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July 27, 2009

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Clerk's Office
N.C. Utilities Commission

Ms. Renne Vance, Chief Clerk
North Carolina Utilities Commission
430 North Salisbury Street
Dobbs Building
Raleigh, NC 27603-5918

VIA HAND DELIVERY

Re: Application of Duke Energy Carolinas, LLC for Approval of
Save-a-Watt Approach, Energy Efficiency Rider and Portfolio
Of Energy Efficiency Programs
Docket No. E-7, Sub 831

Dear Ms. Vance:

Enclosed please find an original and thirty (30) copies of the Supplemental Testimony of Roger D. Colton, for filing on behalf of the North Carolina Justice Center, AARP, North Carolina Council of Churches and Legal Aid of North Carolina (the Public Interest Intervenors).

If you have any questions regarding this matter, please feel free to let me know.

Sincerely,

Jack Holtzman
Staff Attorney

Xc: (w/encl.) Parties of Record

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**State of North Carolina
Before the North Carolina Utilities Commission**

FILED

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Clerk's Office
N.C. Utilities Commission

**In Re)
Application of Duke Energy Carolinas, LLC)
For Approval of Save-a-Watt Approach,)
Energy Efficiency Rider and Portfolio of)
Energy Efficiency Programs)**

Docket No. E-7, Sub. 831

**Supplemental Testimony
of
Roger D. Colton
In Opposition to Proposed Settlement**

**On Behalf of:
North Carolina Justice Center,
AARP, NC Council of Churches
and Legal Aid of NC**

Raleigh, North Carolina

July 27, 2009

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

2 A. My name is Roger Colton. My address is Fisher, Sheehan & Colton, Public Finance and
3 General Economics, 34 Warwick Road, Belmont, Massachusetts, 02478.

4
5 **Q. ARE YOU THE SAME ROGER COLTON WHO HAS PREVIOUSLY FILED**
6 **DIRECT AND REBUTTAL TESTIMONY IN THIS PROCEEDING?**

7 A. Yes.

8
9 **Q. PLEASE EXPLAIN THE PURPOSE OF YOUR TESTIMONY.**

10 A. In my Supplemental Testimony, I outline the reasons why the proposed Settlement
11 offered in this proceeding should not be approved and adopted by the North Carolina
12 Utilities Commission (Commission) specifically as to the impact of the settlement on
13 low-income customers and low and fixed-income senior customers. Absent
14 modifications, the Settlement proposal should be rejected. The North Carolina Justice
15 Center, AARP, NC Council of Churches and Legal Aid of North Carolina continue to
16 oppose the "Save-A-Watt" design, even as modified in the settlement, and recommend
17 that an independent third party administrator is a better approach to ensuring that all cost-
18 effective usage reduction occurs on the Duke Energy system in North Carolina.

19
20 **Q. PLEASE EXPLAIN THE ASPECTS OF THE SETTLEMENT THAT**
21 **SPECIFICALLY IMPLICATE THE INTERESTS OF CUSTOMERS WHO ARE**
22 **LOW-INCOME AND LOW AND FIXED-INCOME SENIORS.**

1 A. The Settling Parties purport to address issues involving low-income and low and fixed-
2 income seniors customers in three separate sections of the Agreement and Joint
3 Stipulation of Settlement (Settlement Document). Through the Settlement Document,
4 Duke Energy (Company) proposes:

- 5 ➤ To make available its residential programs “without regard to whether (program
6 participants) own or rent their home”;
- 7 ➤ To “continue to pursue partnerships with third party agencies to help implement
8 programs, including partnerships offering assistance to low-income households”; and
- 9 ➤ To “convene the Advisory Group to guide efforts to expand cost-effective programs
10 for low-income customers.”

11 Certainly, the elimination of the requirement that program recipients be homeowners is a
12 positive modification of the Company’s original low-income program. The remaining
13 two steps, however, are inadequate to address the concerns of the low-income and low
14 and fixed-income seniors.

15
16 **Program Design**

17 **Q. PLEASE EXPLAIN WHAT THE SETTLEMENT PROPOSAL OFFERS IN**
18 **TERMS OF ENERGY SAVINGS.**

19 A. A review of the Settlement Document from the perspective of low-income and low and
20 fixed-income senior customers should begin with the recognition that the Settlement
21 provides for a substantial overall increase in energy efficiency. The Settlement Document
22 (attached as Exhibit No. 1 to the Supplemental Testimony of Theodore Shultz) provides
23 that “Duke Energy Carolinas has increased the amount of energy efficiency avoided cost

1 savings it will target to achieve for customers.” (Settlement Document, at 4). The
2 Settlement Document provides that “the overall energy savings percentage for each
3 settlement year during the 4 year term is cumulative; which results in the energy savings
4 percentage for the fourth year of the settlement being equal to. . .1.9% of retail sales
5 forecast for Year 4.” (Settlement Document, at 19).

6
7 This Settlement proposal is a substantial increase over that which was originally
8 proposed. According to witness John Wilson, testifying on behalf of the environmental
9 groups, “the Company’s target incremental reduction in annual energy use by year 4
10 under the Agreement is equal to 0.75% of its forecast sales for that year – this is 250% of
11 the year 4 target in its original proposal.” (Wilson Settlement Testimony, at 4).
12 (emphasis added).

13
14 **Q. IN WHAT WAY DOES THIS INCREASE IN EFFICIENCY INVESTMENT GIVE**
15 **RISE TO CONCERN FROM A LOW-INCOME AND LOW AND FIXED-**
16 **INCOME SENIORS PERSPECTIVE?**

17 **A.** Despite the proposed 250% increase in energy savings, the commitments that the
18 Settlement Document provides to low-income and low and fixed-income senior
19 customers are relatively meaningless. For example, the Settlement Document provides
20 that “the Company will continue to pursue partnerships with third party agencies to help
21 implement programs, including partnerships offering assistance to low-income
22 households.” The primary existing partnership through which Duke currently offers
23 “assistance to low-income households,” however, is through the Company’s “energy

1 efficiency starter kits.” The starter kit provides low-cost efficiency measures such as
2 compact fluorescent light bulbs. According to the Company’s prior testimony, the value
3 of the kit is “not to exceed \$30.00 in value. . .”
4

5 The use of these low-cost kits as an efficiency program to be “continued” (in the words of
6 the Settlement Document) for low-income and low and fixed-income senior customers
7 has been found ineffective in a variety of circumstances.
8

9 Indeed, the kits are ineffective at providing energy savings even under the Company’s
10 own analysis. Duke’s own discussion of its starter kits program shows the extremely
11 limited energy use savings to low-income and low and fixed-income senior customers
12 resulting from such starter kits. Duke witness Richard A. Morgan stated that the
13 Company has already installed 32,554 starter kits through Duke Carolinas. As a result of
14 those 32,554 starter kits, Duke Carolinas has generated “total annual savings” in
15 electricity of 422,936 kWh and 12,413 therms of natural gas. Therefore Duke’s “starter
16 kits” have generated an “annual savings” per each starter kit of 13 kWh ($422,936 / 32,554$
17 $= 12.992$), and 0.4 therms ($12,413 / 32,554 = 0.38$). Morgan reported that these are the
18 “total savings for all measures” in the kits. The average savings per each starter kit are
19 clearly negligible. In effect, they offer low-income and low and fixed-income senior
20 customers virtually no usage reduction assistance at all.
21

22 Accordingly, for the Company to assert that it will “continue” its existing low-income
23 partnerships, despite increasing the overall usage reduction projections by 250%, is of

1 substantial concern. Duke Energy does not currently offer meaningful partnerships for
2 low-income and low and fixed-income senior customers in North Carolina.

3
4 **Q. PLEASE RESPOND TO DUKE'S ASSERTIONS THAT IT HAS**
5 **SUCCESSFULLY PURSUED LOW-INCOME PROGRAMS IN OTHER**
6 **JURISDICTIONS.**

7 **A.** Duke has argued in this proceeding that it has successful low-income usage reduction
8 programs in other jurisdictions in which Duke affiliates operate. The operative phrase in
9 that argument, however, involve the words "in other jurisdictions." Duke has made no
10 proposal to import these successful programs to North Carolina. In the proposed
11 Settlement, Duke has made no commitment to a reasonable portfolio of low-income
12 usage reduction programs in North Carolina, despite agreeing to increase its overall
13 savings by more than 250%.

14
15 **Q. PLEASE EXPLAIN THE BASIS FOR THIS CONCLUSION.**

16 **A.** Although Duke provided testimony regarding model low-income energy efficiency
17 programs Duke has implemented elsewhere, the Company never acknowledges that Duke
18 has not proposed similar programs *in North Carolina*. Instead, Duke has testified to this
19 Commission about the programs the Company has developed in coordination with
20 Weatherization in the Midwest. For example, Duke has provided information about:

- 21 ○ The two-tier *Indiana* Duke low-income program;
- 22 ○ The *Ohio* Electric Partnership program;

1 Duke has told this Commission that the Company's proposed low-income program in
2 North Carolina is "modeled" after its low-income program in Indiana. The Company's
3 actual program design, however, does not comport with these assertions. Unlike Duke's
4 low-income program in Indiana, for example, which includes the large segment of low-
5 income customers below 150% of the Federal Poverty Level, Duke has chosen to exclude
6 that same segment of its low-income and low and fixed-income senior customers here in
7 North Carolina.

8
9 **Q. DOES NOT THE SUCCESS OF THESE DUKE PROGRAMS IN OTHER**
10 **STATES MAKE IT LIKELY THAT THE PROGRAMS WILL BE**
11 **IMPLEMENTED IN NORTH CAROLINA AS WELL?**

12 A. No. Despite the glowing reports that Duke provides of how well its low-income programs
13 are working in Ohio and Indiana, Duke's current proposed SAW program does not
14 include any commitment to pursue those programs in North Carolina. Indeed, Duke's
15 witness regarding low-income programs was more than somewhat equivocal in
16 expressing what commitments Duke was willing to make in North Carolina. Duke
17 witness Morgan stated that "If this level of services proves to be cost-effective, the
18 Company could seek to increase the program availability." (Morgan Rebuttal, at 12).
19 (emphasis added).

20
21 As can be seen, Duke does not acknowledge that its successful programs are transferable
22 to North Carolina ("if this level of services proves to be cost-effective"). Moreover,
23 Duke's own witness stated that even if those programs were found to be cost-effective in

1 North Carolina, the Company does not commit to offering them in North Carolina. The
2 only commitment that the Company made is it “could” seek to increase the program
3 availability.

4
5 Particularly in light of the Company’s commitment to increase its energy reductions by
6 “more than 250%” (as testified to by Mr. Wilson), this lack of commitment to programs
7 directed toward the low-income and low and fixed-income seniors is unreasonable at
8 best.

9
10 **Q. WHY IS THE LACK OF A COMMITMENT TO MEANINGFUL PROGRAMS**
11 **FOR THE LOW-INCOME AND LOW AND FIXED-INCOME SENIORS,**
12 **DESPITE A PROPOSED 250% INCREASE IN USAGE REDUCTION, OF**
13 **PARTICULAR CONCERN?**

14 **A.** As previously described in this proceeding, under the Save-a-Watt approach, the
15 Company would choose to exclude low-income customers in favor of efficiency
16 programs provided to customers generating higher returns. Consider, for example, that
17 Duke previously objected to additional low-income programs by saying that “Mr. Colton
18 is advocating for a major increase in spending for low-income customer programs that
19 are not cost effective or not as cost effective as the Company’s other current program
20 designs.”

21
22 In fact, we know that the objections that these programs are not cost-effective at all are
23 not well-grounded. Indeed, Duke spent a good part of its rebuttal testimony praising the

1 efficacy of the low-income programs that have been adopted by the Company in other
2 states (e.g., baseload programs, refrigerator replacements, home repair piggyback).

3
4 As can be seen, the real problem that Duke has with these low-income programs in North
5 Carolina is with the second part of the observation above, that they are not as cost-
6 effective. Given the incentive structure created by Save a Watt, the Company is
7 inherently incentivized to implement those programs that are the most cost-effective, and
8 systematically exclude other programs (such as programs for the low-income and low and
9 fixed-income seniors). The Duke Save a Watt program allows the Company greater
10 benefits for those programs where the spread between the avoided costs and the program
11 costs are the greatest (i.e., where the cost-effectiveness is the highest).

12
13 Indeed, Mr. Wilson, testifying on behalf of the environmental intervenors, acknowledges
14 the conflict. Mr. Wilson states that the Settlement “includes provisions for greater
15 flexibility to allow the utility to rapidly implement higher performing programs.”
16 (Wilson, at 13). I acknowledge that:

- 17 ➤ low-income programs are not likely to save the most energy (low-income
18 customers tend to be small users offering smaller savings potential);
- 19 ➤ low-income programs will tend to have lower cost-benefit ratios (coupled with
20 smaller savings are higher per-unit costs), even while having positive cost-
21 benefit ratios overall.

22 As a result, low-income programs will not be the highest performing (or most cost-
23 effective) programs. That does not mean, however, that low-income programs are not

1 cost-effective. As the Company acknowledges, it has implemented cost-effective low-
2 income programs in a variety of states outside North Carolina. The pursuit of these
3 programs for low-income and low and fixed-income senior customers, however, is not
4 sufficiently contemplated by the Save-a-Watt program, even as set forth in the Settlement
5 Document.

6
7 **Q. DOES NOT THE SETTLEMENT DOCUMENT PROPOSE TO DEVELOP A**
8 **PORTFOLIO OF LOW-INCOME PROGRAMS TO OFFER TO THE**
9 **COMMISSION?**

10 A. No. The Settlement Document does not do that. The Settlement Document says that
11 Duke will “convene the Advisory Group. . .to guide efforts to expand cost-effective
12 programs for low-income customers.” This discussion, however, occurs only after the
13 Commission approves the Company’s efficiency plan for the year. By design, therefore,
14 this work will not influence what the Company offers in the near-term. The Company
15 does not commit to expanding its low-income programs.

16
17 Moreover, there is no time frame placed on the work of the Advisory Group regarding
18 low-income programs. For example, the Advisory Group only meets twice a year. While
19 the Advisory Group may “establish working groups on specific topics,” no specific
20 commitment to establish a low-income working group is made, let alone a work group
21 with a specific workplan and a specific timeframe within which to complete that
22 workplan.

1 **Q. IN LIGHT OF THE SETTLEMENT, PLEASE SUMMARIZE WHAT**
2 **MODIFICATIONS SHOULD BE MADE TO ACCOUNT FOR THE INTERESTS**
3 **OF LOW-INCOME AND ELDERLY CUSTOMERS.**

4 **A. In addition to offering weatherization services to customers at or below 150% of the**
5 **Federal Poverty Level, Duke Energy should commit to implementing a baseload electric**
6 **usage reduction program modeled on the “exemplary” low-income programs presented in**
7 **the catalogue of such programs developed by the American Council for an Energy**
8 **Efficient Economy (ACEEE) previously discussed in this proceeding. In addition, Duke**
9 **Energy should commit to importing its own successful low-income programs from**
10 **Indiana and Ohio to North Carolina beginning in the first year.**

11
12 The scope and funding for the program components identified above should be made
13 subject to the deliberations of the Advisory Group identified in the Settlement Document.

14 A plan to deliver efficiency services, including baseload electric efficiency services, to
15 low-income and low and fixed-income senior customers should be delivered to the
16 Commission for approval within 60-days after a final order in this proceeding. The
17 Advisory Group should be directed to respond to the question: what level of programs
18 should be offered to low-income and low and fixed-income senior customers. The
19 Settlement Document should be modified, however, to make clear that the question of
20 *whether* such programs should be offered to low-income and low and fixed-income
21 senior customers has been decided.

22
23 The plan to be developed by the Advisory Committee should include:

- a specific dollar commitment to low-income programs, including either a specific commitment to the number of low-income units to be served, or a specific proportion of total residential budget to be devoted to low-income customers;
- a commitment to pursue electric baseload programs, including refrigerator replacements;
- a commitment to deliver energy efficiency services to households with income below 150% of the Federal Poverty Level;
- a commitment to a program directed specifically toward rental properties, including investments directed toward property owners participating in the Section 8 housing program; and
- a specific workplan through which housing units treated not only through the Department of Energy's Weatherization Assistance Program (WAP), but housing units constructed or rehabbed through public programs such as HOME and the Low-Income Housing Tax Credit (LIHTC), will be reached.

Cost Recovery

Q. DO YOU OFFER ANY POSITION ON THE COST RECOVERY MECHANISM INCLUDED IN THE SETTLEMENT DOCUMENT?

A. No. My testimony is limited to the specific cost recovery issues I identify below.

Q. PLEASE EXPLAIN YOUR COST RECOVERY CONCERNS.

1 A. Duke Power should be required to reflect all avoided costs in its financial analysis. In its
2 financial analysis, the Commission should direct that utility-related Non-Energy Benefits
3 (NEBs) generated by low-income efficiency investments be quantified on an annual
4 basis.

5
6 **Q. DO THESE AVOIDED COSTS INVOLVE REFLECTING SOCIAL COST**
7 **REDUCTIONS IN THE DUKE AVOIDED COST SAVINGS?**

8 A. What I propose does not involve any calculation of “social” cost savings. The avoided costs
9 that Public Interest Intervenors have identified are not “social costs” that are outside the
10 realm of the utility ratemaking process. Rather, this analysis is limited to the specific cost
11 components that would otherwise be reflected in Duke Power’s revenue requirement
12 collected from ratepayers.

13
14 Recent authoritative assessments have been made of the utility-related non-energy benefits
15 arising from the implementation of energy efficiency improvements in low-income housing
16 units. An assessment of non-energy benefits by Oak Ridge National Laboratory¹ found
17 utility benefit as follows classified as “ratepayer benefits” in 2001 dollars:

- 18 ➤ Lower bad debt write-off: \$89
- 19 ➤ Reduced carrying costs on arrearages: \$57
- 20 ➤ Fewer notices and customer calls: \$6
- 21 ➤ Fewer shutoffs and reconnections for delinquencies: \$8
- 22 ➤ Insurance savings: \$1

¹ Martin Schweitzer and Bruce Tonn (April 2002). Non-energy Benefits From the Weatherization Assistance Program: A Summary of Findings from the Recent Literature, Oak Ridge National Laboratory: Oak Ridge (TN).

1 ➤ Transmission and distribution loss reduction: \$48

2
3 As can be seen, the total cost reductions accruing to Duke Power would thus be \$209 per
4 treated customer in 2001 dollars. Bringing these avoided costs forward to 2009 dollars
5 places the value at \$255 (using the U.S. Department of Labor's Inflation Calculator). The
6 dollar value of the non-energy avoided costs would need to be adjusted on an annual
7 basis for inflation.

8
9 **Q. WHY SHOULD THESE NON-ENERGY UTILITY AVOIDED COSTS BE**
10 **REFLECTED IN THE SAVE A WATT COST RECOVERY?**

11 **A.** On the revenue side, Duke Energy's proposed Rider would allow the Company to recover
12 the revenue that the Company loses as a result of the usage reduction resulting from low-
13 income efficiency programs by charging these lost revenues to all other customers. With
14 respect to the low-income weatherization program, to allow the Company to collect this
15 entire lost margin is inappropriate, since on the expense side, the Company has proposed
16 no corresponding mechanism to reflect the decreased costs resulting from the efficiency
17 investments. As a result, these dollars of non-energy avoided costs, in the absence of their
18 identification and capture, would simply flow through as increased earnings to Duke's
19 shareholders. If Duke shareholders are to be held harmless against a decrease in revenue,
20 they should not also be allowed to benefit from the decrease in expenses. These decreases
21 in expenses should not be pocketed by Duke shareholders as increased profits.

1 This process of capturing the non-energy avoided costs will have no negative
2 consequences under the terms of the Duke Save-A-Watt program. Low-income and
3 elderly customers can not expect to see rates lower than they would have seen without the
4 efficiency investments. However, if the Commission allows the Company to capture
5 some percentage of its energy avoided costs, it stands to follow that the non-energy
6 avoided costs should be treated the same way. Simply because one set of avoided costs is
7 energy-related, while the other set of avoided costs is non-energy-related does not change
8 the fact that both represent real sets of avoided costs.

9
10 **Q. PLEASE SUMMARIZE YOUR TESTIMONY REGARDING NON-ENERGY**
11 **UTILITY AVOIDED COSTS.**

12 A. The avoided costs identified here are not social benefits. They are concrete, quantifiable,
13 expense reductions that, in the absence of the recommended ratemaking treatment, would
14 flow through to investors as additional, unwarranted, increases in equity returns. The
15 offsets calculated as described above should be provided as a supplement to the
16 Weatherization Assistance Program (WAP) to fund additional weatherization activities in
17 low-income housing units.

18
19 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

20 A Yes, it does.