



September 2, 2011

North Carolina Utilities Commission Attn: Ms. Renee Vance, Chief Clerk 4325 Mail Service Center Raleigh, North Carolina 27699-4325



# Statement of Position Letter Southern Alliance for Clean Energy

Progress Energy Carolinas, Incorporated's DSM/EE Cost Recovery Rider Application, Docket No. E2 Sub 1002

Southern Alliance for Clean Energy ("SACE") files this Statement of Position letter to comment on Progress Energy Carolinas Inc.'s ("PEC" or "the Company") Demand Side Management ("DSM") and Energy Efficiency recovery rider ("2011 DSM/EE filing" or "filing"), which PEC filed on June 3, 2011.

SACE generally supports PEC's application for approval of its DSM/EE cost recovery rider. We have reviewed this filing and similar data filed in North Carolina thoroughly. We also appreciate the efforts of PEC staff and the Public Staff to address many of our questions informally. However, SACE has a few remaining concerns relating to the Evaluation Measurement and Verification ("EM&V") process described by PEC, which are detailed in Parts II and III below.

PEC looks to be on track to capture increasing amounts of energy efficiency savings and provide ratepayers with low cost, reliable, energy resources. Notably, PEC data suggest that its programs appear to be achieving more savings than forecasted.

PEC's savings estimates should be verified through an improved, more transparent EM&V process. With more clarity about the impacts of PEC's programs, we anticipate that PEC program managers will be able to better optimize their programs. The Commission and Public Staff, of course, have a vital interest in such transparency so that they may ensure that ratepayers are getting the highest possible energy value for investments in energy efficiency.

To that end, SACE recommends that PEC provide: (i) a complete true-up for its 2009-2011 vintage savings in its 2012 DSM/EE filing, (ii) a schedule or timeline for EM&V activities so it is clear when vintages will be verified and finalized; and (iii) clearer documentation, in future filings, explaining how it applies the EM&V results to the true-up. SACE looks forward to continuing to work with PEC to ensure that the Company's programs succeed in saving energy and money for North Carolinians.

<sup>1</sup> SACE is not filing for intervention in Docket E-2 Sub 1002 because we do not anticipate participating in this docket beyond submitting this Statement of Position letter. We are aware of the limited manner in which Statement of Position letters are considered where a specific application is at issue.

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### I. PEC appears to be achieving more energy efficiency savings than anticipated.

Strong customer response to PEC's residential lighting program resulted in PEC exceeding its forecast energy savings by about 10%. In 2010, PEC forecasted 2010-2011 energy savings of 148,019 MWh and operating and maintenance ("O&M") costs of approximately \$46 million.<sup>2</sup> Actual energy savings were 163,841 MWh, and O&M expenditures were approximately \$44 million, or about 4% less than anticipated.<sup>3</sup> The total O&M expenditures are slightly less than anticipated, and the programs are also more cost-effective based on the cost of saved energy.<sup>4</sup>

The energy savings and expenditure data from the 2010 and 2011 DSM/EE filings do not provide an "apples-to-apples" comparison because PEC reports data for different time periods in the two filings. In its 2010 filing, PEC forecast costs and energy savings for December 1, 2010 to November 30, 2011; in its 2011 filing, it reported actual costs and energy savings for April 1, 2010 to March 31, 2011. Accordingly, Table 1 shows reported energy savings and costs for these different time periods.

	Capa Savings	•	Energy Savings (MWh)	Costs (O&M)	Cost of Saved Energy (\$/kWh) <sup>6</sup> \$0.30
Forecast (2010	Summer	Winter	148,019	£45.0:11:	
filing)	184.3	3.5		\$45.9 million	
Actual (2011 filing)	183.3	3.7	163,841	\$43.9 million	\$0.27

Table 1. 2010-11 PEC System Program Savings and O&M Costs

SACE urges PEC to continue its efforts to obtain significant energy savings from cost-effective efficiency programs.

# II. Most of PEC's energy savings results are preliminary because of a lack of EM&V reports and data to date.

Although PEC is reporting higher than anticipated savings, these results are preliminary and are subject to change based on EM&V analyses and resultant true-ups. As stated in PEC Witness Evans testimony, "These values are initially based on engineering estimates and/or past impact evaluations. Future periods are based on updated impact evaluations conducted through the measurement and verification activities and applied prospectively and in conjunction with applicable net lost revenue true ups."<sup>7</sup>

<sup>&</sup>lt;sup>2</sup>E2 Sub 977, Progress Energy Carolinas, Incorporated's DSM/EE Cost Recovery Rider Application ("2010 DSM/EE filing"), Exhibit 1 at page 13 and 5, respectively.

<sup>&</sup>lt;sup>3</sup> E2 Sub 1002, 2011 DSM/EE Filing, Exhibit 1 at page 31 and at page 15.

<sup>&</sup>lt;sup>4</sup> Cost of Saved Energy is the total cost to the utility per total annual energy savings attributed to its EE programs, irrespective of measure life.

<sup>&</sup>lt;sup>5</sup> SACE notes that it is possible to line up cost and energy savings data, using workpapers in both exhibits, but did not have time to total each program's cost and energy savings by month.

<sup>&</sup>lt;sup>6</sup> This does not include administrative or general costs. If these costs were included, the cost of saved energy would increase.

<sup>&</sup>lt;sup>7</sup>2011 DSM/EE filing at page 15, line 13

EM&V is a critical step in ensuring that energy efficiency programs are cost-effectively saving the utility and ratepayer's money. SACE strongly supports the implementation of cost-effective energy efficiency programs and believes that programs that are not achieving energy efficiency savings as planned must be re-evaluated for opportunities to modify program design, increase participation, and/or reduce cost. It is therefore important for PEC to provide EM&V results in a timely manner to ensure that the Commission and Public Staff can determine whether the programs are achieving cost-effective savings.

# a. First program evaluation indicates deemed savings assumptions overestimated actual savings

As Table 2 illustrates, PEC overestimated the deemed (planned) savings for most of the measures in the Residential Home Energy Improvement Program (HEIP). Despite higher than anticipated participation, the program's saving were 2,577 MWh less than what PEC estimated in 2010-2011.8

Table 2. Updated Unit Energy Savings and Peak Demand Reductions for PEC's Home Energy Improvement Program

Measure (units)	Deemed Savings <sup>9</sup>	Verified Savings (Navigant)	Measure Unit Savings Adjustment	Deemed Peak Demand Reduction	Verified Peak Demand Reduction (Navigant)	Measure Unit Savings Adjustment
Level 1 HVAC tune- ups (kWh/system)	277	96	35%	0.244	0.092	38%
Air Source Heat Pumps(kWh/system)	697	371	53%	0.572	0.424	74%
Central Air Conditioners (kWh/system)	429	293	68%	0.572	0.429	75%
Ground Source Heat Pumps (kWh/system)	1725	1725	100%	0.690	0.690	100%
Duct Sealing (kWh/system)	579	244	42%	0.271	0.167	61%
Windows (kWh/home)	796	516	65%	0.410	0.480	117%
Attic Insulation (kWh/home)	391	830	212%	0.270	0.344	127%

#### b. Preliminary free ridership rates in HEI program EM&V report

<sup>&</sup>lt;sup>8</sup> 2011 DSM/EE filing, Exhibit 1 at 33.

<sup>&</sup>lt;sup>9</sup> Deemed savings are "based either on the North Carolina Measures Database...or on similar programs in Florida or California." 2009 EM&V Report for the Home Energy Improvement Program at 5.

In this filing, PEC plans to true-up its Home Energy Improvement Program based on the EM&V report it has filed (and summarized above). 10 However, PEC's HEI program EM&V report only contains preliminary free ridership rates. 11 PEC Witness Evans states, on page 16 of his testimony, that the PPI and recovery of net lost revenues for PEC's HEIP program have been trued up to recognize the results of the vintage 2009 HEIP M&V analysis.<sup>12</sup>

It is our understanding, from conversations with PEC, that the company plans to true up its energy savings and participation retroactively, and annually for programs with a larger share of the portfolio of savings, and slightly less frequently for programs with less savings (as a way to spend EM&V dollars most effectively). Based on these conversations, SACE anticipates that in the 2012 DSM/EE filing, PEC will complete a final true up for HEI program using final free ridership rates and several others that will include verified energy savings, participation and appropriate net to gross ratios. Accordingly, we do not view this filing as the final true-up of the 2010-11 vintage year with respect to impacts and the associated lost revenue recovery requirements.

Given our remarks on EM&V, SACE encourages PEC to file complete EM&V for all of its programs as early as possible to allow for robust review, and also for PEC to plan for necessary changes to allow the company to cost-effectively achieve their energy efficiency targets. In addition, SACE encourages PEC to provide an EM&V schedule that includes starting, ending and effective dates for all future EM&V reports. 13

#### PEC should provide clear explanation on how it applies the results of its EM&V III. analysis to the true ups.

PEC has willingly made efforts to work with SACE to clarify how its HEI program EM&V verified energy savings are applied to its lost revenue calculation in this filing. Table 4, below, provides our analysis of the energy savings projected in the 2010 DSM filing for the HEI program and the "trued-up" energy savings in this filing. As shown, PEC's kWh savings estimates are 54% less in the 2011 DSM/EE filing than in the 2010 DSM/EE filing, which is approximately the reduction recommended in the EM&V report.<sup>14</sup> However, it is still difficult to attribute the reduction in energy savings to participation, or the EM&V process, or otherwise.

Table 4. Adjusted Energy Savings (MWh) for Lost Revenue Calculations for PEC's Home **Energy Improvement Program** 

Energy Savings from HEIP	2010 DSM/EE Filing	2011 DSM/EE Filing	Percentage Reduction	Percentage Reduction in EM&V Report
Calendar year 2009	3722	1704	54%	50%

<sup>&</sup>lt;sup>10</sup> The 2009 EM&V Report for the Home Energy Improvement Program is available in Docket E2 sub 936.

<sup>&</sup>lt;sup>11</sup>2009 EM&V Report for the Home Energy Improvement Program, Table 4-10 at page 39

<sup>&</sup>lt;sup>12</sup> 2011 DSM/EE filing, Evans testimony at page 16

<sup>&</sup>lt;sup>13</sup> Duke Energy Carolinas provided a schedule for EM&V reports in its annual energy efficiency and DSM

compliance filing in North Carolina. See NCUC Docket E-7 Sub 979.

<sup>&</sup>lt;sup>14</sup>2009 EM&V Report for the Home Energy improvement Program, Docket E2 Sub 1002, at Table 4-7.

#### IV. Conclusion and Recommendations

In conclusion, PEC appears to be on the right track to capturing increasing amounts of energy efficiency savings, and providing ratepayers with low cost, reliable, energy resources. However, the Company's savings estimates must be verified through a transparent EM&V process so that PEC, the Commission, Public Staff, interested parties and the public can be sure that ratepayers are getting the highest possible energy value for investments in energy efficiency.

Therefore, SACE recommends that PEC provide: (i) a complete true-up for its 2010-11 vintage savings in its 2012 DSM/EE filing, (ii) a schedule or timeline for EM&V activities so it is clear when vintages will be verified and finalized; and (iii) clearer documentation, in future filings, explaining how it applies the EM&V results to the true-up.

Sincerely,

John D. Wilson

Director of Research