SOUTHERN ENVIRONMENTAL LAW CENTER

Telephone 919-967-1450 | 601 WEST ROSEMARY STREET, SUITE 220 CHAPEL HILL, NC 27516-2356 | Facsimile 919-929-9421

June 8, 2011

VIA HAND DELIVERY

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

RE: Application of Duke Energy Carolinas, LLC For Approval of DSM and Energy Efficiency Cost Recovery Rider Pursuant to G.S. 62-133.9 and Commission Rule R8-69
Docket No. E-7, Sub 979

Dear Ms. Vance:

Enclosed for filing in the above-referenced docket are an original and thirty (30) copies of the Testimony and accompanying exhibit of John D. Wilson on behalf of Southern Alliance for Clean Energy. By copy of this letter and enclosures, I am serving all parties of record on the service list.

Sincerely,

Robin Dunn

Robin Dunn

RGD
Enclosures
cc: Parties of Record

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
DOCKET NO. E-7, SUB 979

In the Matter of Application of Duke Energy Carolinas, LLC For Approval of DSM and Energy Efficiency Cost Recovery Rider Pursuant to G.S. 62-133.9 and Commission Rule R8-69	)	**TESTIMONY OF JOHN D. WILSON ON BEHALF OF SOUTHERN ALLIANCE FOR CLEAN ENERGY**

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

A. My name is John D. Wilson. I am the Director of Research for Southern Alliance for Clean Energy ("SACE"), and my business address is 1810 16th Street, NW, 3rd Floor, Washington, DC 20009.

Q. PLEASE STATE BRIEFLY YOUR EDUCATION, BACKGROUND AND EXPERIENCE.

A. I graduated from Rice University in 1990 with a Bachelor of Arts in physics and history. I received a Masters in Public Policy from the John F. Kennedy School of Government at Harvard University in 1992, with an emphasis in energy and environmental policy and economic and analytic methods. Since 1992, I have worked in the private and public sectors on a wide range of public policy issues, usually related to energy, environmental and planning topics.

I became the Director of Research for SACE in 2007. Among my responsibilities as Director of Research, I lead SACE's energy efficiency program advocacy. I have participated in the North Carolina Climate Action Plan Advisory Group, and have served as a member of various technical working groups that address energy supply and efficiency issues, including Duke Energy Carolinas, LLC's ("Duke") Carolinas Energy Efficiency Collaborative ("Collaborative"), which is the regional energy efficiency advisory group established pursuant to the Duke save-a-watt settlement.

I have testified before this Commission and the South Carolina Public Service Commission in the Duke save-a-watt proceedings, docket nos. E-7, Sub. 831 and 2007-358-E, respectively. I have also appeared before this Commission and the public service commissions of South Carolina, Georgia and Florida to testify or present on a variety of

energy issues. I have also presented to the Board of the Tennessee Valley Authority and participated in technical activities related to its recently-approved integrated resource plan.

A copy of my resume is attached as Wilson Exhibit 1.

Q. ON WHOSE BEHALF ARE YOU TESTIFYING IN THIS CASE?

A. I am testifying on behalf of SACE.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to describe my evaluation of Duke's proposed Rider EE for Vintage 3. I will discuss my analysis of Duke's performance in delivering energy-efficiency resources to its customers since the Commission approved the modified save-a-watt programs and compensation mechanism, and Duke's evaluation, measurement and verification ("EM&V") efforts to date. I also provide recommendations concerning the EM&V process more generally as it relates to energy efficiency rider cost recovery proceedings like this one.

Q. WHAT IS DUKE REQUESTING THAT THE COMMISSION APPROVE IN THIS PROCEEDING?

A. Duke is requesting that the Commission approve its Rider EE, which recovers costs associated with its demand-side management ("DSM") and energy efficiency ("EE") programs, for Vintage 3. The rider incorporates the third vintage of Duke's DSM and EE programs and includes a participation true-up for Vintage 1 programs.

Q. **DO YOU AGREE WITH THE SCOPE OF THE PARTICIPATION TRUE-UP FOR VINTAGE 1?**

A. Yes, I generally agree with Duke witness McManeus's interpretation of the scope of the true-up as set forth in the Agreement of Joint Stipulation and Settlement, In re: Application of Duke For Approval of Save-a-Watt Approach, Energy Efficiency Rider and Portfolio of Energy Efficiency Programs, Docket No. E-7, Sub 831 (June 12, 2009) ("Settlement Agreement"), which was approved by the Commission subject to certain modifications on February 9, 2010. See Dir. Testimony of McManeus at 17-19.

The Settlement Agreement calls for the use of as-filed avoided cost rates from Docket No. E-7, Sub 106 and updated (actual) participation and actual 2010 lost revenue rates to calculate lost revenues. While I agree that Duke is required to update for actual participation, I have not fully reviewed its actual participation data so I cannot testify as to the accuracy of this true-up. Duke applied the Commission-approved guidelines to identify found revenues. SACE has not closely examined this issue, and I do not have an opinion as to the accuracy of Duke's interpretation of the guidelines.

Duke is correctly implementing the Settlement Agreement, as approved by the Commission, by using the "deemed savings," or Duke's initial estimate of load impacts, in combination with its participation true-up in order to calculate total savings for its programs. As noted later in my testimony, two initial EM&V study results generally validate the original deemed savings estimates. This is unsurprising given that the "deemed savings" estimates were based on industry experience.

Duke correctly updated its revenue requirement for Vintage 1 to include new programs and pilots approved and implemented since the estimated filing. In addition to recognizing the revenue requirement associated with these major modifications, Duke

also made minor modifications to its programs, such as altering distribution channels and adding 33 measures to its Non-Residential Smart $aver® Program. Dir. Testimony of Duff at 7. Assuming that these measures are cost-effective, any costs associated with these measures are properly included in the true-up, consistent with the terms of the Settlement Agreement.[1]

Q. IS THE DUKE VINTAGE 1 EMF (TRUE-UP RIDER) REASONABLE?

A. Yes, I generally support Duke's request to modify its Vintage 1 revenue requirement to approximately $74.3 million, as reflected in Table 1 below. This revenue requirement includes $42.7 million in actual revenues collected through Rider 1 and $31.6 million in the proposed EMF components of Rider 3, and is subject to a final true-up at the conclusion of the four-year save-a-watt pilot period.

Table 1: Proposed Vintage 1 Revenue Requirement

	Source (McManeus Exhibit 3, Column 3)	$ millions
Actual Residential Revenue Collected	Residential Line 10	30.5
Actual Non-Residential Revenue Collected	Non-Residential Lines 10 + 11	12.2
Total Revenue Collected		42.7
Residential EMF	Residential Line 11	20.8
Non-Residential EMF	Non-Residential Lines 12 + 13	10.8
Total EMF		31.6
Total Vintage 1 Revenue Requirement		**74.3**

The final true-up process will include a determination as to whether the actual after-tax rate of return on actual program costs exceeds the earnings cap established in the Settlement Agreement. An estimate of earnings can be made by deducting actual net lost

[1]The Settlement Agreement provides that "[t]o 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." Settlement Agreement at 25.

revenues and program costs associated with Rider 1 from the total proposed revenue requirement of $74.3 million, as Tables 2 - 4 demonstrate.

Table 2: Actual Net Lost Revenues ($ millions)[2]

Residential	7.4
Non-Residential	-
Total	**7.4**

Table 3: Actual Program Costs ($ millions)[3]

Residential 2009	5.8
Residential 2010	28.0
Non-Residential 2009	3.0
Non-Residential 2010	13.8
Total	**50.6**

Table 4: Estimated Pre-Cap Earnings ($ millions)

Proposed Revenue Requirement	74.3
Actual Net Lost Revenues	-7.4
Actual Program Costs	-50.6
Estimated Pre-Cap Earnings	**16.3**

Assuming a 37.1% tax rate and the maximum earnings cap of 15% of actual program costs, Duke could be limited to $12.1 million in earnings on its Vintage 1 performance. Accordingly, Duke may exceed the earnings cap by about $4.2 million ($16.3 – $12.1), and therefore may ultimately be entitled to approximately $70.1 million in revenues for Vintage 1 (plus additional lost revenues collected as part of Rider 2) rather than the requested $74.3 million.

However, my revenue calculation is a rough estimate that may not represent a complete calculation. For example, it does not take into account the present value calculation referenced in the Settlement Agreement. Settlement Agreement, Exhibit B

[2] Figures are from the direct testimony of McManeus, Exhibit 3.
[3] Figures are from the direct testimony of Duff, Exhibit 3.

at 22. Also, as Duke witness McManeus stated in her testimony, the earnings calculation is intended to be performed on the entire program rather individual vintage results. Dir. Testimony of McManeus at 7. For these reasons, even though I currently estimate that the Duke's pre-cap earnings ($74.3 million) will exceed the earnings cap established by the Settlement Agreement ($70.1 million) by about $4.2 million, the final true-up process at the conclusion of save-a-watt's four-year pilot period may show that Duke stayed within the earnings cap.

In light of the uncertainty in the final results, and notwithstanding my estimate of $4.2 million in excess earnings, I believe that Duke's request for a modified Vintage 1 revenue requirement of $74.3 million is reasonable.

Q. IS DUKE'S PROSPECTIVE VINTAGE 3 REVENUE REQUIREMENT REASONABLE?

A. Yes, the revenue requirement is reasonable and is consistent with the Settlement Agreement. The prospective revenue requirement appears to be calculated in the same manner as the prospective Vintage 2 revenue requirement was calculated in Docket No. E-7 Sub 941, which was approved by the Commission on August 3, 2010. Based on my review of Duke's application and testimony, the calculations appear consistent with my understanding of the Settlement Agreement. Although I did not review every calculation in Duke's application, I verified that the amount of revenue requested is consistent with the achievement of the targeted savings described in the Settlement Agreement.

The Settlement Agreement anticipated that estimated revenues associated with 85% achievement of the avoided cost target would be approximately $61.5 million in

Vintage 3, plus an amount associated with actual and forecast net lost revenues. Settlement Agreement, Exhibit B at 23.

Q. WHY DOES THE PROPOSED REVENUE REQUIREMENT DIFFER FROM THE AMOUNT ANTICIPATED IN THE SETTLEMENT?

A. The proposed revenue requirement differs from the amount anticipated in the Settlement Agreement for several reasons, the most significant of which, in my opinion, is the opt-out adjustment.

The total revenue requirement associated with achievement of the avoided cost target is about $43 million. As illustrated in Table 5 below, the revenue requirement would be about $57.4 million when adjusted to remove the effect of opt-outs. This is reasonably close to the $61.5 million estimate in the Settlement Agreement given that the revenue requirement reflects a number of other updates and adjustments that seem to be appropriate under the Settlement Agreement and other recent orders.

Table 5: Effect of Opt-outs on the Total Revenue Requirement for Vintage 3

All costs in $ millions	Source	Avoided Cost Revenue Requirement, Reflecting Opt-out	Avoided Cost Revenue Requirement, Adjusted to Remove Effect of Opt-Outs
Residential	McManeus Exhibit 1, Line 5	19.5	19.5
Non-Residential	McManeus Exhibit 1, Line 5	23.5	
Opt-Out Rate (as % of load)	Duff Testimony, p. 15, Line 16		38%
Adjusted Non-Residential	= 23.5 / (1-38%)		37.9
Total		**43.0**	**57.4**

Q. DO YOU HAVE ANY OTHER OBSERVATIONS ABOUT DUKE'S REQUESTED PROSPECTIVE VINTAGE 3 REVENUE REQUIREMENT?

A. Yes. Although I believe the revenue requirement is reasonable and consistent with the Settlement Agreement, it may be substantially underestimated. It appears likely that when Duke files for a true-up, it will require a significant EMF revenue requirement.

Duke appears to be very cautious about over-collecting in its riders. The Vintage 1 EMF represents 42% of the total Vintage 1 revenue requirement Duke proposed, meaning that customers paid slightly more than half of what they might have during 2009 and 2010 for Vintage 1 energy efficiency program impacts. Under-collection comes with no carrying charge to customers.[4]

Furthermore, Duke's program plan for Vintage 3 appears to fall short of its savings targets, as outlined in the Settlement Agreement. The incremental energy savings anticipated in the Settlement Agreement for Vintage 3 are about 382 GWh (873 GWh – 491 GWh). Settlement Agreement, Exhibit B at 20.[5] However, Duke's Vintage 3 estimated system impacts are only about 195 GWh, with estimated program costs of about $57 million. Duke's Vintage 3 avoided cost revenue requirement of $43 million is approximately equal to a 72% North Carolina allocation of program costs.

Although the avoided cost savings target, and associated energy and capacity savings targets, are provided in the Settlement Agreement on a cumulative basis, it is notable that the Vintage 3 energy savings are only about half of the amount anticipated in

[4] However, if the final true-up reveals excess earnings, Duke must issue a refund to customers with interest. Settlement Agreement, Exhibit B at 22.

[5] The incremental capacity savings anticipated in the Settlement Agreement for Vintage 3 are about 188 MW (736 MW – 548 MW). Settlement Agreement, Exhibit B at 20. However, this number cannot be directly compared to the incremental capacity savings estimate for Vintage 3 because an unknown amount of the capacity savings attributable to the DSM programs are continued savings from prior vintages. Similarly, calculation of the cumulative capacity savings attributable to all three vintage years requires updated estimates for Vintage 2, which are not available in this docket.

the Settlement Agreement. As discussed later in my testimony, Duke is delivering energy-efficiency resources to its customers at a very attractive (i.e. low) cost. In order to achieve the system energy savings target outlined in the Settlement Agreement, Duke will need to spend about twice as much as it currently anticipates on this cost-effective resource and continue with good program implementation and delivery.

Duke can achieve this goal if participation is higher than anticipated, if additional measures are offered which boost participant savings, and/or if Duke is authorized to offer additional programs. SACE has encouraged Duke to offer additional and expanded programs through its participation in the Collaborative. I encourage the Commission to undertake prompt review of any applications for new programs that Duke may submit so that Duke's customers can realize the benefits of the programs.

Q. IS THE VINTAGE 3 REVENUE REQUIREMENT BASED ON VERIFIED SAVINGS DATA?

A. Partially. Duke estimates savings for most measures in the Vintage 3 revenue requirement by using "deemed savings" and its forecast participation true-up as inputs to determine the total avoided cost savings for its programs. The "deemed savings" and forecast participation inputs are also used in the calculation of the lost revenue portion of the revenue requirement. Duke's testimony is somewhat confusing with respect to the extent to which it has incorporated the residential CFL and non-residential lighting-related EM&V results into the prospective Vintage 3 component of Rider 3. Witness McManeus suggests this was done only for the CFL measure, Dir. Testimony of McManeus at16, but witness Duff suggests that the results for non-residential lighting are or will soon be incorporated, Dir. Testimony of Duff at 14. Because Duke forecasts

about half of the savings in Vintage 3 from these lighting measures, it appears that approximately half of the Vintage 3 revenue requirement will be based on verified savings data from Vintage 1 program experience.

Q. PLEASE DESCRIBE THE ROLE EM&V PLAYS IN EE RIDER DOCKETS?

A. EM&V plays a critical role in determining the achievements of energy efficiency (and DSM) programs and the riders that fund these programs. This Commission has noted "[t]he results of M&V activities are an important consideration in the context of ... the utilities EE/DSM rider [and] M&V reports will help the Commission decide: (1) how much incentive/reward the utility can collect from its customers through the DSM/EE rider." Order Requesting Comments on Measurement and Verification of Reduced Energy Consumption, Rulemaking Proceeding to Implement Session Law 2007-397, NCUC E-100 Sub 113, ("Order Requesting M&V Comments") at 3 (August 24, 2010).

Q. IS DUKE COMPLETING EM&V IN A MANNER THAT IS CONSISTENT WITH REQUIREMENTS AND IN A TIMELY MANNER?

A. The Settlement Agreement does not provide a deadline by which all EM&V study estimates shall be completed. It provides that "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." Settlement Agreement, Exhibit B at 25.

However, the EM&V studies do appear to be delayed, in some cases without explanation, as Table 6 illustrates. Duke should complete the EM&V studies in a more timely manner and keep the Collaborative informed of the status of the EM&V studies. Duke provided a report to the Collaborative on August 31, 2010 that outlined its schedule

for completing EM&V studies, but since that time, Duke has not included any update on EM&V studies on the Collaborative agenda. Other than material filed in Duke's application, I am not aware of any EM&V study results, though the original EM&V schedule provided for substantial updates to "deemed savings" values with verified savings values for the Vintage 3 rider.

Table 6: Timeline for EM&V Study Results

EM&V Study	Report Completion Date		Notes
	Original Estimate[6]	**Complete /** *Revised Est.*[7]	
Smart Saver CFLs	12/20/10	**2/15/2011**	Filed as Ossege Exhibit A.
Residential Smart Saver	2/21/11	*4/15/2011 or Q2/Q3 2011*	Delayed due to technical and evaluation issues. Unaware if this has been completed on the revised schedule.
PowerShare	11/01/10	*"in review" or Q2/Q3 2011*	Delay not explained.
PowerManager	11/01/10	*"in review" or Q2 2011*	Delay not explained.
Residential Energy Assessments[8]	10/25/10	*Q2 2011*	Delay not explained.
Non-Res. Smart Saver Marketing	n/a	**3/1/2011**	Not discussed in the August 6, 2010 EM&V plan, but filed as Ossege Exhibit C.
Non-Res. Smart Saver Prescriptive	8/30/10	**2/6/2011** *or Q2/Q4 2011*	Provided evaluated impacts for high-bay lighting measures only, which represent 51% of total program savings. Filed as Ossege Exhibit B, although testimony indicates this is forthcoming.

[6]TecMarket Works, Evaluation Plans for Duke Energy's Energy Efficiency Programs in North Carolina, August 6, 2010.

[7]Completion dates and revised estimates are from the Dir. Testimony of Ossege, Exhibit 1 at 9-10 and the Dir. Testimony of Ossege at13-14. Where different dates are provided, the estimate from Exhibit 1 is followed by the testimony estimate.

[8]Includes Personalized Energy Report®, Online Services, and Home Energy House Call.

Non-Res. Smart Saver Custom	10/25/10	*Q2 2011 or Q2/Q42011*	Delayed due to low program participation.
Non-Res. Energy Assessment	10/18/10	*3/31/11 or Q2 2011*	Delayed due to low program participation. Unaware if this has been completed on the revised schedule.
Low Income	12/13/10	*Q4 2011*	Delay not explained, although Duke has discussed challenges and design issues with the Collaborative at every meeting.
K12 Curriculum	8/9/10	*Q3 2011 or Q2/Q3 2011*	Delay not explained, although Duke has discussed low program participation and design issues with the Collaborative.[9]
Home Energy Comparison Report (SC Pilot)	n/a	*Q2 2011 or Q2/Q3 2011*	Duke plans to file for full commercialization in Q3 of 2011.[10]
Smart Energy Now (NC Pilot)	n/a	*"planned"*	This pilot has not been discussed with the Collaborative since the August 31, 2010 meeting.
Residential Retrofit (NC/SC Pilots)	n/a	*Q2 2011*	This pilot was approved 2/10 (SC) and 1/11 (NC).

Q. WHAT IS YOUR OPINION OF DUKE'S COMPLETED EM&V STUDIES?

A. Despite Duke's delays, the quality of Duke's EM&V studies appears to be very good, and the findings appear to provide at least initial confirmation that Duke has selected appropriate deemed savings values for its lighting measures. Thus far, Duke has verified only two types of "deemed savings" values, non-residential high-bay lighting installed with prescriptive incentives and residential CFLs installed via customer

[9] Duke first discussed its concerns with the Collaborative during the June 23, 2010 meeting, and Duke staff has provided updates on the K12 Curriculum program in subsequent Collaborative meetings. It is my understanding that Duke has solicited proposals to offer this program through a different implementation agency, though Duke has not discussed this with the Collaborative.

[10] Duke Energy Carolinas, *Home Energy Comparison Report Pilot*, provided to Carolinas Energy Efficiency Collaborative, February 22, 2011.

coupons. Dir. Testimony of Duff at 14. As illustrated below in Tables 7 and 8, evaluated savings for Duke's residential CFL coupon program were somewhat below original "deemed savings" estimates, but evaluated savings for the non-residential high bay lighting measures are substantially higher than what Duke had anticipated.

Table 7: Savings for Residential CFL Coupon Verification[11]

Annual Energy Savings (MWh)	**North Carolina**	**South Carolina**	**Total**
Based on deemed savings[12]	95,174	28,827	124,001
Based on evaluated savings[13]	79,687	24,136	103,823
(Over)/Underestimate	*-15,487*	*-4,691*	*-20,178*
Evaluated Savings as a % of Deemed Savings	**.84%**	**84%**	**84%**
Annual Capacity Savings (kw)	**North Carolina**	**South Carolina**	**Total**
Based on deemed savings	8,748	2,650	11,398
Based on evaluated savings[14]	8,424	2,551	10,975
(Over)/Underestimate	*(324)*	*(98)*	*(422)*
Verified Savings as a % of Deemed Savings	**96 %**	**96 %**	**96 %**

Table 8: Savings for Non-Residential High-Bay Lighting Verification[15]

Annual Energy Savings (MWh)	**North Carolina**	**South Carolina**	**Total**
Based on deemed savings[16]	19,320	9,012	28,333
Based on evaluated savings	38,834	14,420	53,254
(Over)/Underestimate	*19,514*	*5,408*	*24,921*
Evaluated Savings as a % of Deemed Savings	**201 %**	**160 %**	**188%**
Annual Capacity Savings (kW)	**North Carolina**	**South Carolina**	**Total**
Based on deemed savings	4,644	2,166	6,810
Based on evaluated savings	6,084	2,253	8,337
(Over)/Underestimate	*1,440*	*97*	*1,537*

[11]Calculated from savings per bulb and bulb counts. See Dir. Testimony of Ossege at 12 and Exhibit A at 40, respectively.
[12]Referred to as "the company's original estimates." Dir. Testimony of Ossege at 12.
[13]Referred to as net energy savings, including adjustments for free-ridership, spillover and line losses. Dir. Testimony of Ossege at 12.
[14] Total net program coincident kW savings (free riders plus spillover).
[15]Ossege Exhibit B, at 61.
[16]Referred to as "program planning estimated savings" by TecMarket Works.

Verified Savings as a % of Deemed Savings	**131 %**	**104 %**	**122 %**

Q. ASIDE FROM THE DELAYS YOU DISCUSSED ABOVE, DO YOU HAVE ANY ADDITIONAL CONCERNS REGARDING THE PROCESS FOR SUBMITTING AND REVIEWING EM&V DATA?

A. Yes, I am concerned that there will not be a formal opportunity to review the EM&V reports identified in Table 6 until Duke applies for its Vintage 4 rider. Duke has not established a process for sharing its EM&V studies with the Collaborative when completed, so interested parties must wait until Duke applies for its Vintage 4 rider to obtain copies of these reports.

Q. HOW COULD THIS PROCESS BE IMPROVED?

A. The process for submitting and reviewing EM&V data could be improved for Duke, and other electric public utilities, by implementing certain policies concerning EM&V methods and process at the Commission-level. On October 15, 2010 and November 19, 2010, Environmental Defense Fund, Southern Alliance for Clean Energy and the Southern Environmental Law Center ("EDF/SACE/SELC") submitted initial and reply comments, respectively, in response to the Commission's Order Requesting Comments on Measurement and Verification of Reduced Energy Consumption in Docket No. E-100, Sub 113. In those comments, EDF/SACE/SELC recommended that the Commission require utilities to file EM&V documentation that is consistent with neutral, accepted EM&V protocol; establish an EM&V advisory group process that engages interested parties and the utilities; and provide for a process in which EM&V reports are made available for immediate review without waiting for an annual cost recovery rider proceeding.

The third recommendation specifically suggested that detailed EM&V documentation be filed and/or made available for audit by the Commission and parties in individual program dockets as soon as each EM&V report is completed. The EM&V documentation would then be relied on, with appropriate citations, in the annual EE/DSM rider filing and REPS compliance report. This approach would resolve documentation issues in advance of the EE/DSM rider and REPS compliance proceedings, thereby fostering robust program evaluation and encouraging program improvement while still allowing for timely cost recovery and resolution of a utility's compliance status.

Q. IN YOUR OPINION, DID DUKE CUSTOMERS GET A GOOD VALUE FOR THEIR INVESTMENT IN VINTAGE 1 ENERGY EFFICIENCY PROGRAMS?

A. Yes, Duke is delivering energy-efficiency resources to its customers at a very reasonable cost and has achieved a high level of savings for its first full year, 2010. SACE has reviewed Duke's documentation extensively and is in the process of completing an analysis that compares the impacts of energy efficiency programs operated by Duke and Progress Energy Carolinas in North and South Carolina. While that analysis is not yet complete, what follows are some general observations about Duke's programs based on the analysis thus far.

Duke's Residential Programs:

Duke estimates that its 2010 residential programs achieved 500 GWh of annual energy savings "at the plant" (including line loss), which reflects avoided generation. Compared to the 2010 residential billed savings forecast of 27,337 GWh, see Duke 2010 IRP at 108, 500 GWh represents 1.83% of residential sales.

The benefits of Duke's residential programs exceed costs by a ratio of more than 3:1, even if the forecasted cost of Duke's performance incentive at the maximum cap is included in the calculation. More data would be needed to calculate participant benefit-cost ratios, but considering that most of these savings are due to free CFLs, participating customers benefitted.

The proposed residential rate of $0.0024 per kWh translates into a monthly bill impact of $2.84 for 1200 kWh of use. About three-quarters of this rate is recovery of the "avoided cost" revenue requirement, which is capped at program costs plus a performance incentive of up to 15% (pre-tax), as discussed earlier in my testimony. Only one-quarter of this reflects collection of "net lost revenues," which are an alternative rate collection method for Duke's revenue requirement associated with its fixed costs, such as power plants. This "net lost revenues" portion of the rate, about $0.70 per month for 1200 kWh of use, is the portion of the proposed Vintage 3 Rider that represents "cost shifting," whereby non-participants are paying costs that would have otherwise been paid by participants.

Over the long term, even this small $0.70 per month likely overstates the impact of energy efficiency programs on non-participants. From a non-participant point of view, the "avoided cost" portion of the revenue requirement translates into savings to the extent that reductions in fuel costs (i.e. lower fuel cost rider in the near- and long-term) or reductions in system fixed costs (i.e. lower base rate in the long term) help reduce customer bills. Considering that the system benefits of residential energy efficiency programs exceed costs by a ratio of more than 3:1, it is likely that non-participants will not only be made whole with respect to the "avoided cost" portion of the revenue

requirement (because the ratio exceeds 1:1), but will benefit over time because the remaining benefits could more than offset the lost revenue (cost-shifting) portion of the rider.

SACE has evaluated several peer utility energy efficiency programs to examine the relationship between bill impact and energy savings performance. ***While Duke's monthly bill impact is relatively typical (neither high nor low), its actual residential energy savings for 2010 are substantially higher than those of any of the peer utilities in the dataset.*** The dataset includes utilities from Florida, Iowa, Rhode Island, Colorado, Minnesota, Arizona, Washington, and Arkansas. In other words, Duke's 2010 program impacts represent more energy savings for the same customer bill impact—more "bang for the buck"— as compared to every peer utility examined. Although the analysis is not yet complete, I am certain that this conclusion will stand. SACE commends Duke for delivering substantial energy savings with minimal impact on customer bills.

Duke's Non-Residential Programs:

Duke estimates that its 2010 non-residential programs achieved about 78 GWh of annual energy savings "at the plant." Using the North Carolina allocation factor of 73%, and compared to the 25,687 GWh of 2012 non-residential EE participants sales, as provided in McManeus Exhibit 3, this savings represents about 0.22% of non-residential participants sales.

Benefits of Duke's non-residential programs exceed costs by a ratio of more than 3:1, even if the forecast cost of Duke's performance incentive at the maximum cap is included in the calculation. Data needed to calculate participant benefit-cost ratios is not

readily available, and I did not conduct an assessment of non-participant benefits due to the availability of the opt-out for most non-residential customers.

Duke's energy savings impact for its non-residential energy efficiency programs are relatively typical for a first year of a utility-led energy efficiency program, and the Company has operated its non-residential programs at a cost that is well within industry norms, even compared to more experienced utilities.

Q. DO YOU HAVE ANY RECOMMENDATIONS FOR THE COMMISSION CONCERNING THE PROPOSED RIDER EE FOR VINTAGE 3?

A. I do not have any specific recommendation regarding the rider Duke proposes in its application. While I have not identified any specific concerns with the rider at this point, I would like to review the testimony from the Public Staff and any other intervenors and any rebuttal testimony from Duke prior to forming a final opinion.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

John D. Wilson — **Director of Research, Southern Alliance for Clean Energy**

1810 16th Street, NW, 3rd Floor
Washington, DC 20009

202-495-0776
wilson@cleanenergy.org

EXPERIENCE

Southern Alliance for Clean Energy

Director of Research, Asheville, North Carolina and Washington, DC, 2007 – present
http://www.cleanenergy.org/

- Manage energy efficiency programs
- Conduct supporting research and policy development across all program areas

Galveston-Houston Association for Smog Prevention

Executive Director, Houston, Texas, 2001 – 2006
http://www.ghasp.org/

- Member, Regional Air Quality Planning Committee
- Member, Transportation Policy Technical Advisory Committee
- Member, Steering Committee, TCEQ Interim Science Committee
- Published over a dozen reports
- In the media over 250 times
- Awards & recognition from the City of Houston, *Houston Press*, and environmental groups
- First executive director, grew staff to three full time plus several part time & consulting

The Goodman Corporation

Senior Associate, Houston, Texas, 2000 – 2001
http://www.thegoodmancorp.com/

- Project Manager, Houston Main Street Corridor
- Project Manager, Houston Downtown Circulation Study
- Project Manager, Austin Corridor Planning
- Project Manager, Ft. Worth Berry Street Corridor Initiative

Florida Legislature

Senior Legislative Analyst and Technology Projects Coordinator, Office of Program Policy Analysis and Government Accountability, Tallahassee, Florida, 1997- 1999
http://www.oppaga.state.fl.us/

- Coordinator, Florida Government Accountability Report, 1999
- Coordinator, Project Management Software Implementation, 1999
- Creator and Editor, *Florida Monitor Weekly*, 1998 - 99
- Author or team member for reports on water supply policy, environmental permitting, community development corporations, school district financial management and other issues – most recommendations implemented by the 1998 and 1999 Florida Legislatures

Florida State University

Environmental Management Consultant, Tallahassee, Florida, 1997
http://www.pepps.fsu.edu/FACT97/index.html

- Project staff, *Florida Assessment of Coastal Trends*, 1997

Houston Advanced Research Center

Research Associate, Center for Global Studies, Woodlands, Texas, 1992 - 96
http://www.harc.edu/mitchellcenter/index.html

- Performance Award, 1995
- Coordinator, Houston Environmental Foresight, 1993 - 96
- Coordinator, Rio Grande/Rio Bravo Basin Initiative, 1992 - 94
- Secretary, Task Force on Climate Change in Texas, 1992 - 94
- Researcher, *Policy Options: Responding to Climate Change in Texas*, 1992 - 93

US Environmental Protection Agency

Student Assistant, Climate Change Division, Washington, DC, 1991 - 92

- Special Achievement Award, 1991

EDUCATION

Harvard University

Master in Public Policy, John F. Kennedy School of Government, 1992

- Concentration areas: Environment, negotiation, economic and analytic methods

Rice University

Bachelor of Arts, conferred cum laude, 1990

- Majors: Physics (with honors) and history

Additional Training and Experience

Spanish language; Advanced computer skills; Served and led political committees for the Sierra Club and Clean Water Action; Certified Master Wildlife Conservationist, Leon County Extension Service

CERTIFICATE OF SERVICE

I certify that the persons on the service list have been served with the Testimony of John D. Wilson on behalf of Southern Alliance for Clean Energy either by electronic mail or by deposit in the U.S. Mail, postage prepaid.

This the 8th day of June, 2011.

Robin Dunn

Robin Dunn