modifications to the Commission for approval.
3. The Company will make residential programs available to customers without regard to whether they own or rent their home.
4. The Company will continue to pursue partnerships with third party agencies to help implement programs, including partnerships offering assistance to low income households. Upon approval of its programs, the Company will convene the Advisory Group (discussed in Section K, below) to guide efforts to expand cost-effective programs for low-income customers.

5. The Company will seek to leverage available state and federal funds to operate effective efficiency programs. Its application for such funds will be transparent with respect to the cost, operation and profitability of programs operated with those funds in a manner consistent with its authorized revenue recovery mechanism. Use of such funds helps offset the customer's project costs and are supplemental to Duke Energy's incentives to customers. As such, these funds will not change the impacts or cost-effectiveness of Duke Energy Carolinas' programs. Further, the amount of avoided costs recognized by the Company will not be reduced if customers also use state or federal funds to offset any portion of their project costs.

#### **K. Regional Efficiency Advisory Group**

1. The Company will work with stakeholders to develop a regional efficiency advisory group that may be broadened to include other utilities in the Carolinas. At a minimum, this advisory group will exist to cover a four-year program, including subsequent M&V activities. The advisory group will meet at least twice a year and may establish working groups on specific topics.
2. The advisory group will be comprised of a broad spectrum of regional stakeholders that represent a balanced interest in the program and its impacts, as well as national energy efficiency advocates and experts. A third party will facilitate the discussions. The advisory group will determine its own rules of operation, including the process for setting the agendas and activities of the group, consistent with these terms. Members agree to participate in the advisory group in good faith consistent with mutually-agreed upon rules of participation. Meetings will be open to additional parties who agree to the participation rules.
3. The role of the advisory group is to collaborate on new program ideas, review modifications to existing programs, ensure an accurate public understanding of the programs and funding, and review the M&V process.
  - a. The advisory group will review periodic status reports on program progress, collaborate on new program ideas, review modifications to existing programs, help set M&V priorities, provide recommendations for the submission applications to revise or extend programs and rate structures, and participate in the selection of the independent third party or parties that will conduct M&V of the programs.
  - b. The advisory group will review Duke Energy Carolinas' annual program report prior to its submission.
  - c. The advisory group will review any proposed adjustments in overall program targets that may be suggested as a result of factors outside the Company's control.

- d. The advisory group will evaluate and support appropriate strengthening of state building efficiency codes and state appliance efficiency standards, as well as any other state efficiency-related policies that may be encouraged or required by federal law.
4. Duke Energy Carolinas will provide information related to the development of energy efficiency and demand-side management programs to stakeholders in a transparent manner. The Company agrees to disclose program-related data at a level of detail similar to that which it has disclosed in other states or to data disclosed by other regulated utilities in the Carolinas. The Company will share all aspects of the development and evaluation of programs including the M&V process.
5. At its discretion, the Company may require confidentiality agreements with members who wish to review confidential avoided cost data or any calculations that could be used to determine the avoided cost data. Disclosure of this data would harm Duke Energy Carolinas competitively and could result in financial harm to its customers.
6. Participation in the advisory group shall not preclude any party from participating in any utility commission proceedings.

## Duke Energy Carolinas / Environmental Intervenor / Public Staff Save-A-Watt Settlement

Provision	Exhibit B Reference	Save-a-Watt as proposed by DEC in Initial Filing	Environmental Intervenor / Public Staff Concerns / Recommendations	Resulting Compromise / Save-A-Watt Settlement Agreement Provisions
<b>Term</b>	<b>B</b>	No definitive term, but proposal included a 4-year term of programs.	Because of the unique nature of the save-a-watt compensation mechanism, the model should be re-evaluated at the end of 4 years.	4 year pilot program (with true-up, etc. extending beyond as necessary). A full review of the save-a-watt model will occur in year 5.
<b>Avoided Cost-Based Compensation to Duke for Results</b>	<b>C</b>	Energy Efficiency: 90% of actual (independently measured & verified) avoided costs achieved.	As a value-of-service framework, the avoided cost framework proposed by the Company had unnecessarily high revenue requirements, a financial incentive to focus on demand response and peak shaving programs, and less incentive to avoid construction of new base load generation.	Separate avoided cost percentages for demand-side management and energy efficiency programs to make the Company indifferent relative to profitability.  A cost-based earnings cap ensures that the framework has a strong cost-of-service element but with a novel value-based guarantee not typically offered by utilities.  50% of actual (independently measured & verified) NPV avoided capacity and energy costs achieved, subject to an earnings cap (described below).
	<b>C</b>	Demand-Side Management: 90% of actual (independently measured & verified) avoided costs achieved.		75% of actual (independently measured & verified) avoided capacity costs achieved, subject to an earnings cap (described below).
<b>Included Elements in Avoided Cost-Based Compensation</b>	<b>A, D, G</b>	Program costs, "lost revenues," and management incentive – all at risk, based upon achievement of actual, verified results	See discussion of "net lost revenues" below.	Program costs and management incentive - both at risk, based upon achievement of actual, independently verified results.  "Net lost revenues" (for energy conservation programs only) broken out and dealt with separately, (as described below).

**Exhibit C**

<b>Avoided Cost Calculation</b>	<b>D</b>	Demand: Based on Avoided Cost rate filed with NCUC ( <i>i.e.</i> , "peaker methodology")		Based on PURPA avoided capacity cost rates filed with NCUC, using 1.2 performance adjustment factor. The avoided capacity rate will be set for 4 years.
		Energy: Based on avoided energy costs, per IRP	None.	Based on avoided energy costs per IRP, using comparable methodology as applied in PURPA avoided energy cost rates approved by NCUC.
<b>Earnings Caps</b>	<b>F</b>	No explicit performance targets; implicit within "pay for performance" nature of avoided cost revenue stream.  No earnings caps.	Duke Energy Carolinas' proposal provides the utility with an opportunity for an uncapped return on investment that is <i>unreasonably high</i> when compared to other utilities.  Duke Energy Carolinas' shareholder incentives should be tiered based upon actual results. <sup>2</sup>	Based on targeted plan savings, earnings cap varies based upon performance level achieved as percent of target (see below) <u>% Target CAP</u> ≥ 90-100% 15% cap on return on program costs 80-89% 12% cap on return on program costs 60-79% 9% cap on return on program costs <60% 5% cap on return on program costs *Energy efficiency – savings considered over life of measure, <i>e.g.</i> , HVAC has 15 yrs of savings *Demand-side management – savings are annual
<b>Initial Revenue Requirements Calculation</b>	<b>H</b>	Based on 90% of estimated avoided costs at 100% achievement, "shaped" to resemble power plant investment and recovery.	The Company's proposal to reshape revenues is unnecessarily complex. The Company should base revenues on contemporaneous estimates of avoided costs.	Based on 4-year plan to create \$754 million in (nominal) avoided costs at 100% achievement level; no "reshaping" of revenue requirements.

<sup>2</sup> While the Public Staff is not opposed to shareholder incentives being tiered based upon the actual results of demand-side management and energy efficiency programs, it does not share this concern with regard to this proceeding.

# Exhibit C

<b>True Up</b>	<b>H</b>	Annual, with adjustment to revenue requirements based on actual compared to targeted avoided cost savings. Over collections refunded to customers with 0% interest.	If the Company overcollects, the Company, not customers, would receive the time value benefit of the overcollections.	True-up at conclusion of 4-year period, based on actual compared to targeted avoided cost savings, in conjunction with performance targets and earnings caps. The Company will pay interest on overcollections at an interest rate to be determined during the first true-up that shows a balance owing to customers.
<b>Cost Recovery Period</b>	<b>A, B, II</b>	20 years based on life of measure with recovery of and on avoided cost	See discussion of limited term above.	6 years: (4 + true up in year 5) for recovery of avoided cost and full 6 years for recovery of net lost revenues.



Exhibit C

<p><b>"Net Lost Revenue" Recovery Mechanism (loss attributable to fixed cost recovery for energy efficiency programs only)</b></p>	<p>A, G</p>	<p>No explicit lost revenue recovery proposed.</p>	<p>The Environmental Intervenor are concerned that the Company's save-a-watt proposal does not explicitly address lost revenues, accounting for them instead in the avoided cost revenue recovery. This would bias the Company in favor of demand-side management programs and against energy efficiency programs. Also, following a rate case, rates for vintage years prior to base rate could be unaffected, and continue to collect net lost revenues.</p> <p>The Public Staff is concerned about the lack of transparency caused by no provision for explicit net lost revenue recovery. Because save-a-watt revenue would be based simply on a percentage of avoided costs, it would not be readily evident what portions of the revenues were being utilized to compensate the Company for program costs, net lost revenues, and bonus incentives. The Public Staff also believes that any loss to the Company due to net lost revenues is transitory, and can be eliminated over time by increased growth in electricity usage, increased numbers of customers, achievements of cost efficiencies, reductions in the cost of capital, or a general rate case.</p>	<p>Direct recovery of net lost revenues as defined and set forth in Commission Rule R8-68 resulting from energy efficiency programs for 3 (vintage) years.</p> <p>Net lost revenue recovery mechanism terminated prior to 36 months if/when Commission approves an alternative recovery mechanism or the implementation of new rates in a general rate case or other comparable proceeding to the extent that the rates are set to explicitly or implicitly recover net lost revenues.</p>
<p><b>Stakeholder Input</b></p>	<p>K</p>		<p>The stakeholder advisory group structure is not sufficient to assure adequate input or transparency.</p>	<p>Greater transparency and details regarding the structure of the stakeholder advisory group are guaranteed. The possibility of a two-state, multi-utility structure is suggested to improve participation and reduce costs.</p>

Schultz Settlement Exhibit No. 1

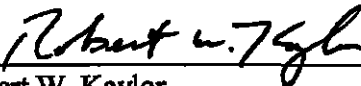
**Exhibit C**

<b>Performance Targets</b>	<b>D</b>		The proposal does not include ambitious enough programs or performance targets.	The program establishes increased performance targets, approximately doubling to 0.5% in the third year and 0.75% in the fourth year.
<b>Cost Allocation</b>	<b>H</b>	The Company proposed that only retail customers would pay for the costs and benefits associated with demand-side management and energy efficiency programs. Under the original filing, Duke Energy Carolinas proposed that residential customers pay for programs available to residential customers and non-residential customers pay for programs available to non-residential customers.	<p>With regard to jurisdictional cost allocation, the Environmental Intervenors and the Company's proposal is consistent with the Company's original petition, with one exception: instead of allocating demand-side management programs on kWh sales, Duke and the Environmental Intervenors propose to make the jurisdictional allocation based on contribution to peak demand.</p> <p>The Public Staff does not accept the Company's cost allocation methodology. Consistent with its previously filed testimony in this proceeding, the Public Staff proposes that the costs and benefits of demand-side management and energy efficiency programs be allocated to both wholesale and retail customers.</p>	This issue is unresolved and will be presented to the Commission for determination in this proceeding. Likewise, the appropriate allocation method for assigning costs to customer classes will be determined in this proceeding.

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's Agreement and Joint Stipulation of Settlement in Docket No. E-7, Sub 831 has been served by electronic mail (e-mail), hand delivery or by depositing a copy in the United States Mail, first class postage prepaid, properly addressed to parties of record.

This the 12<sup>th</sup> day of June, 2009.

  
Robert W. Kaylor  
Law Office of Robert W. Kaylor, P.A.  
3700 Glenwood Avenue, Suite 330  
Raleigh NC 27612  
(919) 828-5250  
NC State Bar No. 6237

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

**FILED**

**JUN 19 2009**

DOCKET NO. E-7, SUB 831

Clerk's Office  
N.C. Utilities Commission

In re:	)	
Application of Duke Energy Carolinas, LLC	)	SETTLEMENT TESTIMONY OF
For Approval of Save-a-Watt Approach,	)	STEPHEN M. FARMER FOR
Energy Efficiency Rider and Portfolio of	)	DUKE ENERGY CAROLINAS
Energy Efficiency Programs	)	
	)	

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**I. INTRODUCTION AND PURPOSE**

1    **Q.    PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2    A.    My name is Stephen M. Farmer, and my business address is 1000 East Main  
3           Street, Plainfield, Indiana.

4    **Q.    BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?**

5    A.    I am a former employee of Duke Energy Shared Services, Inc. On December 31,  
6           2006, I retired as an employee of Duke Energy Shared Services, Inc. after serving  
7           Duke Energy Indiana, Inc. and its predecessor companies for over thirty-one  
8           years. I am currently self-employed and provide rate and regulatory consulting  
9           services as an independent contractor. I have been retained by Duke Energy  
10          Corporation as a consultant in the area of rates.

11   **Q.    DID YOU PREVIOUSLY CAUSE TO BE PRE-FILED IN THIS DOCKET**  
12       **CERTAIN DIRECT AND REBUTTAL TESTIMONIES ON BEHALF OF**  
13       **DUKE ENERGY CAROLINAS?**

14   A.    Yes, I did.

15   **Q.    WHAT IS THE PURPOSE OF YOUR SETTLEMENT TESTIMONY IN**  
16       **THIS PROCEEDING?**

17   A.    The purpose of my testimony is to explain and support certain provisions of the  
18           Agreement and Joint Stipulation of Settlement (the "Agreement") among Duke  
19           Energy Carolinas, LLC ("Duke Energy Carolinas" or the "Company") and the  
20           Southern Alliance for Clean Energy, Environmental Defense Fund, Natural  
21           Resources Defense Council, and the Southern Environmental Law Center  
22           (collectively, the "Environmental Intervenors"), and the Public Staff of the North

1 Carolina Utilities Commission (the “Public Staff”) (collectively referred to as the  
2 “Stipulating Parties”). In particular, I will discuss certain provisions of the  
3 Settlement Terms attached to the Agreement as Exhibit B and certain aspects of  
4 Exhibit C, which sets out the various areas of compromise between the parties.  
5 My testimony includes calculations that quantify the customer rate impacts that  
6 are projected to occur as a result of the recovery of energy efficiency costs, lost  
7 revenues and incentives. The testimony of Mr. Theodore E. Schultz filed in  
8 support of the Agreement includes a more detailed discussion of the terms  
9 included in Exhibits B and C of the Settlement Agreement. As Mr. Schultz and I  
10 discuss, the Agreement includes several areas of compromise by the Stipulating  
11 Parties that affect the determination of costs to be recovered from customers.

12 **Q. MR. FARMER, WHAT HAS BEEN THE FOCUS OF YOUR**  
13 **TESTIMONIES IN THIS PROCEEDING?**

14 A. My testimonies in this proceeding have focused on the development of the  
15 proposed jurisdictional revenue requirements applicable to Duke Energy  
16 Carolinas’ save-a-watt proposal and the development of ratemaking principles  
17 and provisions included in Rider EE (NC), which is the Company’s proposed  
18 energy efficiency cost recovery mechanism.

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A. Yes. Farmer Settlement Exhibit Nos. 1 through 3 include summaries and comparisons of the annual jurisdictional revenue requirement and rate impacts that reflect the various provisions and terms of the Agreement. Farmer Settlement Exhibit No. 1 includes a side-by-side comparison of annual jurisdictional revenues that would have been collected during the first four years of the Company's save-a-watt proposal as originally filed (amounts shown in columns B through D) and the annual jurisdictional revenues that will be billed to North Carolina customers for the same period assuming the Commission approves the Agreement (amounts shown in columns E through I). Farmer Settlement Exhibit No. 1 shows that the sum of the jurisdictional revenue requirement based on the terms and provisions of the Agreement is \$27.4 million (8.0%) less than the Company's original filing over the four-year recovery period. As explained below, there are a number of factors that contribute to the net change in revenue requirement.

1   **Q.   PLEASE EXPLAIN THE REASONS WHY THE CUMULATIVE**  
2       **JURISDICTIONAL REVENUE REQUIREMENT PROVIDED FOR IN**  
3       **THE AGREEMENT IS LESS THAN THE REVENUE REQUIREMENT**  
4       **UNDER THE COMPANY'S ORIGINAL SAVE-A-WATT PLAN OVER**  
5       **THE FOUR-YEAR COST RECOVERY PERIOD.**

6   **A.**   There are a number of factors to consider when comparing the jurisdictional  
7       revenue requirement based on the terms and provisions of the Agreement to the  
8       jurisdictional revenue requirement under the Company's originally filed Energy  
9       Efficiency Plan. First, as originally filed, the save-a-watt proposal provided for  
10      the recovery of lost revenues and program costs spread out over the life of the  
11      energy efficiency and demand-side management programs that gave rise to  
12      avoided cost savings. For example, if an energy efficiency program had a life of  
13      ten years, the recovery of program costs would have occurred over ten years. In  
14      contrast, under the provisions of the Agreement, the recovery of program costs  
15      applicable to a particular vintage of energy efficiency programs will occur during  
16      the program vintage year. The revenue streams under both plans are intended to  
17      provide the Company the opportunity, but not a guarantee, of program cost  
18      recovery. The recovery of net lost revenues, which also would have occurred  
19      over the life of approved energy efficiency program under the Company's original  
20      proposal, will now be limited to the level of estimated net lost revenues that are  
21      expected to occur during the 36-month period that begins as of each initial vintage  
22      year of customer participation in Company sponsored programs. The Agreement  
23      provides that the recovery of net lost revenues applicable to vintage years three



1 and four energy efficiency programs will extend two-years beyond the initial  
2 four-year cost recovery period assuming such recovery is not reduced or  
3 terminated as a result of the explicit or implicit recovery of net lost revenues as  
4 part of a general rate case or comparable proceeding. The Company estimates  
5 that the combined sum of net lost revenues subject to recovery by North Carolina  
6 customers in years five and six will total approximately \$54 million at 85% of  
7 targeted achievement levels, if not reduced or terminated earlier.

8 The Stipulating Parties have agreed to mitigate any potential overbilling of  
9 costs to customers by initially billing customers at a rate that assumes the  
10 Company will achieve 85% of its targeted avoided cost savings goals (revenues  
11 under the Company's original proposal assumed the Company would achieve  
12 100% of its targeted goals). The Agreement provides for an annual true-up  
13 process in order to adjust jurisdictional revenue requirement to reflect historical  
14 customer participation levels in addition to any changes or updates to forecasted  
15 customer participation levels. In addition, the Agreement provides for a true-up  
16 after the end of the four-year period that will capture differences, not only due to  
17 actual versus projected customer participation levels, but also differences that  
18 may arise due to projected versus verified program impacts. Finally the end-of-  
19 period true-up will capture any adjustment that may result from the cap on  
20 Company earnings provided for in the Agreement. The Settlement Agreement  
21 jurisdictional revenue requirement shown on Farmer Settlement Exhibit Nos. 1  
22 through 3 assumes the Company achieves 85% of the avoided cost savings  
23 targeted across the Duke Energy Carolinas' system. Any difference between

1 amounts due the Company based on actual avoided cost savings realized by  
2 customers and amounts billed customers at 85% of target achievement will be  
3 collected from or refunded to customers as part of the annual and/or end of period  
4 true-up.

5 As explained by Mr. Schultz, the Settlement Agreement provides for a  
6 significant increase in the level of kilowatt-hour savings compared to the  
7 Company's original filing. For example, energy efficiency programs applicable  
8 to the third and fourth vintage years have been scaled up to achieve customer  
9 kWh savings of 0.5% and 0.75% of sales, respectively. These customer savings,  
10 which represent increases of over 80% and 150% when compared to the  
11 Company's original Energy Efficiency Plan, will result in an increase in the level  
12 of jurisdictional revenue requirement.

13 **Q. MR. FARMER, WHAT ARE SOME OF THE OTHER DRIVERS OF THE**  
14 **DIFFERENCE BETWEEN JURISDICTIONAL REVENUE**  
15 **REQUIREMENTS UNDER THE COMPANY'S PLAN AS ORIGINALLY**  
16 **FILED AND JURISDICTIONAL REVENUE REQUIREMENTS UNDER**  
17 **THE AGREEMENT?**

18 **A.** The Agreement includes a number of other changes and modifications, which will  
19 impact the recovery of jurisdictional revenue requirement. For example, as  
20 explained by Mr. Schultz, Section C of the Settlement Terms states that when  
21 developing jurisdictional revenue requirement, the Company will utilize 75% of  
22 avoided capacity costs applicable to demand response programs and 50% of the  
23 net present value of avoided capacity and energy costs applicable to energy

1 conservation programs. Jurisdictional revenues in the Company's original filing  
2 were based on 90% of estimated avoided capacity and energy cost savings. The  
3 Stipulating Parties agreed to limit the effect that potential increases in future  
4 avoided capacity and energy cost rates might have on the calculation of  
5 jurisdictional revenue requirement by fixing the MWh and MW-per-year avoided  
6 energy cost and avoided capacity cost rates at the onset of the plan subject to  
7 certain limited adjustments. The Agreement includes other provisions that limit  
8 the recovery of energy efficiency and demand-side management costs as outlined  
9 in the testimony of Mr. Schultz. For example, after-tax earnings on actual  
10 program costs will be capped at graduated percentage return levels based on the  
11 percentage achievement of targeted avoided cost savings. Finally, revenue  
12 requirement determinations do not reflect the revenue reshaping provisions  
13 included in the original filing. The changes in concepts and terms discussed  
14 above are implicitly included in the Agreement through the calculation of the  
15 projected system avoided cost savings of \$754 million.

16 **Q. DOES THE SETTLEMENT CHANGE THE COMPANY'S ALLOCATION**  
17 **OF COSTS AND BENEFITS OF DEMAND-SIDE MANAGEMENT**  
18 **PROGRAMS TO NORTH CAROLINA RETAIL CUSTOMERS?**

19 **A.** Yes. As part of the Settlement, the Environmental Intervenors and Duke Energy  
20 Carolinas agreed to make a change to the way costs associated with demand-side  
21 management costs are allocated. For purposes of determining the North Carolina  
22 retail revenue requirement, Duke Energy Carolinas and the Environmental  
23 Intervenors agree that for demand-side management programs, inputs will be

1 allocated between the North Carolina and South Carolina retail jurisdictions based  
2 on contributions to system retail peak demand by all system retail customers  
3 based on the Company's cost of service study. The save-a-watt proposal, as  
4 originally filed, provided that for demand-side management programs inputs  
5 would be allocated between the North Carolina and South Carolina retail  
6 jurisdictions based on kWh sales to system retail customers. For energy  
7 efficiency programs and net lost revenues, inputs will be assigned to the North  
8 Carolina and South Carolina retail jurisdictions based on kWh sales to system  
9 retail customers from the cost of service study. Program costs applicable to  
10 energy efficiency and demand-side management programs will be allocated  
11 between North Carolina and South Carolina jurisdictions on the same basis as  
12 revenue requirement.

13 **Q. MR. FARMER, DUKE ENERGY CAROLINAS AND THE**  
14 **ENVIRONMENTAL INTERVENORS HAVE AGREED THAT REVENUE**  
15 **REQUIREMENT WILL BE ALLOCATED TO NORTH CAROLINA AND**  
16 **SOUTH CAROLINA RETAIL CUSTOMERS ONLY AND THAT NO**  
17 **PORTION OF THE SETTLEMENT AGREEMENT REVENUE**  
18 **REQUIREMENT WILL BE ALLOCATED TO WHOLESALE**  
19 **CUSTOMERS. PLEASE EXPLAIN THE RATIONALE FOR THIS**  
20 **DECISION.**

21 **A.** Because the Company's energy efficiency and demand-side management  
22 programs included in the portfolio of programs approved in this proceeding are  
23 programs directed specifically to Duke Energy Carolinas' retail customers, the

1 Company believes it is appropriate to recover the costs of such programs only  
2 from these customers. Like Progress Energy Carolinas and the Commission,  
3 Duke Energy Carolinas interprets N.C. Gen. Stat. § 62-133.9(e) to mean that costs  
4 of new energy efficiency and demand-side management programs should “be  
5 recovered only from those customer classes eligible to participate in the program  
6 and to which the program is targeted.” *Order Approving Agreement and*  
7 *Stipulation of Partial Settlement, Subject to Certain Commission-Required*  
8 *Modifications*, Docket No. E-2, Sub 931, at 30 (June 15, 2009).

9 **Q. DO YOU DISPUTE THE FACT THAT ALL CUSTOMERS LIKELY WILL**  
10 **RECEIVE INDIRECT BENEFITS FROM THE COMPANY’S ENERGY**  
11 **EFFICIENCY PROGRAMS?**

12 A. No, I am simply making the point that to comply with N.C. Gen. Stat. § 62-  
13 133.9(e) the costs of a program or measure should be recovered from those  
14 customers eligible to participate in the program. Duke Energy Carolinas believes  
15 its allocation methodology is more consistent with the North Carolina General  
16 Assembly’s use of the words “only” and “directly” in this statute, which provides  
17 that:

18 The Commission shall determine the appropriate assignment of  
19 costs of new demand-side management and energy efficiency  
20 measures for electric public utilities and shall assign the costs of  
21 the programs *only* to the class or classes of customers that  
22 *directly* benefit from the programs. [Emphasis added.]  
23

24 N.C. Gen. Stat. § 62-133.9(e).

1     **Q.     DOES THE PUBLIC STAFF SUPPORT THE METHOD AGREED TO BY**  
2           **DUKE ENERGY CAROLINAS AND THE ENVIRONMENTAL**  
3           **INTERVENORS FOR ALLOCATING THE REVENUE REQUIREMENT**  
4           **TO NORTH CAROLINA RETAIL CUSTOMERS?**

5     A.    No. The Public Staff did not agree to this proposed method and the Stipulating  
6           Parties have agreed to present the issue of the appropriate jurisdictional allocation  
7           method to the Commission through testimony.

8     **Q.     HAVE THE STIPULATING PARTIES ACCEPTED THE ALLOCATION**  
9           **OF ENERGY EFFICIENCY AND DEMAND-SIDE MANAGEMENT**  
10          **REVENUE REQUIREMENT BETWEEN NORTH CAROLINA AND**  
11          **SOUTH CAROLINA JURISDICTIONS BASED ON KILOWATT-HOURS**  
12          **SALES AND CONTRIBUTION TO PEAK DEMAND, RESPECTIVELY?**

13    A.    Yes, the Stipulating Parties accept the allocation of energy efficiency and  
14          demand-side management revenue requirement to the North Carolina and South  
15          Carolina jurisdictions based on kilowatt-hour sales and contribution to peak  
16          demand. The only remaining item of contention is that the Public Staff believes it  
17          would be more appropriate to allocate revenue requirement on a class-by-class  
18          basis rather than on a “residential” and “non-residential” basis as proposed by  
19          Duke Energy Carolinas and as accepted by the Environmental Intervenors.

20    **Q.     IS THE COMPANY PROPOSING ANY CHANGES FROM ITS**  
21          **ORIGINAL FILING TO HOW IT ALLOCATES ENERGY EFFICIENCY**  
22          **AND DEMAND-SIDE MANAGEMENT REVENUE REQUIREMENT**  
23          **AMONG NORTH CAROLINA RETAIL CUSTOMERS?**

1 A. No. Under the Company's allocation proposal, residential and non-residential  
2 customers will pay their respective share of energy efficiency and demand-side  
3 management program costs, lost revenues, and incentives based on the percentage  
4 of system kilowatt-hour sales consumed and peak demands contributed by  
5 residential and non-residential customers, respectively.

6 **Q. DOES THE PUBLIC STAFF SUPPORT THE COMPANY'S**  
7 **ALLOCATION OF ENERGY EFFICIENCY AND DEMAND-SIDE**  
8 **MANAGEMENT REVENUE REQUIREMENT AMONG NORTH**  
9 **CAROLINA RETAIL CUSTOMER GROUPS?**

10 A. No, the Public Staff opposes the Company's combination of non-residential retail  
11 customers into one group for purposes of allocating the revenue requirement. The  
12 Company chose to combine non-residential customers into one class in  
13 recognition of the fact that programs offered within the non-residential classes cut  
14 across various rate groups. In addition, the Company's goal was to reduce  
15 complexity when administering the Rider.

16 **Q. HAVE YOU PREPARED EXHIBITS THAT PROVIDE ESTIMATES OF**  
17 **THE CHANGE IN RATES THAT WOULD OCCUR AS A RESULT OF**  
18 **THE RECOVERY OF ENERGY EFFICIENCY AND DEMAND-SIDE**  
19 **MANAGEMENT COSTS AFTER REFLECTING THE EFFECTS OF THE**  
20 **SETTLEMENT AGREEMENT?**

21 A. Yes. Farmer Settlement Exhibit No. 2 shows the estimated percentage change in  
22 retail rates for residential and non-residential customers that would occur during  
23 the four-year cost recovery period based on the terms of the Agreement. In

1        addition, Farmer Settlement Exhibit No. 3 includes calculations of monthly billing  
2        factors for residential and non-residential customers that can be used to evaluate  
3        the impact of the recovery of energy efficiency costs by individual customers. As  
4        shown on Farmer Settlement Exhibit No. 2, residential and non-residential rates  
5        will increase by 1.47% and 0.68%, respectively, during the first year of the four-  
6        year cost recovery period when compared to 2008 annual jurisdictional revenues.  
7        Residential and non-residential rates will increase by 4.93% and 2.14%,  
8        respectively, during the fourth year. It is important to keep in mind that  
9        customers who participate in programs offered by the Company will likely,  
10       depending on the level of participation, reduce their net bill below the level that  
11       would have been incurred had the Company's energy efficiency and demand-side  
12       management programs not been in place. Customers who do not participate in  
13       programs offered by the Company will benefit to the extent the Company's  
14       energy efficiency and demand-side management programs lower the marginal  
15       cost of energy and capacity below the level that would have been incurred had the  
16       Company not been able to realize avoided cost savings. The rate impacts shown  
17       on Farmer Settlement Exhibit Nos. 1 and 2 do not include the savings discussed  
18       above that will be realized by customers who participate in Company sponsored  
19       programs. In addition, the impacts of customers "opting out" of Rider EE (NC)  
20       are not included in the exhibit. The percentage change in individual customer  
21       rates caused by the implementation of Rider EE (NC) will be dependent on the  
22       level of power consumed by the individual customer.



As shown on Farmer Settlement Exhibit No. 3, the monthly billing factor for a residential customer taking service under Rate RS is estimated to be \$0.001206 per kWh during the first year of the four-year cost recovery period. The estimated monthly billing factor increases to \$0.004207 per kWh in the last year of the four-year cost recovery period. The monthly bill of a typical residential customer using 1,000 kilowatt-hours will increase by \$1.21 and \$4.03, respectively during the first and fourth years.

### III. NET LOST REVENUES

**Q. MR. FARMER, DO THE SETTLEMENT TERMS PROVIDE FOR THE RECOVERY OF NET LOST REVENUES?**

A. Yes, the various provisions relating to the recovery of net lost revenues are set out in Exhibit B, Section G of the Agreement. Section G includes a table that shows the projected annual level of net lost revenues that is expected to occur during the six-year recovery period provided for in the Agreement. As shown on this table, the estimated amount of net lost revenues to be collected from North Carolina customers totals \$151 million at 85% achievement. The recovery of net lost revenues will be subject to adjustment (either up or down) based on the level of verified kW and kWh reductions actually realized. At a savings level that equals 100% of target achievement the recovery of lost revenues would total approximately \$178 million. As explained earlier in my testimony, the recovery of net lost revenues applicable to energy efficiency programs for vintage years three and four will extend two-years beyond the initial four-year cost recovery period assuming such recovery does not terminate or is not reduced as a result of

1 approval of a decoupling or alternative recovery mechanism or an order in a  
2 general rate proceeding that provides for the recovery of net lost revenues.

3 **Q. HOW WILL THE COMPANY CALCULATE NET LOST REVENUES**  
4 **UNDER THE AGREEMENT?**

5 A. The calculation of net lost revenues (sometimes referred to as lost margins) was  
6 estimated by multiplying the portion of the Company's tariff rates that represent  
7 the recovery of fixed costs by the estimated kW and kWh reductions applicable to  
8 energy efficiency programs. The calculation of net lost revenues does not apply  
9 to demand-side management programs. The Company calculated the portion of  
10 retail tariff rates representing the recovery of fixed costs by deducting the  
11 recovery of fuel costs from its tariff rates.

12 **Q. DID THE COMPANY'S ORIGINAL SAVE-A-WATT PROPOSAL CALL**  
13 **FOR THE EXPLICIT RECOVERY OF NET LOST REVENUES?**

14 A. No. There was no explicit recognition or recovery of net lost revenues. The  
15 recovery of net lost revenues was embedded in the revenue requirement  
16 calculations that were based on 90% of estimated avoided capacity and energy  
17 costs included in the Company's original filing. The reduced percentages of  
18 avoided costs used to determine revenue requirement set forth in Section C of  
19 Exhibit B of the Agreement, were calculated recognizing that net lost revenues  
20 would be recovered separately.

21 **IV. TRUE-UP**

22 **Q. DO THE SETTLEMENT TERMS PROVIDE FOR A TRUE-UP**  
23 **PROCESS?**

1     A.     Yes. As explained above, the Settlement Agreement provides for series of annual  
2           true-ups that will be conducted to update revenue requirements based on actual  
3           customer participation results. Revenues will be collected from customers based  
4           on the annual participation true-up results plus an updated forecast of customer  
5           participation in the Company's energy efficiency and demand-side management  
6           programs. A final true-up process, based on independently measured and verified  
7           results will take place after the evaluation of the program results when the four-  
8           year period is complete. At that time, amounts due the Company based on the  
9           terms of the Agreement will be compared to revenues collected from customers.  
10          Any difference will be flowed through to customers or will be collected from  
11          customers, as the case may be. If there are amounts owed to customers, such  
12          amounts will be refunded with interest at a rate to be determined by the  
13          Commission in the first true-up proceeding in which an over collection occurs.  
14          Net lost revenues will be included in the final true-up process at the end of the  
15          four-year plan. The outstanding balance of net lost revenues will be adjusted  
16          based on the actual measured and verified lost revenues determined in the final  
17          true-up process.

18                 The true-up process will capture the effects of a number of reconciliations.  
19          For example, the true-up process will capture the difference between revenues  
20          billed customers based on 85% of targeted energy efficiency program avoided  
21          cost savings billed customers (revenue requirement calculated based on 50% of  
22          life-time net present value savings) and 85% of targeted demand-side  
23          management program avoided cost savings billed customers (revenue requirement

1       calculated based on 75% of nominal dollar savings over the four-year recovery  
2       period) and revenues due the Company based on the applicable percentage of  
3       verified energy efficiency and demand-side management avoided cost savings  
4       actually realized. The true-up process will capture the difference between lost  
5       revenues billed customers and the recovery of net lost revenues owed the  
6       Company based on verified MW and MWh savings. The true-up process also will  
7       include calculations that ensure that the level of compensation recovered by the  
8       Company is capped so that the after-tax rate of return on actual program costs  
9       applicable to energy efficiency and demand-side management programs does not  
10      exceed the predetermined earnings cap levels set out in the Agreement.

11   **Q.   PLEASE SUMMARIZE THE PROCESS THAT WILL BE USED TO**  
12       **ENSURE THAT COMPANY EARNINGS APPLICABLE TO THE SAVE-**  
13       **A-WATT PROGRAM DO NOT EXCEED THE PREDETERMINED**  
14       **LEVELS SET OUT IN THE AGREEMENT.**

15   **A.**   First, let me emphasize that the Agreement does not guarantee or ensure that the  
16       Company will realize or achieve the earnings levels set out in the Agreement.  
17       The Company assumes the risk that projected savings will not materialize and that  
18       revenues received from customers based on the percentage of avoided cost  
19       savings retained by the Company will not result in any management incentive or  
20       cover the costs of energy efficiency and demand-side management programs.  
21       Having said that, the process used to determine compliance with the earnings cap  
22       provision will be as follows. The Company will calculate the level of after-tax  
23       earnings, on a net present value basis, that would be produced by deducting actual

1 program costs incurred during the four-year settlement period from the  
2 cumulative revenue level to which the Company is entitled based on the  
3 provisions of the Agreement. The cumulative revenue level, which will exclude  
4 the recovery of lost revenues, will be calculated by applying the various  
5 provisions set out in the discussion of the true-up process above. The Company  
6 will then apply the appropriate tax factors in order to determine the after-tax  
7 earnings level produced by these values. The after-tax earnings level will be  
8 divided by actual program costs incurred in order to determine the percentage  
9 return (*i.e.*, rate of return) on actual program costs. The Company will compare  
10 the rate of return on actual program costs produced by this calculation to the rate  
11 of return cap (*i.e.*, management incentive) that is provided for in Section F of the  
12 Agreement taking into consideration the percentage of avoided cost savings  
13 actually realized relative to the \$754 million of targeted system avoided costs  
14 savings (see chart below). If the rate of return on actual program costs is less than  
15 the capped level provided for in the Agreement, in other words, if the Company is  
16 not able to realize the level of earnings that are provided for in the Agreement,  
17 then no further adjustment will be made. If, on the other hand, the rate of return  
18 on actual program costs incurred exceeds the level provided for in the Agreement,  
19 then the excess earnings level (grossed-up for applicable taxes) will be refunded  
20 to customers. The performance targets and earnings caps levels set out in Section  
21 F-1 of the Agreement are as follows:

1

% of Target Achievement	Earnings Cap
≥90%	15%
80% to 89%	12%
60% to 79%	9%
<60%	5%

2

3 **Q. PLEASE EXPLAIN FARMER SETTLEMENT EXHIBIT NO. 4.**

4 A. Farmer Settlement Exhibit No. 4 is a revision of the Rider EE (NC) tariff that was  
5 previously filed with the Commission that incorporates the provisions of the  
6 Agreement. Duke Energy Carolinas is requesting Commission approval of the  
7 tariff provisions and rates included on Farmer Settlement Exhibit No. 4.

8

**V. CONCLUSION**

9 **Q. WERE FARMER SETTLEMENT EXHIBIT NOS. 1-4 PREPARED BY**  
10 **YOU OR AT YOUR DIRECTION?**

11 A. Yes.

12 **Q. DOES THIS COMPLETE YOUR TESTIMONY IN SUPPORT OF THE**  
13 **AGREEMENT AND JOINT STIPULATION OF SETTLEMENT?**

14 A. Yes, it does.

**DUKE ENERGY CAROLINAS, LLC**

**Comparison Of Jurisdictional Revenue Requirement Applicable To  
The Company's Energy Efficiency Plan Reflecting the Terms of the Settlement Agreement  
(Dollars in Millions)**

Line No.	Year	Filed save-a-watt Proposal (Note 1)			Settlement Agreement (Notes 2 - 4)					Differences		Line No.
		Residential Programs	Non Residential Programs	Total	Residential Programs	Non Residential Programs	Subtotal	Net Lost Revenues	Total	Amount	Percent	
	(A)	(B)	(C)	(D)	(E)	(F)	(G)	(H)	(I)	(J)	(K)	
1	1	\$ 25.9	\$ 37.9	\$ 63.8	\$ 18.4	\$ 13.0	\$ 31.4	\$ 7.7	\$ 39.1	\$ (24.7)	(38.8%)	1
2	2	\$ 33.0	\$ 48.5	\$ 81.5	\$ 22.4	\$ 16.9	\$ 39.3	\$ 16.5	\$ 55.8	\$ (25.7)	(31.6%)	2
3	3	\$ 37.9	\$ 57.7	\$ 95.6	\$ 33.8	\$ 27.7	\$ 61.5	\$ 29.9	\$ 91.4	\$ (4.1)	(4.3%)	3
4	4	\$ 43.5	\$ 57.7	\$ 101.2	\$ 49.4	\$ 36.7	\$ 86.1	\$ 42.3	\$ 128.4	\$ 27.2	26.9%	4
5		\$ 140.3	\$ 201.9	\$ 342.1	\$ 124.0	\$ 94.2	\$ 218.2	\$ 96.5	\$ 314.8	\$ (27.4)	(8.0%)	5

**Notes:**

(1) Filed proposal conservation revenues are recovered over the useful life of the measure, thus the four year view does not represent the total cost that would have incurred under the Company's original proposal

revenues applicable to vintage years 3 and 4 will extend 2 years beyond the 4-year cost recovery period unless terminated early due to approval of a decoupling or alternative recovery mechanism or an order in a general rate proceeding that provides for the recovery of net lost revenues. The Company estimates that the combined sum of net lost revenues subject to recovery by North Carolina customers in years five and six will total approximately \$54 million at 85% of targeted achievement levels

(3) Revenues, including Net Lost Revenues, are set at 85% achievement

**DUKE ENERGY CAROLINAS, LLC**

**ESTIMATED ANNUAL REVENUE INCREASE APPLICABLE TO  
THE COMPANY'S ENERGY EFFICIENCY PLAN REFLECTING THE TERMS  
OF THE SETTLEMENT AGREEMENT  
(DOLLARS IN MILLIONS)**

Estimated Annual Recovery Via Rider EE per Settlement Agreement											
Line No.	Description	2008 Revenue (A)	Year 1		Year 2		Year 3		Year 4		Line No.
			Amount (B)	Percent Increase (C)	Amount (D)	Percent Increase (E)	Amount (F)	Percent Increase (G)	Amount (H)	Percent Increase (I)	
1	Residential	\$ 1,708.3	\$ 25.0	1.47%	\$ 36.6	2.14%	\$ 59.0	3.45%	\$ 84.2	4.93%	1
2	Non - Residential	\$ 2,066.8	\$ 14.1	0.68%	\$ 19.2	0.93%	\$ 32.5	1.57%	\$ 44.3	2.14%	2
4	Total	<u>\$ 3,775.1</u>	<u>\$ 39.1</u>	1.04%	<u>\$ 55.8</u>	1.48%	<u>\$ 91.4</u>	2.42%	<u>\$ 128.4</u>	3.40%	3

## Notes:

(1) Includes gross receipts tax and regulatory fee



## **DUKE ENERGY CAROLINAS, LLC**

### **ESTIMATED ANNUAL RIDERS APPLICABLE TO THE COMPANY'S ENERGY EFFICIENCY PLAN REFLECTING THE TERMS OF THE SETTLEMENT AGREEMENT**

North Carolina residential billing factor = NC residential revenue requirement / (Projected NC residential retail kWh sales) , where:

	Year 1	Year 2	Year 3	Year 4
Residential Avoided Cost Revenue Requirement	\$17,780,486	\$21,641,504	\$32,666,750	\$47,753,363
Residential Net Lost Revenue Revenue Requirement	\$6,407,393	\$13,727,793	\$24,327,229	\$33,601,989
Total Residential Revenue Requirement	\$24,187,879	\$35,369,297	\$56,993,980	\$81,355,353
Projected NC Residential Sales (kWh)	20,745,460,539	20,920,652,327	21,157,792,176	20,902,972,074
Rider	\$0.001166	\$0.001691	\$0.002694	\$0.003892
Revenue-related taxes and regulatory fees factor	1.034554	1.034554	1.034554	1.034554
Rider including Gross Receipts Tax and regulatory fee	\$0.001206	\$0.001749	\$0.002787	\$0.004027

North Carolina non-residential billing factor = NC non-residential revenue requirement / (Projected NC non-residential retail kWh sales), where:

	Year 1	Year 2	Year 3	Year 4
Non-Residential Avoided Cost Revenue Requirement	\$12,549,468	\$16,300,593	\$26,774,109	\$35,469,462
Non-Residential Net Lost Revenue Revenue Requirement	\$1,046,326	\$2,248,960	\$4,622,291	\$7,320,518
Total Non-Residential Revenue Requirement	\$13,595,794	\$18,549,554	\$31,396,400	\$42,789,980
Projected NC Non-Residential Sales (kWh)	32,830,015,696	33,152,448,061	33,524,459,865	33,069,815,036
Rider	\$0.000414	\$0.000560	\$0.000937	\$0.001294
Revenue-related taxes and regulatory fees factor	1.034554	1.034554	1.034554	1.034554
Rider including Gross Receipts Tax and regulatory fee	\$0.000428	\$0.000579	\$0.000969	\$0.001339

**Notes:**

(1) Revenues are set at 85% achievement

## RIDER EE (NC) ENERGY EFFICIENCY RIDER

### APPLICABILITY (North Carolina Only)

Service supplied under the Company's rate schedules is subject to approved energy efficiency adjustments over or under the Rate set forth in the approved rate schedules for energy efficiency programs approved as "new" under Commission Rule R8-68.

### ENERGY EFFICIENCY RATE ADJUSTMENT

Revenue requirements associated with Rider EE will be allocated between NC and SC retail customers, and then allocated between NC residential and non-residential customers. Demand-Side Management (DSM) revenue requirements will be allocated based on contribution to peak demand by all system retail customers, excluding the peak demand of those customers that opt out of the plan. Energy Efficiency (EE) revenue requirements will be assigned to the North Carolina and South Carolina retail jurisdictions based on kWh sales of system retail customers. For the allocation between NC residential and non-residential customers, DSM revenue requirements will be based on contribution to peak and residential customers will pay for residential EE costs and non-residential customers will pay for non-residential EE costs. For purposes of the true-up calculations, program costs and all other inputs will be allocated in a like manner.

Energy Efficiency Adjustments (EEA) will be applied to the energy charges of all rate schedules as determined by the following formula:

$$\text{EEA (residential)} = \frac{\text{ACDSMC} + \text{ACCOE} + \text{ACCOC} + \text{NLR} + \text{TUA, as assigned to the residential class of customers}}{S_{\text{residential}}}$$

$$\text{EEA (nonresidential)} = \frac{\text{ACDSMC} + \text{ACCOE} + \text{ACCOC} + \text{NLR} + \text{TUA, as assigned to the nonresidential class of customers}}{S_{\text{nonresidential}}}$$

Where,

EEA = Energy Efficiency Adjustment Amount  
 ACDSMC = Avoided Cost of Capacity for Demand-Side Management Revenue Requirement  
 ACCOE = Avoided Cost of Energy for Energy Efficiency Revenue Requirement  
 ACCOC = Avoided Cost of Capacity for Energy Efficiency Revenue Requirement  
 NLR = Net Lost Revenues  
 TUA = True-up Adjustment to be included in the fifth year of the rider only  
 S = Projected kWh Sales for the Rider Period for the class (residential or nonresidential) of NC retail customers, excluding the sales of those customers that opt out of the plan

EEA is calculated for a 12 month period, referred to as the Rider Period.

EEA adjustments, and any related true-ups of EEA adjustments, will reflect applicable revenue-related taxes and regulatory fees.

$$\text{ACDSMC} = \text{PDSMC} \times \text{ACC} \times 75\%$$

Where,

PDSMC = Projected kW demand impacts for the combined measures/programs for the vintage applicable to the Rider Period  
 ACC = Annual Avoided Capacity Costs per kW from the Company's Avoided Cost Filing (Interconnected to Transmission System, with Performance Adjustment Factor of 1.2), escalated using the Escalation Factor, to obtain nominal year S values for each year of the measure/program. Escalation Factor = escalation factor used in Avoided Cost Filing for escalation of capital costs.  
 75% = Percentage of avoided costs for demand-side management to be collected through the rider

$$\text{ACCOE} = (\text{NPV at the after-tax weighted average cost of capital of } (\text{PCOE} \times \text{ACE}) \text{ for each year for the life of the measure/program}) \times 50\%$$

Where,

PCOE = Projected annual kWh energy impacts for the life of the measures/programs for the vintage applicable to the Rider Period  
 ACE = Annual Avoided Energy Costs from modeling results that calculate the annual energy costs for the

Duke Energy Carolinas system with and without the portfolio of energy efficiency programs. The difference between the energy costs for the portfolio is assigned to individual program/measure vintage years to determine the Annual Avoided Energy Costs for the program/measure by vintage year. The modeling is consistent with the methodology used for energy cost determination in the Company's *Avoided Cost filings and Integrated Resource Plans*.

50% = Percentage of avoided costs for conservation to be collected through the rider

$ACCOC = (NPV \text{ at the after-tax weighted average cost of capital of } (PCOC \times ACC) \text{ for each year for the life of the measure/program}) \times 50\%$

Where,

PCOC = Projected kW demand impacts for the measure/program by year for the life of the measure/program for the vintage applicable to the Rider Period

ACC = Annual Avoided Capacity Costs (Interconnected to Transmission System, with Performance Adjustment Factor of 1.2) from the Avoided Cost Filing, escalated using the Escalation Factor, to obtain nominal year \$ values for each year of the measure/program.

Escalation Factor = escalation factor used in Avoided Cost Filing for escalation of capital costs.

50% = Percentage of avoided costs for energy efficiency to be collected through the rider

Net lost revenues shall be recovered for 36 months for each vintage year, except that the recovery of net lost revenue will end upon implementation of new rates approved by the Commission in a general rate case or comparable proceeding to the extent that rates are set in a rate case, for vintages up until that point.

$NLR = PNLRE \times NLRR$

Where,

PNLRE = Projected Energy impacts for all measures/programs for the vintage applicable to the Rider Period

NLRR = Tail block energy rates, excluding the fuel cost component of such rates, at the time of the lost kilowatt-hour sales

In the fifth Rider Period, a true-up amount will be included in the EEA as follows:

$TUA = ACT + NLRT + ECT$

Where,

ACT = Avoided Cost True-up

NLRT = Net Lost Revenue True-up

ECT = Earnings Cap True-up

$ACT = ADSMCT + ACOET + ACOCT$

Where,

ADSMCT = Avoided Demand-Side Management Capacity True-up

ACOET = Avoided Energy Efficiency Energy True-up

ACOCT = Avoided Energy Efficiency Capacity True-up

$ADSMCT = (Year 1((ADSMC - PDSMC) \times ACC) + Year 2((ADSMC - PDSMC) \times ACC) + Year 3((ADSMC - PDSMC) \times ACC) + Year 4((ADSMC - PDSMC) \times ACC)) \times 75\%$

Where,

ADSMC = Actual demand impacts for the measure/program for each vintage year

PDSMC = Projected demand impacts for the measure/program for each vintage year as used in the EEA calculation for each year

ACC = Annual Avoided Capacity Costs from the Avoided Cost Filing (Interconnected to Transmission System with Performance Adjustment Factor of 1.2), escalated using the Escalation Factor, to obtain nominal year \$ values for each year of the measure/program.

Escalation Factor = escalation factor used in Avoided Cost Filing for escalation of capital costs.

75% = Percentage of avoided costs for demand side management collected through the rider

$ACOET = (NPV \text{ at the after-tax weighted average cost of capital of } (Year 1((ACOE - PCOE) \times ACE) \text{ for each year for the life of the measure/program}) + (NPV \text{ at the after-tax weighted average cost of capital of } (Year 2((ACOE - PCOE) \times ACE) \text{ for each year for the life of the measure/program}) + (NPV \text{ at the after-tax weighted average cost of capital of } (Year 3((ACOE - PCOE) \times ACE) \text{ for each year for the life of the measure/program}) + (NPV \text{ at the after-tax weighted average cost of capital of } (Year 4((ACOE - PCOE) \times ACE) \text{ for each year for the life of the measure/program}) \times 50\%$

Where,

ACOE = Actual Energy impacts for the measure/program by year for the life of the measure/program for years 1-4 and projected Energy impacts for the measure/program for the remaining years of the life of the measure/program by vintage year

PCOE = Projected Energy impacts for the measure/program by year for the life of the measure/program for each vintage as used in the Rider SAW calculation each year

ACE = Annual Avoided Energy Costs from modeling results that calculate the annual energy costs for the Duke Energy Carolinas system with and without the portfolio of energy efficiency programs. The difference between the energy costs for the portfolio is assigned to individual program/measure vintage years to determine the Annual Avoided Energy Costs for the program/measure by vintage year. The modeling is consistent with the methodology used for energy cost determination in the Avoided Cost Filings and Integrated Resource Plans.

50% = Percentage of avoided costs for energy efficiency collected through the rider

ACOC = (NPV at the after-tax weighted average cost of capital of (Year 1((ACOC – PCOC) x ACC) for each year for the life of the measure/program) + (NPV at the after-tax weighted average cost of capital of (Year 2((ACOC – PCOC) x ACC) for each year for the life of the measure/program) + (NPV at the after-tax weighted average cost of capital of (Year 3((ACOC – PCOC) x ACC) for each year for the life of the measure/program) + (NPV at the after-tax weighted average cost of capital of (Year 4((ACOC – PCOC) x ACC) for each year for the life of the measure/program) x 50%

Where,

ACOC = Actual Demand impacts for the measure/program by year for the life of the measure/program for years 1-4 and projected Demand impacts for the measure/program for the remaining years in the life of the measure/program by vintage year

PCOC = Projected Demand impacts for the measure/program by year for the life of the measure/program for the vintage as used in the EEA calculation each year

ACC = Annual Avoided Capacity Costs (Interconnected to the Transmission System, Performance Adjustment Factor of 1.2) from the Avoided Cost Filing, escalated using the Escalation Factor, to obtain nominal year \$ values for each year of the measure/program.

Escalation Factor = escalation factor used in Avoided Cost Filing for escalation of capital costs.

50% = Percentage of avoided costs for energy efficiency to be collected through the rider

NLRT = Year 1(ANLRE – PNLRE) x NLRR + Year 2(ANLRE – PNLRE) x NLRR + Year 3(ANLRE – PNLRE) x NLRR + Year 4(ANLRE – PNLRE) x NLRR

Where,

ANLRE = Actual Energy impacts for all measures/programs for the vintage

PNLRE = Projected Energy impacts for all measures/programs for the vintage as used in the EEA calculation each year

NLRR = Tail block energy rates, excluding the fuel cost component of such rates, at the time of the lost kilowatt-hour sales, as used in the EEA calculation each year

ECT = NIC minus (Greater of NIC or CNI) plus applicable income related taxes

Where,

NIC = Net Income Cap

CNI = Calculated Net Income

NIC = PTCP x APC

Where,

PTCP = Performance Target Cap Percentage

APC = Sum of actual program costs for the Years 1-4

PTCP is derived from the following table:

<u>Percentage Actual Target Achievement (PATA)</u>	<u>ROI Cap on Program Costs Percentage</u>
>=90%	15%
80% to 89%	12%
60% to 79%	9%
< 60%	5%

$$PATA = AACS / TACS$$

Where,

AACS = Actual Avoided Cost Savings

TACS = Targeted Avoided Cost Savings

AACS = Sum of the nominal lifetime avoided cost savings after all applicable true-ups

CNI = EEAAT plus applicable revenue-related taxes and regulatory fee – Sum Years 1-4 APC – RRT – IT

Where,

EEAAT = (Sum of Years 1-4 (ACDSMC + ACCOE + ACCOC)) + ACT

RRT = Revenue related taxes and regulatory fee calculated at the appropriate revenue related tax rate plus regulatory fee x AACS

IT = Income taxes calculated at the appropriate composite income tax rate x (AACS – Sum Years 1-4 APC – RRT)

#### EFFECT ON RATES

As a result of the Commission's Order dated \_\_\_\_\_ in Docket No. E-7, Sub 831, EEA adjustments included in the current rate schedules effective for service on and after (date). The effect of the Commission's Order, including revenue-related taxes and regulatory fee, is an increment of 0.1206 cents/kWh for residential rate schedules and 0.0428 cents/kWh for non-residential rate schedules.

#### OPT OUT PROVISION FOR QUALIFYING NONRESIDENTIAL CUSTOMERS

The EEA increment applicable to Energy Efficiency Programs and/or Demand-Side Management Programs will not be applied to the energy charge of the applicable rate schedule for Customers qualified to opt out of the programs where:

- a. The Customer certifies or attests to the Company that it has, or has plans for implementing alternative energy efficiency measures in accordance with quantifiable goals.
- b. Electric service to the Customer must be provided under:
  1. An electric service agreement where the establishment is classified as a "manufacturing industry" by the Standard Industrial Classification Manual published by the United States Government, and where more than 50% of the electric energy consumption of such establishment is used for its manufacturing processes.
  2. An electric service agreement for general service as provided for under the Company's rate schedules where the Customer's annual energy use is 1,000,000 kilowatt hours or more.

The following additional provisions apply for qualifying customers who elect to opt out:

- Qualifying customers may opt out of the Company's energy efficiency programs.
- The Customer may not opt of the Company's individual energy efficiency programs. The choice to opt out applies to the Company's entire portfolio of energy efficiency programs.
- If a customer elects to participate in an energy efficiency program, the customer may not subsequently choose to opt out of the program for a period of five (5) years or the life of the applicable measure, whichever is longer.

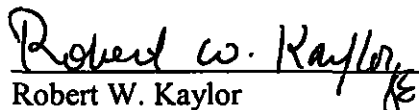
#### USE OF RIDER

Because Rider EE (NC) charges are already included in the Rates of the Company's current rate schedules, which are effective for service on and after (date), this Rider should not be used in addition to such rate schedules for bill calculations.

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's Settlement Testimony of J. Danny Wiles, Theodore E. Schultz and Stephen M. Farmer in Docket No. E-7, Sub 831 has been served by electronic mail (e-mail), hand delivery or by depositing a copy in the United States Mail, first class postage prepaid, properly addressed to parties of record.

This the 19<sup>th</sup> day of June, 2009.



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