#### BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 1073

In the Matter of	)	
Application of Duke Energy Carolinas, LLC	)	DIRECT TESTIMONY OF
for Approval of Demand-Side Management	)	CONITSHA B. BARNES
and Energy Efficiency Cost Recovery Rider	)	FOR
Pursuant to N.C. Gen. Stat. § 62-133.9 and	)	<b>DUKE ENERGY CAROLINAS, LLO</b>
Commission Rule R8-69	)	

#### I. <u>INTRODUCTION AND PURPOSE</u>

- 1 O. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.
- 2 A. My name is Conitsha B. Barnes. My business address is 550 South Tryon
- 3 Street, Charlotte, North Carolina 28202.
- 4 Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?
- 5 A. I am employed by Duke Energy Carolinas, LLC ("Duke Energy Carolinas,"
- 6 "DEC," or the "Company") as a Strategy and Collaboration Manager -
- 7 Carolinas in the Company's Market Solutions Regulatory Strategy and
- 8 Evaluation group.
- 9 Q. PLEASE SUMMARIZE YOUR EDUCATION AND PROFESSIONAL
- 10 **QUALIFICATIONS.**
- 11 A. I graduated from North Carolina State University with a Bachelor of Arts in
- 12 Political Science. I started my career with Duke Energy Carolinas in 1998.
- From 1998 to 2008, I worked in the call center organization in a variety of
- 14 roles including customer service specialist, alternate shift supervisor and
- business analyst. In 2008, I joined the Marketing Department, where I
- managed the portfolio of energy efficiency income-qualified low income
- programs offered in North Carolina, South Carolina, Ohio, Kentucky and
- 18 Indiana. I joined the Market Solutions Regulatory Strategy and Evaluation
- group in 2010 as a Strategy and Collaboration Manager Carolinas.
- 20 Q. PLEASE DESCRIBE YOUR DUTIES AS STRATEGY AND
- 21 **COLLABORATION MANAGER.**

- 1 A. I am responsible for the analysis and support of DEC's Energy Efficiency
- 2 ("EE") and Demand-Side Management ("DSM") programs.
- 3 Q. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THIS
- 4 **COMMISSION?**
- 5 A. No, I have not testified before this Commission.
- 6 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS
- 7 **PROCEEDING?**
- 8 A. My testimony supports DEC's Application for approval of its DSM/EE Cost
- 9 Recovery Rider, Rider EE, for 2016 ("Rider 7"), which encompasses
- components relating to both the Company's save-a-watt pilot approved in
- Docket No. E-7, Sub 831, as well as the new cost recovery mechanism and
- portfolio of programs approved in the Commission's *Order Approving*
- 13 DSM/EE Programs and Stipulation of Settlement issued October 29, 2013 in
- Docket No. E-7, Sub 1032 ("Sub 1032 Order"). My testimony provides (1) an
- overview of the Commission's Rule R8-69 filing requirements; (2) a synopsis
- of the EE and DSM programs included in this filing; (3) discussion of our
- 17 results to date; (4) an explanation of how these results have affected the Rider
- 7 calculations; (5) an overview of cost recovery under the new mechanism;
- and (6) any updates the Company has made since the Commission's Sub 1032
- Order, as well as its October 29, 2014 Order approving DEC's Rider EE for
- 21 2015 in Docket No. E-7, Sub 1050.

### Q. PLEASE DESCRIBE THE EXHIBITS ATTACHED TO YOUR

#### **TESTIMONY.**

A.	Barnes Exhibit 1 supplies, for each program, load impacts and avoided cost
	revenue requirements by vintage. Barnes Exhibit 2 contains a summary of net
	lost revenues for the period June 1, 2009 to December 31, 2016. Barnes
	Exhibit 3 contains the actual program costs for North Carolina for June 1,
	2009 through December 31, 2014 and estimated costs for the DEC system for
	the twelve months ending December 31, 2016. Barnes Exhibit 4 contains the
	found revenues used in the net lost revenues calculations. Barnes Exhibit 5
	supplies evaluations of event-based programs. Barnes Exhibit 6 contains a
	discussion of the findings and results of DEC's programs and a comparison of
	impact estimates from the previous year. Barnes Exhibit 7 contains the
	modified projected program and portfolio cost-effectiveness results for the
	portfolio of programs approved in the Sub 1032 Order. Barnes Exhibit 8
	contains a summary of program performance and an explanation of the
	variances between the expected program results and the actual results. It is
	designed to create more transparency with regard to the factors that have
	driven these variances. Barnes Exhibit 9 is a list of DEC's industrial and large
	commercial customers that have opted out of participation in its DSM or EE
	programs and a listing of those customers that have elected to participate in
	new measures after having initially notified the Company that they declined to
	participate, as required by Commission Rule R8-69(d)(2). Barnes Exhibit 10

- 1 contains the detailed calculations underlying DEC's achievement level under
- 2 the save-a-watt earnings cap. Barnes Exhibit 11 contains the projected shared
- 3 savings incentive associated with Vintage 2016.

#### 4 Q. WERE BARNES EXHIBITS 1-11 PREPARED BY YOU OR AT YOUR

#### 5 **DIRECTION AND SUPERVISION?**

6 A. Yes, they were.

7

#### II. RULE R8-69 FILING REQUIREMENTS

#### 8 Q. WHAT INFORMATION DOES DEC PROVIDE IN RESPONSE TO

#### 9 THE COMMISSION'S FILING REQUIREMENTS?

- 10 A. The information for Rider 7 is provided in response to the Commission's
- filing requirements contained in R8-69(f)(1) and can be found in the
- testimony and exhibits of Company witnesses Barnes, Ham and Miller as
- follows:

R8-69(f)(1)		Items	<b>Location in Testimony</b>
(i)		Projected NC retail sales for the rate period	Miller Exhibit 6
(:	ii)	For each measure for which cost recovery is re	equested through Rider 7:
(ii)	a.	Total expenses expected to be incurred during the rate period	Barnes Exhibit 1
(ii)	b.	Total costs savings directly attributable to measures	Barnes Exhibit 1
(ii)	c.	Evaluation, Measurement, and Verification activities for the rate period	Ham Exhibit 1
(ii)	d.	Expected summer and winter peak demand reductions	Barnes Exhibit 1
(ii)	e.	Expected energy reductions	Barnes Exhibit 1
(i	iii)	Filing requirements for DSM/EE EMF rider, i	ncluding:
(iii)	a.	Total expenses for the test period in the aggregate and broken down by type of expenditure, unit, and jurisdiction	Barnes Exhibit 3

	Total avoided costs for the test period in the	
(iii) b.	aggregate and broken down by type of	Barnes Exhibit 1
	expenditure, unit, and jurisdiction	Barnes Exmert 1
	expenditure, unit, und jurisdiction	Testimony of Roshena Ham
(iii) c.	Description of results from EM&V activities	and Ham Exhibits A-I
	Total summer and winter peak demand	and Ham Exmons A-1
(iii) d.	reductions in the aggregate and broken	Barnes Exhibit 1
(III) u.		Barnes Eximolt 1
	down per program	
(iii) e.	Total energy reduction in the aggregate and	Barnes Exhibit 1
	broken down per program	Total and a first total a Dames
(iii) f.	Discussion of findings and results of	Testimony of Conitsha Barnes
(***)	programs	and Barnes Exhibit 6
(iii) g.	Evaluations of event-based programs	Barnes Exhibit 5
	Comparison of impact estimates from	Testimony of Conitsha Barnes
(iii) h.	previous year and explanation of significant	and Barnes Exhibits 6 and 8
	differences	and Barnes Exhibits 0 and 0
(iv)	Determination of utility incentives	Testimony of Conitsha Barnes
(iv)	Determination of utility incentives	& Barnes Exhibits 10 and 11
(11)	Actual revenues from DSM/EE and	Miller Exhibit 3
(v)	DSM/EE EMF riders	Willer Exhibit 5
(:)	Duan and Diday 7	Testimony of Carolyn Miller
(vi)	Proposed Rider 7	& Miller Exhibit 1
(-::)	Projected NC sales for customers opting out	Miller Evhibit 6
(vii)	of measures	Miller Exhibit 6
(viii)	Supporting work papers	CD accompanying filing

#### III. PORTFOLIO OVERVIEW

#### 2 Q. WHAT ARE DEC'S CURRENT EE AND DSM PROGRAMS?

- 3 A. The Company has two interruptible programs for non-residential customers,
- 4 Interruptible Service ("IS") and Standby Generation ("SG") that are accounted
- for outside of the cost recovery mechanism approved by the Commission in
- 6 the Sub 1032 Order. Aside from IS and SG, the following DSM and EE
- 7 programs have been implemented by DEC in its North Carolina service
- 8 territory:

1

#### RESIDENTIAL CUSTOMER PROGRAMS

1	Appliance Recycling Program
2	• Energy Assessments Program
3	Energy Efficiency Education Program
4	Energy Efficient Appliances and Devices
5	HVAC Energy Efficiency Program
6	Multi-Family Energy Efficiency Program
7	My Home Energy Report
8	Income-Qualified Energy Efficiency and Weatherization Program
9	Power Manager
10	NON-RESIDENTIAL CUSTOMER PROGRAMS
11	Non-Residential Smart \$aver® Energy Efficient Food Service
12	Products Program
13	Non-Residential Smart \$aver® Energy Efficient HVAC Products
14	Program
15	Non-Residential Smart \$aver® Energy Efficient IT Products Program
16	Non-Residential Smart \$aver® Energy Efficient Lighting Products
17	Program
18	Non-Residential Smart \$aver® Energy Efficient Process Equipmen
19	Products Program
20	Non-Residential Smart \$aver® Energy Efficient Pumps and Drives
21	Products Program
22	Non-Residential Smart \$aver® Custom Program

1		• Non-Residential Smart \$aver® Custom Energy Assessments Program
2		• PowerShare®
3		PowerShare® CallOption
4		• Energy Management and Information Services Pilot Program <sup>1</sup>
5		• Small Business Energy Saver (Approved on August 13, 2014 in
6		Docket No. E-7, Sub 1055)
7		• Smart Energy in Offices (Approved on August 13, 2014 in Docket No.
8		E-7, Sub 961)
9	Q.	ARE THESE SUBSTANTIVELY THE SAME PROGRAMS DEC
10		RECEIVED APPROVAL FOR IN DOCKET NO. E-7, SUB 1032?
11	A.	Yes. The programs contained in the current portfolio are the same as those
12		approved by the Commission in the Sub 1032 Order, with the exception of the
13		additions of the Smart Energy in Offices ("SEO") and Small Business Energy
14		Saver ("SBES") programs and discontinuation of the Energy Management and
15		Information Services ("EMIS") Pilot Program.
16	Q.	PLEASE DESCRIBE ANY UPDATES MADE TO THE UNDERLYING
17		ASSUMPTIONS FOR DEC'S PORTFOLIO OF PROGRAMS THAT
18		HAVE ALTERED PROJECTIONS FOR VINTAGE 2016.
19	A.	Duke Energy Carolinas made several updates to the underlying assumptions
20		for the program portfolio for Vintage 2016 compared to what was filed and

Page 8 DOCKET NO. E-7 Sub 1073

<sup>&</sup>lt;sup>1</sup> The North Carolina Utilities Commission issued an Order on November 26, 2014 in Docket No. E-7, Sub 1032 approving DEC's request to discontinue the Energy Management and Information Services Pilot Program.

approved in Docket No. E-/, Sub 1032. First, consistent with the notice that
the Company filed with the Commission on December 18, 2013 in Docket No.
E-7, Sub 1032, DEC, after reaching agreement with the Public Staff, updated
the avoided capacity rates to reflect the rates contained in the Stipulation of
Settlement among DEC, Duke Energy Progress, Inc. and the Public Staff filed
October 29, 2013 in Docket No. E-100, Sub 136. Second, in accordance with
the Agreement and Stipulation of Settlement ("Stipulation") that DEC reached
with the Public Staff, the North Carolina Sustainable Energy Association
("NCSEA"), the Southern Alliance for Clean Energy ("SACE"),
Environmental Defense Fund ("EDF"), Natural Resources Defense Council
("NRDC"), the South Carolina Coastal Conservation League, and the Sierra
Club, and which was filed with the Commission on August 19, 2013 (the
"Stipulation") and approved in the Sub 1032 Order, DEC updated the avoided
transmission and distribution ("T&D") rates. These two updates affect the
avoided cost benefits associated with each of the programs and, consequently,
the cost-effectiveness of the entire portfolio and DEC's projected shared
savings incentive.

The third update reflects restating the estimated program participation and cost for the rate period of January 1, 2016 to December 31, 2016 based on market conditions and program performance experienced in Vintage 2014.

The fourth update reflects the additions of the costs and impacts associated with the SBES and SEO programs to the portfolio, as well as the

removal of costs and impacts associated with the discontinued EMIS Pilot Program.

A.

The final update reflects the application of Evaluation, Measurement, and Verification ("EM&V") results and updating of the savings impacts for those programs for which DEC received EM&V results after it filed its application in Docket No. E-7, Sub 1050. Updating programs for EM&V results will change the projected avoided cost benefits associated with the projected participation and hence will impact the calculation of the specific program and overall portfolio cost-effectiveness, as well as impact the calculation of DEC's projected shared savings incentive.

### Q. AFTER FACTORING THESE UPDATES INTO THE VINTAGE 2016

PORTFOLIO, DO THE RESULTS OF DEC'S PROSPECTIVE COST-

#### EFFECTIVENESS TESTS INDICATE THAT IT SHOULD

#### DISCONTINUE OR MODIFY ANY OF ITS PROGRAMS?

In accordance with the Stipulation, DEC performed the prospective analysis of each of its programs and the aggregate portfolio for the Vintage 2016 period. As discussed above, this analysis factored in the impact of updating the program cost, participation, avoided energy capacity rates and T&D rates and the impacts of programs for which DEC received updated EM&V. The projected cost-effectiveness from this analysis for each program and the entire portfolio for Vintage 2016 is contained in Barnes Exhibit 7. This exhibit shows that, with the exception of the Income-Qualified EE Products and

Services Program, which was not cost-effective prior to the updates, and the HVAC EE Program, all of the programs and the aggregate portfolio continue to project cost-effectiveness. Since the HVAC EE Program provides efficiency opportunities for such a large component of overall residential usage, and because the program is on the border of being cost effective, DEC does not plan to discontinue the program. Instead, DEC is currently evaluating opportunities to modify the HVAC EE Program in order to enhance the program and return it to being a cost-effective program.

#### DID DEC MAKE ANY MODIFICATIONS TO ITS PORTFOLIO OF Q. PROGRAMS DURING VINTAGE 2014? 10

Yes. The Company increased the customer incentive from \$30 to \$50 per recycled appliance for the Appliance Recycling Program.<sup>2</sup> In addition, DEC expanded the number of participants who were offered the My Home Energy Report<sup>3</sup> and added an electronic/interactive report allowing participants to receive reports in an electronic/interactive format that should lead to greater energy savings. The modifications were made in compliance with the Flexibility Guidelines approved by the Commission in the Sub 1032 Order.

#### IV. EE AND DSM PROGRAM RESULTS TO DATE

<sup>2</sup> The Company filed notification of the program change for the Appliance Recycling Program July 25, 2014 in Docket No. E-7, Sub 1032.

1

2

3

4

5

6

7

8

9

11

12

13

14

15

16

17

18

A.

<sup>&</sup>lt;sup>3</sup> The Company filed notification of the program changes for the My Home Energy Report Program on November 7, 2014 in Docket No. E-7, Sub 1032.

1	Q.	HOW MUCH ENERGY, CAPACITY AND AVOIDED COST SAVINGS
2		DID DEC DELIVER AS A RESULT OF ITS EE AND DSM
3		PROGRAMS DURING VINTAGE 2014?
4	A.	During Vintage 2014, DEC's EE and DSM programs delivered over 546
5		million kilowatt hours ("kWh") of energy savings and nearly 880 megawatts
6		("MW") of capacity savings, which produced net present value of avoided
7		cost savings of \$324 million.
8	Q.	HOW MUCH ENERGY, CAPACITY AND AVOIDED COST SAVINGS
9		HAS DEC DELIVERED AS A RESULT OF THESE PROGRAMS
10		DURING THE SAVE-A-WATT PILOT?
11	A.	Since receiving approval for the save-a-watt pilot, DEC, through its EE and
12		DSM programs, has generated over 2,030 gigawatt hours ("GWh") of energy
13		reductions and over 980 MW of capacity reductions. These programs have
14		also generated nearly \$925 million in nominal avoided cost benefits for
15		DEC's customers.
16	Q.	HOW DO THESE RESULTS COMPARE WITH THE
17		PERFORMANCE TARGETS IN DOCKET NO. E-7, SUB 831?
18	A.	As shown in Barnes Exhibit 10, during the four-year term of the modified
19		save-a-watt pilot, the actual nominal avoided cost benefits generated by these
20		programs are nearly 123 percent of the target to achieve shown in Exhibit B to
21		the Agreement and Joint Stipulation of Settlement between DEC, the Public

Staff, SACE, EDF, NRDC, and the Southern Environmental Law Center filed

June 12, 2009 in Docket No. E-7, Sub 831 ("Save-a-Watt Settlement").
Similarly, capacity impacts are over 115 percent of the target over the four-
year term of the save-a-watt pilot, and energy impacts are over 135 percent of
the cumulative target. Notably, this achievement is as compared to the
original targets and does not reflect the impact of opt-outs on the number of
eligible participants as contemplated in the Save-a-Watt Settlement. In other
words, DEC exceeded the targets without adjustment. Given DEC's
achievement beyond the avoided cost targets for its save-a-watt pilot, the
Company is entitled to the highest earning cap allowed under the Save-a-Watt
Settlement. Essentially, due to the outstanding results delivered during the
four-year term of the save-a-watt pilot, DEC is allowed to earn the lesser of
the permitted avoided cost revenues or 15 percent of the program costs on an
after-tax basis. After comparing the allowed avoided cost revenue calculation
to the 15 percent earnings cap on program cost, DEC determined that it is
appropriate to apply the 15 percent after-tax earnings cap, which is reflected
in the calculation of the final save-a-watt true-up component of Rider 7.

# 17 Q. DID ANY PROGRAMS SIGNIFICANTLY OUT-PERFORM 18 RELATIVE TO THEIR ORIGINAL ESTIMATES FOR VINTAGE 19 2014)?

20 A. Yes. During Vintage 2014, DEC's portfolio of programs was able to deliver 21 energy and capacity savings that yielded avoided costs that were almost 119 22 percent of the target, and it did so while only expending 89 percent of targeted

program cost. While DEC's the Company's entire portfolio of programs performed well, programs in the portfolio that feature lighting measures continued to contribute the largest portion of the impacts. In the residential market, the energy efficient lighting component of the Energy Efficient Appliances and Devices Program, the EE Education Program, and the Energy Assessment Program achieved elevated participation with customers adopting measures at much higher rates than originally anticipated. As a result of this higher participation, the savings impacts for the three programs, compared to those originally filed for Vintage 2014, exceeded the projections by 605 percent, 136 percent and 312 percent, respectively. In Vintage 2014, the energy savings associated with the Non-Residential Smart \$aver EE Lighting Products program achieved 129 percent of the as-filed impacts.

### Q. HAVE ANY PROGRAMS SIGNIFICANTLY UNDERPERFORMED RELATIVE TO THEIR ORIGINAL ESTIMATES IN VINTAGE 2014?

A. Yes. The Income-Qualified EE and Weatherization Program underperformed during Vintage 2014, in large part due to the continuing inability to implement the Weatherization and Equipment Replacement component of the program. Since the exhaustion of the North Carolina and South Carolina State Energy Offices' ARRA funds in late 2012, DEC had been working with the State Energy Offices to reestablish a plan for them to partner and administer the program as a component of the new portfolio filing. In 2014, the State Energy Offices requested to be removed from consideration in providing

weatherization services as the program administrator. The Company has since identified a program administrator for the Weatherization and Equipment Replacement measures through a Request for Proposal ("RFP"). The program administrator signed a contract with DEC in fourth quarter of 2014 and plans to launch the program in March 2015.

Another program that underperformed during Vintage 2014 was the Appliance Recycling Program. The program has struggled to hit its targeted achievement and only delivered 30 percent of the anticipated savings. This underperformance was driven by both lower customer participation (58 percent of target) and an erosion of the savings impact recognized per participant that occurred due to application of EM&V results. The details associated with the change in impacts that resulted from the replacement of the initial impact estimates with the EM&V results, are shown in Ham Exhibit C. In an attempt to address the lower than anticipated participation in early 2014, DEC filed notification to increase the participant incentive from \$30 to \$50 effective May 1, 2014. This modification appears to have been effective, as the program observed more than a 200 percent increase in participation after the increased participant incentive was implemented.

#### V. <u>RIDER IMPACTS</u>

## Q. HAVE THE PARTICIPATION RESULTS AFFECTED THE VINTAGE 2014 EXPERIENCE MODIFICATION FACTOR?

Yes. The Experience Modification Factor ("EMF") in Rider 7 accounts for changes to actual participation relative to the forecasted participation levels utilized in DEC's Vintage 2014 Rider EE. As DEC receives actual participation information, it is then able to update participation-driven actual avoided cost benefits and the net lost revenues derived from its EE and DSM For example, as mentioned above, the Appliance Recycling programs. Program and Income-Qualified EE and Weatherization Program underperformed relative to their original participation targets. As a result, the EMF will be reduced to reflect the lower costs, net lost revenues and shared savings incentive associated with these programs. On the other hand, higherthan-expected participation in the Energy Assessments, Non-Residential Smart \$aver EE Lighting Products, and EE Education programs, as well as the additions of the SEO and SBES programs, cause the EMF to reflect higher program costs, net lost revenues, and shared savings incentive.

## 15 Q. HOW ARE THE RESULTS OF EVALUATION, MEASUREMENT 16 AND VERIFICATION APPLIED TO DEC'S EE PROGRAMS?

As further explained in Company witness Ham's testimony, EM&V is a comprehensive assessment and data collection methodology that DEC utilizes to determine the achieved load reductions, actual free ridership, and the effectiveness of program design for each measure or program. Pursuant to the Stipulation, and consistent with the agreement reached by DEC, SACE, and the Public Staff and approved by the Commission in its *Order Approving* 

1

2

3

4

5

6

7

8

9

10

11

12

13

14

17

18

19

20

21

22

A.

A.

DSM/EE Rider and Requiring Filing of Proposed Customer Notice issued or
November 8, 2011 in Docket No. E-7, Sub 979 ("EM&V Agreement"), for all
EE programs, with the exception of Non-Residential Smart \$aver Custom
Rebate Program and Low Income Energy Efficiency and Weatherization
Assistance Program, DEC applies EM&V results retrospectively to the
beginning of the program offering. For the purposes of the vintage true-ups
these initial EM&V results will be considered actual results for a program
until the next EM&V results are received. The new EM&V results will then
be considered actual results going forward and applied prospectively for the
purposes of truing up vintages from the first day of the month immediately
following the month in which the study participation sample for the EM&V
was completed. This EM&V will then continue to apply and be considered
actual results until it is superseded by new EM&V results, if any.

For all new programs and pilots, DEC will follow a consistent methodology. In other words, initial estimates of impacts will be used until DEC has valid EM&V results, which will then be applied back retrospectively to the beginning of the offering and will be considered actual results until a second EM&V is performed.

## Q. HOW WILL EM&V BE INCORPORATED INTO THE VINTAGE 2014 TRUE-UP COMPONENT OF RIDER 7?

All of the final EM&V results that have been received by DEC as of December 31, 2014 have been applied prospectively from the first day of the

month immediately following the month in which the study participation sample for the EM&V was completed in accordance with the EM&V Agreement. Accordingly, for any program for which DEC has received EM&V results, the per participant impact applied to the projected program participation in Vintage 2014 is based upon the actual EM&V results that have been received.

#### Q. PLEASE DESCRIBE HOW DEC CALCULATED FOUND REVENUES.

Consistent with the Stipulation and with the "Decision Tree" found in Appendix A of the Commission's February 8, 2011 order in Docket No. E-7, Sub 831, and approved for the new portfolio in the Sub 1032 Order, possible found revenue activities were identified, categorized, and netted against the net lost revenues created by DEC's EE programs. Found revenues may result from activities that directly or indirectly result in an increase in customer demand or energy consumption within DEC's service territory. Load-building activities such as these, however, would not be considered found revenues per se if they (1) would have occurred regardless of DEC's activity, (2) were a result of a Commission-approved economic development activity not determined to produce found revenues, or (3) were part of an unsolicited request for DEC to engage in an activity that supports efforts to grow the economy. On the other hand, found revenues would occur for load growth that did not fall into the previous categories but was directly or indirectly a result of DEC's activities. Based on the results of this work, all potential

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

A.

found revenue-related activities are identified and categorized in Barnes
Exhibit 3. Additionally, as discussed in the testimony of Company witness
Timothy J. Duff in Docket E-7, Sub 1050, DEC also proposes to adjust
calculation of found revenues to account for the impacts of activities outside
of its EE programs that it undertakes that reduce customer consumption – i.e.,
"negative found revenues"

A.

- Q. PLEASE DISCUSS THE ADJUSTMENT THAT DEC PROPOSES TO

  MAKE TO ITS FOUND REVENUE CALCULATION TO ACCOUNT

  FOR THE ACTIVITIES IT HAS TAKEN OUTSIDE OF ITS EE

  PROGRAMS THAT REDUCE CONSUMPTION.
  - In his direct testimony in Docket No, E-7, Sub 1050, Company witness Duff discussed that DEC was planning to aggressively pursue with its outdoor lighting customers the replacement of aging Mercury Vapor lights with Light Emitting Diode ("LED") fixtures. By moving customers past the standard High Pressure Sodium ("HPS") fixture to an LED fixture in this replacement process, DEC is generating significant energy savings. These energy savings, since they come outside of DEC's EE programs, are not captured in DEC's calculation of lost revenues. Since one of the activities that DEC includes in the calculation of found revenues is the increase in consumption from new outdoor lighting fixtures added by DEC, it is logical and symmetrical to count the energy consumption reduction realized in outdoor lighting efficiency upgrades. The Company does not take credit for the entire efficiency gain

from replacing Mercury Vapor lights, but rather only the efficiency gain from
replacing HPS with LED fixtures. It is also important to note that DEC has
not recognized any negative found revenues in excess of the found revenues
calculated; in other words, the net found revenues number will never be
negative and have the effect of increasing net lost revenue calculations. The
Company does not believe the Public Staff is opposed to DEC's proposal,
based on Public Staff Witness Maness's Affidavit filed in Docket No. E-7,
Sub 1050, which states: "In general, the Public Staff acknowledges that there
may be cases in which it may be appropriate, for purposes of determining the
DSM/EE Rider, to offset positive found revenues with negative ones.
However, should the Company propose such an offset; the underlying
circumstances and impacts on the utility will need to be evaluated very
carefully, on a case-by-case basis."

#### 14 Q. HAS THE OPT-OUT OF NON-RESIDENTIAL CUSTOMERS

#### 15 AFFECTED THE RESULTS FROM THE PORTFOLIO OF

#### **APPROVED PROGRAMS?**

17 A. Yes, the opt-out of qualifying non-residential customers has had a negative
18 effect on DEC's overall non-residential impacts. For Vintage 2014, DEC had
19 1,782 eligible customer accounts opt out of participating in DEC's non20 residential portfolio of EE programs. Although this represents slightly more
21 than 15 percent of eligible customer accounts, these same customer accounts
22 represent nearly 49 percent of the load for all eligible customers. Essentially,

1	this means that DEC could only deliver the efficiency benefits associated with
2	its non-residential programs to customers who comprise approximately 70
3	percent of its total non-residential customer load.

## 4 Q. PLEASE DESCRIBE THE ACTIVITIES UNDERTAKEN BY DEC TO 5 ENCOURAGE NON-RESIDENTIAL CUSTOMERS TO OPT INTO ITS

#### **PROGRAMS GOING FORWARD.**

A.

In addition to the structural enhancements that were incorporated into DEC's portfolio approved in the Sub 1032 Order, DEC continues to enhance its non-residential portfolio through both program additions and program enhancements to make opting into the Rider more attractive to customers. In 2014, DEC successfully commercialized its Smart Energy Now Program and made it available across its entire service territory through the SEO program. In 2014, DEC also worked to develop a midstream channel for its Non-residential Prescriptive Program to provide customers with yet another way to take advantage of the program by working directly with distributors. The Company also worked on developing a streamlined approach to the Non-residential Custom Program application process in order to remove some of the traditional barriers to participation. The Company plans to bring this approach to market in 2015.

#### VI. THE VINTAGE 2016 COMPONENT OF RIDER 7

1	Q.	WHAT IS THE PRIMARY DIFFERENCE BETWEEN THE VINTAGE
2		2016 COMPONENT OF DEC'S PROPOSED RIDER 7 AND THE
3		SAVE-A-WATT TRUE-UP PORTION OF THE PROPOSED RIDER 7?
4	A.	The primary difference is that the revenue requirement calculation for the
5		Vintage 2016 component of the Rider 7 filing applies the shared savings
6		recovery mechanism approved in the Sub 1032 Order.
7	Q.	PLEASE PROVIDE AN OVERVIEW OF THE SHARED SAVINGS
8		RECOVERY MECHANISM APPROVED IN DOCKET NO. E-7, SUB
9		1032.
10	A.	Pursuant to the Stipulation, DEC's cost recovery mechanism allows it to (1)
11		recover the reasonable and prudent costs incurred for adopting and
12		implementing DSM and EE measures in accordance with N.C. Gen. Stat. §62-
13		133.9 and Commission Rules R8-68 and R8-69; (2) recover net lost revenues
14		incurred for up to 36 months of a measure's life for EE programs; and (3) earn
15		a Portfolio Performance Incentive ("PPI") based upon the sharing of 11.5% of
16		the net savings achieved through DEC's EE and DSM programs on an annual
17		basis.
18	Q.	PLEASE EXPLAIN HOW DEC DETERMINES THE PPI.
19	A.	First, DEC determines the net savings eligible for incentive by subtracting the
20		present value of the annual lifetime EE and DSM program costs (excluding
21		approved low-income programs as described below) from the net present
22		value of the annual lifetime avoided costs achieved through the Company's

1	programs (again, excluding approved low-income programs). The Company
2	then multiplies the net savings eligible for incentive by the 11.5% shared
3	savings percentage to determine its pretax incentive.

## 4 Q. PLEASE EXPLAIN IF DEC EXCLUDES ANY PROGRAMS FROM 5 THE DETERMINATION OF ITS PPI CALCULATION.

- A. Consistent with the Stipulation, DEC has excluded the impacts and costs associated with the Income-Qualified EE and Weatherization Program from its calculation of the PPI. At the time the program was approved, it was not cost-effective, but was approved based on its societal benefit. As such, although DEC is eligible to recover the program costs and 36 months of the net lost revenues associated with the impacts of the program, it does not earn an incentive, and the negative net savings associated with these types of programs is not factored into the calculation of the annual shared savings PPI.
- 14 Q. PLEASE EXPLAIN HOW PROGRAMS THAT ARE DETERMINED
  15 NOT TO BE COST-EFFECTIVE, BUT ARE OFFERED BY THE
  16 COMPANY ARE TREATED.
- 17 A. Duke Energy Carolinas recognizes that there are certain EE programs that
  18 may not be cost-effective at an annual view, but are nevertheless offered as
  19 DEC evaluates opportunities to redesign the program to restore the program
  20 offerings to cost-effectiveness. As discussed previously, the residential
  21 HVAC EE Program is not cost-effective for Vintage 2016, but DEC continues
  22 to offer it. For this program, because it was approved as a cost effective

6

7

8

9

10

11

12

program offering, DEC is eligible to recover the program costs and 36 months of the net lost revenues associated with the impacts of the program, but has factored in the negative net savings into the calculation of the projected annual shared savings PPI.

#### VII. PROJECTED RESULTS

# Q. PLEASE PROVIDE A PROJECTION OF THE RESULTS THAT DEC EXPECTS TO SEE FROM IMPLEMENTATION OF THE NEW PORTFOLIO.

Consistent with its practices during the save-a-watt pilot, DEC will update the actual and projected EE achievement levels in its annual Rider EE filing to account for any program or measure additions based on the performance of programs, market conditions, economics and consumer demand. The actual results for Vintage 2014 and projection of the results for the next three years as well as the associated projected program expense for DEC's portfolio of programs are summarized in Table 2 below:

16 **Table 2.** 

1

2

3

4

5

9

10

11

12

13

14

15

A.

Duke Energy Carolinas System (NC & SC) EE/DSM Portfolio 2014 Actual Results and 2015-2017 Projected Results											
	2014 2015 2016										
Annual System MW	880	970	1,047	1,049							
Annual System Net MWh	545,986	413,574	591,015	434,467							
Annual Program Costs (Millions)	\$90	\$105	\$124	\$111							

These projections are very similar to those provided by DEC and approved by
the Commission in Docket No. E-7, Sub 1032. The projected impacts and
cost for Vintage 2016 are different as a result of updated participation
estimates as well as the EM&V results that have been applied to the following
programs: My Home Energy Report, Appliance Recycling, the Residential
Neighborhood Component of the Income-Qualified EE and Weatherization
Program, the Specialty Bulb Measures included in the Energy Efficient
Appliances and Devices Program, the Tune and Seal elements of the HVAC
EE Program, Power Manager and PowerShare. In addition, the Vintage 2016
projected impacts and costs reflect projected participation in SEO and SBES,
the two new programs approved during Vintage 2014.

### VIII. COLLABORATIVE DISCUSSIONS AND COMPANY COMMITMENTS

- Q. PLEASE PROVIDE AN UPDATE OF THE STATUS OF THE COLLABORATIVE'S DISCUSSION OF COMBINED HEAT AND POWER ("CHP").
- A. When DEC conducted its first quarter Collaborative meeting on February 26,
  2015, one of the agenda items discussed was the potential to supplement its
  current capability to incentivize CHP through its Non-Residential Custom
  Program with a new dedicated CHP Program Pilot. During the meeting Isaac
  Panzarella of North Carolina State University presented information regarding
  other states' CHP programs, as well as his work related to estimating the

potential for CHP in North Carolina. Following his presentation, the Collaborative discussed the belief of some stakeholders that a dedicated pilot program would cause more awareness among potential CHP customers, since there have been no application filed for CHP under the Custom Program to date. As a result of the meeting, the Company agreed to work to establish a CHP Working Group ("CWG") consisting of technical experts, legal support and other interested stakeholders and to conduct the first CWG meeting no later than March 31, 2015. In this meeting, the CWG will discuss and evaluate potential constructs for a CHP Pilot Program, which could then be modeled by the Company to determine cost-effectiveness and feasibility. In the event that a CHP Pilot Program is not developed and filed with the Commission prior to DEC's next EE/DSM annual filing, DEC will report the outcome of the CWG meetings in its 2016 filing.

### 14 Q. HAS DEC IMPLEMENTED THE NORTH CAROLINA INCOME-15 QUALIFIED EE WEATHERIZATION PROGRAM?

A. As discussed earlier, due to the unfortunate withdrawal of the State Energy Office from discussions to establish it as the Program administrator, DEC was forced to select another program administrator for the program, which has delayed program implementation until late March 2015. The Company will continue to provide updates to the Collaborative on the implementation of this program and will also update the Commission in next year's annual filing.

## Q. PLEASE PROVIDE AN UPDATE ON THE RESULTS FROM CHANGES MADE TO REDUCE OPT OUTS.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

A.

In March of 2014, DEC offered customers who had previously elected to opt out in the annual window the opportunity to opt in the first week of March (five business days). During the five-day period, DEC received notification that 101 customer accounts accounting for a total annual usage of 147,294.5 MWh elected to opt in. The implementation of the additional window allowed for these customers to opt in to participate in EE and/or DSM programs that otherwise would not have had this option. In addition to the annual opt-in window, the Sub 1032 Order approved DEC's request to increase the incentive up to 75 percent of the cost difference between new standard equipment and new higher efficiency equipment for measures offered in the Non-Residential Smart \$aver Program. To date, DEC has not had EM&V performed on the Non-Residential Smart \$aver Program that could potentially provide insight into isolating the effect of the increase to 75 percent has had on opt-out. Given the number of changes that have occurred with the portfolio and the opt out eligibility, without the benefit of any EM&V results DEC cannot determine the impact this change has had on opt-out at this time. The Company will continue to monitor opt out trends and will attempt to further evaluate the impact of the incentive increases upon receiving EM&V results.

#### IX. <u>CONCLUSION</u>

- 1 Q. DOES THIS CONCLUDE YOUR PRE-FILED DIRECT TESTIMONY?
- 2 A. Yes.

#### Duke Energy Carolinas, LLC EE Vintage 1 (June 1, 2009 - December 31, 2009) Docket Number E-7, Sub 1073

Load Impacts and Avoided Cost Revenue Requirements by Program

				Α	В	С		D
Residential Programs	System kW Reduction - Summer Peak	System Energy Reduction (kWh)	-	m Avoided Cost ue Requirement @50%	System Avoided Cost @ 100%	NC Retail kWh Sales Allocation Factor (Miller Exhibit 5, Pg. 1)	NC I	Residential Avoided Costs A * C
Line EE Programs (at 50% Avoided Cost)								
1 Residential Energy Assessments	1,057	8,369,462	\$	1,106,481		73.0077318%	\$	807,817
2 Smart Saver® for Residential Customers	1,592	12,547,819		1,940,744	3,881,488	73.0077318%		1,416,893
3 Low Income Energy Efficiency and Weatherization Assistance	143	1,354,096		141,337	282,675	73.0077318%		103,187
4 Energy Efficiency Education Program for Schools	56	303,763	Ċ	55,373	110,746	73.0077318%		40,427
5 Total for Residential Conservation Programs	2,849	22,575,141	\$	3,243,936	\$ 6,487,871		\$	2,368,324
			-	m Avoided Cost ue Requirement @75%	System Avoided Cost @ 100%	NC Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 1)		A6 * C6
6 Total DSM Programs (at 75% Avoided Cost)	116,172		\$	4,655,124	\$ 6,206,832	33.9010659%	\$	1,578,137
	System kW Reduction -	System Energy	-	m Avoided Cost lue Requirement	System Avoided Cost @ 100%	NC Retail kWh Sales Allocation Factor (Miller	NC No	n-Residential Avoided Costs A * C
Non Posidontial Drograms	Summer Peak	Reduction (kWh)		@50%		Exhibit 5, Pg. 1)		
Non-Residential Programs								
EE Programs (at 50% Avoided Cost)								
7 Smart Saver® for Non-Residential Customers Lighting	5,267	28,004,505	\$	5,247,545		73.0077318%	\$	3,831,113
8 Smart Saver® for Non-Residential Customers Motors	124	624,404		183,846	367,691	73.0077318%		134,222
9 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	-	-		-	-	73.0077318%		-
10 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products	46	257,738		67,096	134,192	73.0077318%		48,985
11 Smart Saver® for Non-Residential Customers - HVAC 12 Smart Saver® for Non-Residential Customers - Custom Rebate	267	765,127		295,533	591,065	73.0077318% 73.0077318%		215,762
13 Total for Non-Residential Conservation Programs		232,797 29,884,571	Ś	30,165 5,824,184	\$ 11,648,368	- /3.00//318%	Ś	22,023 4,252,105
	, , , , , , , , , , , , , , , , , , ,	, ,	-	m Avoided Cost lue Requirement @75%	System Avoided Cost @ 100%	NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 1)		A14* C14
14 Total DSM Programs (at 75% Avoided Cost)	116,172		\$	4,655,124	\$ 6,206,832	39.9179344%	\$	1,858,229
Total DSM Program Breakdown	F7 40 4		_	m Avoided Cost lue Requirement @75%	System Avoided Cost @ 100%	NC Retail Peak Demand Allocation Factor (Miller Exhibit 5, Pg.1)		A17* C17
15 Power Manager (Residential)	57,494	-	\$	3,082,269				
16 Power Share (Non-Residential)	58,678			1,572,855	2,097,140	72.040000101		2.422.222
17 Total DSM	116,172	-	\$	4,655,124	\$ 6,206,833	73.8190004%	Ş	3,436,366

# Duke Energy Carolinas, LLC EE Vintage 1 ( January 1, 2010 - December 31, 2010) Docket Number E-7, Sub 1073 Load Impacts and Avoided Cost Revenue Requirements by Program

				Α	В	С		D
	System kW Reduction -	System Energy	-	em Avoided Cost	System Avoided Cost @	NC Retail kWh Sales Allocation Factor (Miller	NC	Residential Avoided Costs A * C
Residential Programs	Summer Peak	Reduction (kWh)	Keve	nue Requirement @50%	100%	Exhibit 5, Pg. 2)		ATC
Line EE Programs (at 50% Avoided Cost)								
1 Residential Energy Assessments	1,563	11,178,033	\$	1,549,012	\$ 3,098,024	72.7072722%	\$	1,126,244
2 Smart Saver® for Residential Customers	41,497	381,777,103	*	42,560,548	85,121,096	72.7072722%	*	30,944,613
3 Low Income Energy Efficiency and Weatherization Assistance	599	5,663,263		591,118	1,182,236	72.7072722%		429,786
4 Energy Efficiency Education Program for Schools	469	2,526,416		460,540	921,080	72.7072722%		334,846
5 Residential Retrofit Pilot	-	-		-	-	72.7072722%		-
6 Home Energy Comparison Report (My Home Energy Report)	159	854,645		24,503	49,006	72.7072722%		17,815
7 Total for Residential Conservation Programs	44,287	401,999,460	\$	45,185,721	\$ 90,371,442		\$	32,853,305
			-	em Avoided Cost nue Requirement @75%	System Avoided Cost @ 100%	NC Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 2)		A8 * C8
8 Total DSM Programs (at 75% Avoided Cost)	438,636		\$	23,481,287	\$ 31,308,383	34.4404513%	\$	8,087,061
							NC No	n-Residential Avoided Costs
	System kW Reduction -	6 . 1 5	-	em Avoided Cost	System Avoided Cost @	NC Retail kWh Sales		A * C
	Summer Peak	System Energy Reduction (kWh)	Reve	nue Requirement @50%	100%	Allocation Factor (Miller Exhibit 5, Pg. 2)		
Non-Residential Programs	•			•	100%	•		
_	•		Keve	•	100%	•		
EE Programs (at 50% Avoided Cost)	Summer Peak	Reduction (kWh)		@50%		Exhibit 5, Pg. 2)	<u> </u>	
_	Summer Peak 13,466	Reduction (kWh)  68,411,677	\$	<b>@50%</b> 13,710,093	\$ 27,420,185	72.7072722%	\$	9,968,234
EE Programs (at 50% Avoided Cost)  9 Smart Saver® for Non-Residential Customers Lighting	Summer Peak	Reduction (kWh)		@50%		Exhibit 5, Pg. 2)	\$	
EE Programs (at 50% Avoided Cost)  9 Smart Saver® for Non-Residential Customers Lighting  10 Smart Saver® for Non-Residential Customers Motors	Summer Peak 13,466	Reduction (kWh)  68,411,677 2,724,749		<b>@50%</b> 13,710,093  798,480	\$ 27,420,185 1,596,959	72.7072722% 72.7072722%	\$	9,968,234 580,553
EE Programs (at 50% Avoided Cost)  9 Smart Saver® for Non-Residential Customers Lighting  10 Smart Saver® for Non-Residential Customers Motors  11 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	Summer Peak  13,466 533 0	Reduction (kWh)  68,411,677 2,724,749 380		<b>@50%</b> 13,710,093  798,480  44	\$ 27,420,185 1,596,959 87	72.7072722% 72.7072722% 72.7072722%	\$	9,968,234 580,553 32
EE Programs (at 50% Avoided Cost)  9 Smart Saver® for Non-Residential Customers Lighting  10 Smart Saver® for Non-Residential Customers Motors  11 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)  12 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products	13,466 533 0 155	68,411,677 2,724,749 380 788,310		<b>@50%</b> 13,710,093 798,480 44 191,588	\$ 27,420,185 1,596,959 87 383,176	72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722%	\$	9,968,234 580,553 32 139,298
EE Programs (at 50% Avoided Cost)  9 Smart Saver® for Non-Residential Customers Lighting 10 Smart Saver® for Non-Residential Customers Motors 11 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 12 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 13 Smart Saver® for Non-Residential Customers - HVAC	13,466 533 0 155 1,586	68,411,677 2,724,749 380 788,310 3,964,553		<b>@50%</b> 13,710,093 798,480 44 191,588 1,734,583	\$ 27,420,185 1,596,959 87 383,176 3,469,166 7,216,325	72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722%	\$	9,968,234 580,553 32 139,298 1,261,168
EE Programs (at 50% Avoided Cost)  9 Smart Saver® for Non-Residential Customers Lighting 10 Smart Saver® for Non-Residential Customers Motors 11 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 12 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 13 Smart Saver® for Non-Residential Customers - HVAC 14 Smart Saver® for Non-Residential Customers - Custom Rebate	13,466 533 0 155 1,586 2,716	68,411,677 2,724,749 380 788,310 3,964,553 21,205,380	\$ \$	@50%  13,710,093 798,480 44 191,588 1,734,583 3,608,163	\$ 27,420,185 1,596,959 87 383,176 3,469,166 7,216,325	72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% PACK Non-Residential Peak Demand Allocation Factor		9,968,234 580,553 32 139,298 1,261,168 2,623,397 14,572,682
EE Programs (at 50% Avoided Cost)  9 Smart Saver® for Non-Residential Customers Lighting 10 Smart Saver® for Non-Residential Customers Motors 11 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 12 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 13 Smart Saver® for Non-Residential Customers - HVAC 14 Smart Saver® for Non-Residential Customers - Custom Rebate 15 Total for Non-Residential Conservation Programs	13,466 533 0 155 1,586 2,716 18,456	68,411,677 2,724,749 380 788,310 3,964,553 21,205,380	\$ Syste	@50%  13,710,093 798,480 44 191,588 1,734,583 3,608,163 20,042,949  em Avoided Cost nue Requirement @75%	\$ 27,420,185 1,596,959 87 383,176 3,469,166 7,216,325 \$ 40,085,899 System Avoided Cost @ 100%	72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722%  NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 2)	\$	9,968,234 580,553 32 139,298 1,261,168 2,623,397 14,572,682
EE Programs (at 50% Avoided Cost)  9 Smart Saver® for Non-Residential Customers Lighting 10 Smart Saver® for Non-Residential Customers Motors 11 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 12 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 13 Smart Saver® for Non-Residential Customers - HVAC 14 Smart Saver® for Non-Residential Customers - Custom Rebate	13,466 533 0 155 1,586 2,716	68,411,677 2,724,749 380 788,310 3,964,553 21,205,380	\$ \$	@50%  13,710,093 798,480 44 191,588 1,734,583 3,608,163 20,042,949  em Avoided Cost nue Requirement	\$ 27,420,185 1,596,959 87 383,176 3,469,166 7,216,325 \$ 40,085,899 System Avoided Cost @ 100%	72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% PACK Non-Residential Peak Demand Allocation Factor		9,968,234 580,553 32 139,298 1,261,168 2,623,397 14,572,682
EE Programs (at 50% Avoided Cost)  9 Smart Saver® for Non-Residential Customers Lighting 10 Smart Saver® for Non-Residential Customers Motors 11 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 12 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 13 Smart Saver® for Non-Residential Customers - HVAC 14 Smart Saver® for Non-Residential Customers - Custom Rebate 15 Total for Non-Residential Conservation Programs  16 Total DSM Programs (at 75% Avoided Cost)	13,466 533 0 155 1,586 2,716 18,456	68,411,677 2,724,749 380 788,310 3,964,553 21,205,380	\$ Syste Rever	@50%  13,710,093	\$ 27,420,185 1,596,959 87 383,176 3,469,166 7,216,325 \$ 40,085,899 System Avoided Cost @ 100%	72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722%  NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 2)	\$	9,968,234 580,553 32 139,298 1,261,168 2,623,397 14,572,682 A16* C16 9,474,444
EE Programs (at 50% Avoided Cost)  9 Smart Saver® for Non-Residential Customers Lighting 10 Smart Saver® for Non-Residential Customers Motors 11 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 12 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 13 Smart Saver® for Non-Residential Customers - HVAC 14 Smart Saver® for Non-Residential Customers - Custom Rebate 15 Total for Non-Residential Conservation Programs  16 Total DSM Programs (at 75% Avoided Cost)  Total DSM Program Breakdown	13,466 533 0 155 1,586 2,716 18,456	68,411,677 2,724,749 380 788,310 3,964,553 21,205,380	\$ Syste Rever	@50%  13,710,093 798,480 44 191,588 1,734,583 3,608,163 20,042,949  em Avoided Cost nue Requirement @75%  23,481,287  em Avoided Cost nue Requirement @75%	\$ 27,420,185 1,596,959 87 383,176 3,469,166 7,216,325 \$ 40,085,899 System Avoided Cost @ 100% \$ 31,308,383	72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722%  NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 2) 40.3489126%  NC Retail Peak Demand Allocation Factor (Miller	\$	9,968,234 580,553 32 139,298 1,261,168 2,623,397 14,572,682
EE Programs (at 50% Avoided Cost)  9 Smart Saver® for Non-Residential Customers Lighting 10 Smart Saver® for Non-Residential Customers Motors 11 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 12 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 13 Smart Saver® for Non-Residential Customers - HVAC 14 Smart Saver® for Non-Residential Customers - Custom Rebate 15 Total for Non-Residential Conservation Programs  16 Total DSM Programs (at 75% Avoided Cost)	13,466 533 0 155 1,586 2,716 18,456	68,411,677 2,724,749 380 788,310 3,964,553 21,205,380	\$ Syste Rever	@50%  13,710,093	\$ 27,420,185 1,596,959 87 383,176 3,469,166 7,216,325 \$ 40,085,899 System Avoided Cost @ 100% \$ 31,308,383	72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722% 72.7072722%  NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 2) 40.3489126%  NC Retail Peak Demand Allocation Factor (Miller	\$	9,968,234 580,553 32 139,298 1,261,168 2,623,397 14,572,682 A16* C16 9,474,444

<sup>(1)</sup> Total System DSM programs allocated to Residential and Non-Residential based on contribution to retail system peak Note: Schedule may not foot due to rounding

#### Duke Energy Carolinas, LLC EE Vintage 2 (January 1, 2011 - December 31, 2011) Docket Number E-7, Sub 1073

Load Impacts and Avoided Cost Revenue Requirements by Program

				Α	В	С		D
Line Residential Programs	System kW Reduction - Summer Peak	System Energy Reduction (kWh)	-	em Avoided Cost ue Requirement @ 50%	System Avoided Cost @ 100%	NC Retail kWh Sales Allocation Factor (Miller Exhibit 5, Pg. 3)	NC	Residential Avoided Costs A * C
EE Programs (at 50% Avoided Cost)	4.006	0.007.046		4 24 4 42 5	4 2 520 274	72 60724540/		055.040
1 Residential Energy Assessments	1,306	9,227,946	\$	1,314,136		72.6972151%	\$	955,340
2 Smart Saver® for Residential Customers	39,712	367,409,449		40,319,118	80,638,236	72.6972151%		29,310,876
3 Low Income Energy Efficiency and Weatherization Assistance	52	488,949		50,792	101,583	72.6972151%		36,924
4 Energy Efficiency Education Program for Schools 5 Residential Retrofit Pilot	262	1,413,208		265,292	530,585	72.6972151%		192,860
	21	126,564		40,936	81,871	72.6972151%		29,759
6 Home Energy Comparison Report (My Home Energy Report)	<u>66</u> 41,419	356,218 379,022,334	\$	30,711 42,020,984	\$ 84,041,969	72.6972151%	\$	22,326 30,548,085
7 Total for Residential Conservation Programs	41,419	3/3,022,334	Syste	em Avoided Cost ue Requirement @	System Avoided Cost @ 100%	NC Residential Peak Demand Allocation Factor	,	30,346,063
				<b>75%</b>	100%	(Miller Exhibit 5, Pg. 3)		A8 * C8
8 Total DSM Programs (at 75% Avoided Cost)	548,335		\$	30,101,993	\$ 40,135,991	32.2293181%	\$	9,701,667
Non-Residential Programs	System kW Reduction - Summer Peak	System Energy Reduction (kWh)	-	em Avoided Cost ue Requirement @ 50%	System Avoided Cost @ 100%	NC Retail kWh Sales Allocation Factor (Miller Exhibit 5, Pg. 3)	NC No	on-Residential Avoided Costs A * C
EE Programs (at 50% Avoided Cost)								
·	11 220	64 100 217	ċ	13,497,639	¢ 26.00E.279	72.6972151%	ċ	0.912.407
9 Smart Saver® for Non-Residential Customers Lighting 10 Smart Saver® for Non-Residential Customers Motors	11,329	64,190,217 5,750,908	\$	1,286,403		72.6972151% 72.6972151%	\$	9,812,407
11 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	1,107 82	503,823		54,884	2,572,806 109,767	72.6972151% 72.6972151%		935,179 39,899
12 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products	184	1,012,402		263,359	526,717	72.6972151% 72.6972151%		191,454
13 Smart Saver® for Non-Residential Customers - HVAC	1,869	4,987,231		2,094,930	4,189,860	72.6972151%		1,522,956
14 Smart Saver® for Non-Residential Customers - Custom Rebate	6,585	55,974,704		11,605,896	23,211,792	72.6972151%		8,437,163
15 Smart Energy Now	692	21,876,936		2,164,517	4,329,034	72.6972151%		1,573,544
16 Total for Non-Residential Conservation Programs	21,848	154,296,221	\$	30,967,627			\$	22,512,602
			-	em Avoided Cost ue Requirement @ 75%	System Avoided Cost @ 100%	NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 3)		A17* C17
17 Total DSM Programs (at 75% Avoided Cost)	548,335		\$	30,101,993	\$ 40,135,991	42.2350050%	\$	12,713,578
			-	em Avoided Cost nue Requirement	System Avoided Cost @	NC Retail Peak Demand Allocation Factor (Miller		
Total DSM Program Breakdown				<b>@75</b> %	100%	Exhibit 5, Pg.3)		A20* C20
Total DSM Program Breakdown  18 Power Manager (Residential)	226,935	-	\$	12,470,132	\$ 16,626,843	Exhibit 5, Pg.3)		A20* C20
_	226,935 321,400 548,335	- -	\$ \$		\$ 16,626,843 \$ 23,509,148	74.4643230%		A20* C20 22,415,245

#### Duke Energy Carolinas, LLC EE Vintage 3 (January 1, 2012 - December 31, 2012) Docket Number E-7, Sub 1073

Load Impacts and Avoided Cost Revenue Requirements by Program

				Α	В	С		D
Line Residential Programs	System kW Reduction - Summer Peak	System Energy Reduction (kWh)	-	em Avoided Cost ne Requirement @ 50%	System Avoided Cost @ 100%	NC Retail kWh Sales Allocation Factor (Miller Exhibit 5, Pg. 4)	NC F	Residential Avoided Costs A * C
EE Programs (at 50% Avoided Cost)								
1 Appliance Recycling	143	1,038,548	\$	145,177	\$ 290,354	72.7194575%	\$	105,572
2 Residential Energy Assessments	1,607	10,486,549		1,773,940	3,547,879	72.7194575%		1,289,999
3 Smart Saver® for Residential Customers	24,247	224,336,833		25,851,451	51,702,902	72.7194575%		18,799,035
4 Low Income Energy Efficiency and Weatherization Assistance	-	-		-	-	72.7194575%		-
5 Energy Efficiency Education Program for Schools	1,748	9,422,807		1,781,282	3,562,564	72.7194575%		1,295,338
6 Residential Retrofit Pilot	47	283,678		94,987	189,973	72.7194575%		69,074
7 Home Energy Comparison Report (My Home Energy Report)	10,461	49,339,464		1,428,665	2,857,330	_		1,038,918
8 Total for Residential Conservation Programs	38,253	294,907,880	\$	31,075,501	\$ 62,151,002		\$	22,597,936
			-	em Avoided Cost le Requirement @ 75%	System Avoided Cost @ 100%	NC Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 4)		A9 * C9
9 Total DSM Programs (at 75% Avoided Cost)	645,443		\$	36,331,282	\$ 48,441,710		\$	12,657,408
			D <b>Syste</b>	em Avoided Cost	System Avoided Cost @	NC Retail kWh Sales	NC No	n-Residential Avoided Costs
	System kW Reduction - Summer Peak	System Energy Reduction (kWh)	Revenu	ie Requirement @ 50%	100%	Allocation Factor (Miller Exhibit 5, Pg. 4)		A * C
Non-Residential Programs	•		Revenu	•	•	Allocation Factor (Miller Exhibit 5, Pg. 4)		A * C
Non-Residential Programs	•		Revenu	•	•	•		A * C
EE Programs (at 50% Avoided Cost)	Summer Peak	Reduction (kWh)	Revenu	50%	100%	Exhibit 5, Pg. 4)	<u> </u>	
EE Programs (at 50% Avoided Cost)  10 Smart Saver® for Non-Residential Customers Lighting	Summer Peak 12,689	Reduction (kWh) 73,807,092	Revenu \$	<b>50%</b> 15,930,066	<b>100%</b> \$ 31,860,133	72.7194575%	\$	11,584,258
EE Programs (at 50% Avoided Cost)  10 Smart Saver® for Non-Residential Customers Lighting 11 Smart Saver® for Non-Residential Customers Motors	Summer Peak	Reduction (kWh)	<b>Revenu</b> \$	50%	\$ 31,860,133 2,772,590	72.7194575% 72.7194575%	\$	
EE Programs (at 50% Avoided Cost)  10 Smart Saver® for Non-Residential Customers Lighting 11 Smart Saver® for Non-Residential Customers Motors 12 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	12,689 1,132	73,807,092 5,967,650	<b>Revenu</b> \$	15,930,066 1,386,295	\$ 31,860,133 2,772,590	72.7194575% 72.7194575% 72.7194575% 72.7194575%	\$	11,584,258 1,008,106 -
EE Programs (at 50% Avoided Cost)  Smart Saver® for Non-Residential Customers Lighting  Smart Saver® for Non-Residential Customers Motors  Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)  Smart Saver® for Non-Residential Customers - Energy Star Food Service Products	12,689 1,132 - 366	73,807,092 5,967,650 - 1,950,854	\$	15,930,066 1,386,295 - 513,211	\$ 31,860,133 2,772,590 - 1,026,423	72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575%	\$	11,584,258 1,008,106 - 373,205
EE Programs (at 50% Avoided Cost)  10 Smart Saver® for Non-Residential Customers Lighting 11 Smart Saver® for Non-Residential Customers Motors 12 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 13 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 14 Smart Saver® for Non-Residential Customers - HVAC	12,689 1,132 - 366 1,716	73,807,092 5,967,650 - 1,950,854 4,120,481	\$	15,930,066 1,386,295 - 513,211 2,004,592	\$ 31,860,133 2,772,590 - 1,026,423 4,009,184	72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575%	\$	11,584,258 1,008,106 - 373,205 1,457,728
EE Programs (at 50% Avoided Cost)  Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors  Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)  Smart Saver® for Non-Residential Customers - Energy Star Food Service Products  Smart Saver® for Non-Residential Customers - HVAC  Smart Saver® for Non-Residential Customers - Custom Rebate	12,689 1,132 - 366 1,716 15,371	73,807,092 5,967,650 - 1,950,854 4,120,481 113,380,706	\$	50% 15,930,066 1,386,295 - 513,211 2,004,592 24,480,159	\$ 31,860,133 2,772,590 - 1,026,423 4,009,184 48,960,318	72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575%	\$	11,584,258 1,008,106 - 373,205 1,457,728 17,801,839
EE Programs (at 50% Avoided Cost)  10 Smart Saver® for Non-Residential Customers Lighting 11 Smart Saver® for Non-Residential Customers Motors 12 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 13 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 14 Smart Saver® for Non-Residential Customers - HVAC	12,689 1,132 - 366 1,716	73,807,092 5,967,650 - 1,950,854 4,120,481	\$	15,930,066 1,386,295 - 513,211 2,004,592	\$ 31,860,133 2,772,590 - 1,026,423 4,009,184 48,960,318 2,397,168	72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575%	\$	11,584,258 1,008,106 - 373,205 1,457,728
EE Programs (at 50% Avoided Cost)  Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors  Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)  Smart Saver® for Non-Residential Customers - Energy Star Food Service Products  Smart Saver® for Non-Residential Customers - HVAC  Smart Saver® for Non-Residential Customers - Custom Rebate  Smart Energy Now	12,689 1,132 - 366 1,716 15,371 386	73,807,092 5,967,650 - 1,950,854 4,120,481 113,380,706 11,795,664	\$ \$	15,930,066 1,386,295 - 513,211 2,004,592 24,480,159 1,198,584	\$ 31,860,133 2,772,590 - 1,026,423 4,009,184 48,960,318 2,397,168	72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575%		11,584,258 1,008,106 - 373,205 1,457,728 17,801,839 871,604
EE Programs (at 50% Avoided Cost)  Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) Smart Saver® for Non-Residential Customers - Energy Star Food Service Products Smart Saver® for Non-Residential Customers - HVAC Smart Saver® for Non-Residential Customers - Custom Rebate Smart Energy Now	12,689 1,132 - 366 1,716 15,371 386	73,807,092 5,967,650 - 1,950,854 4,120,481 113,380,706 11,795,664	\$ \$	15,930,066 1,386,295 513,211 2,004,592 24,480,159 1,198,584 45,512,908 em Avoided Cost the Requirement @	\$ 31,860,133 2,772,590 - 1,026,423 4,009,184 48,960,318 2,397,168 \$ 91,025,815 System Avoided Cost @ 100%	72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% MC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 4)		11,584,258 1,008,106 - 373,205 1,457,728 17,801,839 871,604 33,096,739
EE Programs (at 50% Avoided Cost)  10 Smart Saver® for Non-Residential Customers Lighting 11 Smart Saver® for Non-Residential Customers Motors 12 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 13 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 14 Smart Saver® for Non-Residential Customers - HVAC 15 Smart Saver® for Non-Residential Customers - Custom Rebate 16 Smart Energy Now 17 Total for Non-Residential Conservation Programs  18 Total DSM Programs (at 75% Avoided Cost)  Total DSM Program Breakdown	12,689 1,132 - 366 1,716 15,371 386 31,660	73,807,092 5,967,650 - 1,950,854 4,120,481 113,380,706 11,795,664	\$ Syste Revenue	15,930,066 1,386,295 513,211 2,004,592 24,480,159 1,198,584 45,512,908 em Avoided Cost ise Requirement @ 75% 36,331,282 em Avoided Cost ise Requirement @ 75%	\$ 31,860,133 2,772,590 - 1,026,423 4,009,184 48,960,318 2,397,168 \$ 91,025,815 System Avoided Cost @ 100% \$ 48,441,710	72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% MC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 4)	\$	11,584,258 1,008,106 - 373,205 1,457,728 17,801,839 871,604 33,096,739
EE Programs (at 50% Avoided Cost)  10 Smart Saver® for Non-Residential Customers Lighting 11 Smart Saver® for Non-Residential Customers Motors 12 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 13 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 14 Smart Saver® for Non-Residential Customers - HVAC 15 Smart Saver® for Non-Residential Customers - Custom Rebate 16 Smart Energy Now 17 Total for Non-Residential Conservation Programs  18 Total DSM Programs (at 75% Avoided Cost)  Total DSM Program Breakdown 19 Power Manager (Residential)	12,689 1,132 - 366 1,716 15,371 386 31,660	73,807,092 5,967,650 - 1,950,854 4,120,481 113,380,706 11,795,664	\$ Syste Revenue	15,930,066 1,386,295 513,211 2,004,592 24,480,159 1,198,584 45,512,908 m Avoided Cost ie Requirement @ 75% 36,331,282 m Avoided Cost iue Requirement @75% 15,134,607	\$ 31,860,133 2,772,590 - 1,026,423 4,009,184 48,960,318 2,397,168 \$ 91,025,815 \$ 91,025,815 \$ 48,441,710 \$ 48,441,710 \$ 20,179,477	72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575%  NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 4) 39.8808428%  NC Retail Peak Demand Allocation Factor (Miller	\$	11,584,258 1,008,106 - 373,205 1,457,728 17,801,839 871,604 33,096,739 A18* C18 14,489,221
EE Programs (at 50% Avoided Cost)  Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) Smart Saver® for Non-Residential Customers - Energy Star Food Service Products Smart Saver® for Non-Residential Customers - HVAC Smart Saver® for Non-Residential Customers - Custom Rebate Smart Energy Now Total for Non-Residential Conservation Programs  Total DSM Programs (at 75% Avoided Cost)  Total DSM Program Breakdown	12,689 1,132 - 366 1,716 15,371 386 31,660	73,807,092 5,967,650 - 1,950,854 4,120,481 113,380,706 11,795,664	\$ Syste Revenue	15,930,066 1,386,295 513,211 2,004,592 24,480,159 1,198,584 45,512,908 em Avoided Cost ise Requirement @ 75% 36,331,282 em Avoided Cost ise Requirement @ 75%	\$ 31,860,133 2,772,590 - 1,026,423 4,009,184 48,960,318 2,397,168 \$ 91,025,815 \$ 91,025,815 \$ 48,441,710 \$ 48,441,710 \$ 20,179,477 \$ 28,262,233	72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575% 72.7194575%  NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 4) 39.8808428%  NC Retail Peak Demand Allocation Factor (Miller Exhibit 5, Pg.4)	\$	11,584,258 1,008,106 - 373,205 1,457,728 17,801,839 871,604 33,096,739 A18* C18 14,489,221

#### Duke Energy Carolinas, LLC EE Vintage 4 (January 1, 2013 - December 31, 2013) Docket Number E-7, Sub 1073

Load Impacts and Avoided Cost Revenue Requirements by Program

				Α	В	С		D
Line Residential Programs	System kW Reduction - Summer Peak	System Energy Reduction (kWh)	-	m Avoided Cost e Requirement @ 50%	System Avoided Cost @ 100%	NC Retail kWh Sales Allocation Factor (Miller Exhibit 5, Pg. 5)	NC R	Residential Avoided Costs A * C
EE Programs (at 50% Avoided Cost)								
1 Appliance Recycling	668	4,854,769	\$	716,869			\$	523,028
2 Residential Energy Assessments	1,426	7,688,605		2,022,135	4,044,269			1,475,350
3 Smart Saver® for Residential Customers	13,348 212	122,828,597		15,299,257	30,598,514			11,162,345
4 Low Income Energy Efficiency and Weatherization Assistance 5 Residential Neighborhood Program	212	1,141,122		209,005	418,010	72.9600473% 72.9600473%		152,490
6 Energy Efficiency Education Program for Schools	1,011	5,450,099		998,224	1,996,448			- 728,305
7 Home Energy Comparison Report (My Home Energy Report)	23,002	108,666,008		4,695,898	9,391,796			3,426,129
8 Total for Residential Conservation Programs	39,667	250,629,200	\$	23,941,388		_	\$	17,467,647
			-	m Avoided Cost e Requirement @ 75%	System Avoided Cost @ 100%	NC Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 5)		A * C
9 Total DSM Programs (at 75% Avoided Cost)	707,025		\$	40,799,886	\$ 54,399,848		\$	13,880,528
			System	m Avaidad Cast		NC Retail kWh Sales	NC Nor	n-Residential Avoided Costs
Non-Residential Programs	System kW Reduction - Summer Peak	System Energy Reduction (kWh)	-	m Avoided Cost e Requirement @ 50%	System Avoided Cost @ 100%	Allocation Factor (Miller Exhibit 5, Pg. 5)		A * C
Non-Residential Programs	•		-	e Requirement @	•	Allocation Factor (Miller		A * C
EE Programs (at 50% Avoided Cost)	Summer Peak	Reduction (kWh)	Revenu	e Requirement @ 50%	100%	Allocation Factor (Miller Exhibit 5, Pg. 5)		
EE Programs (at 50% Avoided Cost)  10 Smart Saver® for Non-Residential Customers Lighting	Summer Peak 13,096	Reduction (kWh) 76,690,274	-	e Requirement @ 50% 16,327,527	\$ 32,655,054	Allocation Factor (Miller Exhibit 5, Pg. 5)  72.9600473%	\$	11,912,571
EE Programs (at 50% Avoided Cost)  10 Smart Saver® for Non-Residential Customers Lighting 11 Smart Saver® for Non-Residential Customers Motors	13,096 1,570	76,690,274 8,065,178	Revenu	16,327,527 1,965,520	\$ 32,655,054 3,931,040	Allocation Factor (Miller Exhibit 5, Pg. 5)  72.9600473% 72.9600473%	\$	11,912,571 1,434,044
EE Programs (at 50% Avoided Cost)  Smart Saver® for Non-Residential Customers Lighting  Smart Saver® for Non-Residential Customers Motors  Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	13,096 1,570 32	76,690,274 8,065,178 133,175	Revenu	16,327,527 1,965,520 44,887	\$ 32,655,054 3,931,040 89,774	Allocation Factor (Miller Exhibit 5, Pg. 5)  72.9600473% 72.9600473% 72.9600473%	\$	11,912,571 1,434,044 32,750
EE Programs (at 50% Avoided Cost)  10 Smart Saver® for Non-Residential Customers Lighting 11 Smart Saver® for Non-Residential Customers Motors	13,096 1,570 32 209	76,690,274 8,065,178 133,175 1,132,425	Revenu	16,327,527 1,965,520 44,887 335,181	\$ 32,655,054 3,931,040 89,774 670,363	Allocation Factor (Miller Exhibit 5, Pg. 5)  72.9600473% 72.9600473% 72.9600473% 72.9600473%	\$	11,912,571 1,434,044 32,750 244,549
EE Programs (at 50% Avoided Cost)  Smart Saver® for Non-Residential Customers Lighting  Smart Saver® for Non-Residential Customers Motors  Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)  Smart Saver® for Non-Residential Customers - Energy Star Food Service Products	13,096 1,570 32 209 1,912	76,690,274 8,065,178 133,175 1,132,425 5,081,170	Revenu	16,327,527 1,965,520 44,887 335,181 2,277,985	\$ 32,655,054 3,931,040 89,774 670,363 4,555,969	Allocation Factor (Miller Exhibit 5, Pg. 5)  72.9600473% 72.9600473% 72.9600473% 72.9600473% 72.9600473%	\$	11,912,571 1,434,044 32,750 244,549 1,662,019
EE Programs (at 50% Avoided Cost)  10 Smart Saver® for Non-Residential Customers Lighting 11 Smart Saver® for Non-Residential Customers Motors 12 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 13 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 14 Smart Saver® for Non-Residential Customers - HVAC	13,096 1,570 32 209	76,690,274 8,065,178 133,175 1,132,425	Revenu	16,327,527 1,965,520 44,887 335,181	\$ 32,655,054 3,931,040 89,774 670,363 4,555,969 44,556,371	Allocation Factor (Miller Exhibit 5, Pg. 5)  72.9600473% 72.9600473% 72.9600473% 72.9600473% 72.9600473% 72.9600473%	\$	11,912,571 1,434,044 32,750 244,549
EE Programs (at 50% Avoided Cost)  Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors  Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)  Smart Saver® for Non-Residential Customers - Energy Star Food Service Products  Smart Saver® for Non-Residential Customers - HVAC  Smart Saver® for Non-Residential Customers - Custom Rebate	13,096 1,570 32 209 1,912 13,250	76,690,274 8,065,178 133,175 1,132,425 5,081,170 100,660,054	\$ \$ Syste	16,327,527 1,965,520 44,887 335,181 2,277,985 22,278,186	\$ 32,655,054 3,931,040 89,774 670,363 4,555,969 44,556,371	Allocation Factor (Miller Exhibit 5, Pg. 5)  72.9600473% 72.9600473% 72.9600473% 72.9600473% 72.9600473% 72.9600473%		11,912,571 1,434,044 32,750 244,549 1,662,019 16,254,175
EE Programs (at 50% Avoided Cost)  Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors  Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)  Smart Saver® for Non-Residential Customers - Energy Star Food Service Products  Smart Saver® for Non-Residential Customers - HVAC  Smart Saver® for Non-Residential Customers - Custom Rebate	13,096 1,570 32 209 1,912 13,250	76,690,274 8,065,178 133,175 1,132,425 5,081,170 100,660,054	\$ \$ Syste	16,327,527 1,965,520 44,887 335,181 2,277,985 22,278,186 43,229,285 m Avoided Cost e Requirement @	\$ 32,655,054 3,931,040 89,774 670,363 4,555,969 44,556,371 \$ 86,458,571  System Avoided Cost @ 100%	Allocation Factor (Miller Exhibit 5, Pg. 5)  72.9600473% 72.9600473% 72.9600473% 72.9600473% 72.9600473% 72.9600473%  NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 5)		11,912,571 1,434,044 32,750 244,549 1,662,019 16,254,175 31,540,107
EE Programs (at 50% Avoided Cost)  Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) Smart Saver® for Non-Residential Customers - Energy Star Food Service Products Smart Saver® for Non-Residential Customers - HVAC Smart Saver® for Non-Residential Customers - Custom Rebate Total for Non-Residential Conservation Programs  Total DSM Programs (at 75% Avoided Cost)  Total DSM Program Breakdown  Power Manager (Residential)	13,096 1,570 32 209 1,912 13,250 30,070  707,025	76,690,274 8,065,178 133,175 1,132,425 5,081,170 100,660,054	\$ System  \$ System  \$ System  \$	16,327,527 1,965,520 44,887 335,181 2,277,985 22,278,186 43,229,285  m Avoided Cost e Requirement @ 75%  40,799,886  m Avoided Cost ue Requirement @75%  18,993,470	\$ 32,655,054 3,931,040 89,774 670,363 4,555,969 44,556,371 \$ 86,458,571   System Avoided Cost @ 100%  \$ 54,399,848   System Avoided Cost @ 100%  \$ 25,324,627	Allocation Factor (Miller Exhibit 5, Pg. 5)  72.9600473% 72.9600473% 72.9600473% 72.9600473% 72.9600473% 72.9600473%  NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 5)  41.2108021%  NC Retail Peak Demand Allocation Factor (Miller Exhibit 5, Pg.5)	\$	11,912,571 1,434,044 32,750 244,549 1,662,019 16,254,175 31,540,107
EE Programs (at 50% Avoided Cost)  Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) Smart Saver® for Non-Residential Customers - Energy Star Food Service Products Smart Saver® for Non-Residential Customers - HVAC Smart Saver® for Non-Residential Customers - Custom Rebate Total for Non-Residential Conservation Programs  Total DSM Programs (at 75% Avoided Cost)  Total DSM Program Breakdown	13,096 1,570 32 209 1,912 13,250 30,070	76,690,274 8,065,178 133,175 1,132,425 5,081,170 100,660,054	\$ System  \$ System  \$ System  \$	16,327,527 1,965,520 44,887 335,181 2,277,985 22,278,186 43,229,285  m Avoided Cost e Requirement @ 75%  40,799,886  m Avoided Cost ue Requirement @75%	\$ 32,655,054 3,931,040 89,774 670,363 4,555,969 44,556,371 \$ 86,458,571   System Avoided Cost @ 100%  \$ 54,399,848   \$ 25,324,627 \$ 29,075,221	Allocation Factor (Miller Exhibit 5, Pg. 5)  72.9600473% 72.9600473% 72.9600473% 72.9600473% 72.9600473% 72.9600473%  NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5, Pg. 5)  41.2108021%  NC Retail Peak Demand Allocation Factor (Miller Exhibit 5, Pg.5)	\$	11,912,571 1,434,044 32,750 244,549 1,662,019 16,254,175 31,540,107 A* C 16,813,960

# Duke Energy Carolinas, LLC Vintage 2014 True-up for January 1, 2014 to December 31, 2014 Docket Number E-7, Sub 1073 Load Impacts and Estimated Revenue Requirements, excluding Lost Revenue by Program

				Α		В	C =	=(A-B * 11.5%)		D= B+C	E NC Retail kWh Sales		esidential Revenue Requirement
Residential Programs	System kW Reduction - Summer Peak	System Energy Reduction (kWh)	•	em NPV of oided Cost		System Cost	Earne	d Utility Incentive	S	System Cost Plus Incentive	Allocation Factor (Miller Exhibit 5 pg. 6)		D * E
EE Programs													
1 Appliance Recycling Program	709	5,100,458	\$	1,763,411	\$	1,515,867	\$	28,468	\$	1,544,335	72.9600473%	\$	1,126,747
2 Energy Efficiency Education	746	7,098,145		5,157,345		1,963,153		367,332		2,330,485	72.9600473%		1,700,323
3 Energy Efficient Appliances and Devices	18,424	167,039,197		50,838,876		14,738,129		4,151,586		18,889,715	72.9600473%		13,781,945
4 HVAC Energy Efficiency	2,509	4,526,177		7,061,500		4,786,807		261,590		5,048,397	72.9600473%		3,683,313
5 Income Qualified Energy Efficiency and Weatherization Assistance	792	3,374,813		1,675,463		1,917,192				1,917,192	72.9600473%		1,398,784
6 Multi-Family Energy Efficiency	993	11,588,887		5,610,043		1,442,533		479,264		1,921,797	72.9600473%		1,402,144
7 Energy Assessments	1,312	10,599,335		12,827,575		3,605,737		1,060,511		4,666,248	72.9600473%		3,404,497
8 Subtotal	25,485	209,327,011	\$	84,934,213	\$	29,969,419	\$	6,348,750	\$	36,318,168		\$	26,497,753
9 My Home Energy Report (1)	38,579	142,881,676		12,166,183		8,285,066		446,328		8,731,394	72.9600473%		6,370,430
10 Total for Residential Energy Efficiency Programs	64,064	352,208,687	\$	97,100,396	\$	38,254,485	\$	6,795,079	\$	45,049,563		\$	32,868,183
											NC Residential Peak Demand Allocation Factor (Miller Exhibit 5 pg. 6)		D11* E11
11 Total DSM Programs (2)	785,740	-		113,683,464	\$	31,183,185	\$	9,487,532	\$	40,670,718	34.0209980%	\$	13,836,584
12 Total Residential Revenue Requirement												\$	46,704,767
													-Residential Revenue Requirement
	System kW Reduction -	System Energy	-	em NPV of					S	System Cost Plus	NC Retail kWh Sales Allocation Factor (Miller		·
	Summer Peak	Reduction (kWh)	Avo	oided Cost		System Cost	Earne	d Utility Incentive	•	Incentive	Exhibit 5 pg. 6)		D * E
Non-Residential Programs													
EE Programs	4.504	0.420.240		6.050.644		4 450 405		624.052		2 070 247	72.0500.4700/		4 547 040
13 Non Residential Smart Saver Custom Energy Assessments 14 Non Residential Smart Saver Custom	1,504	9,128,218	\$	6,858,644	\$	1,458,195	\$	621,052	\$	2,079,247	72.9600473%	\$	1,517,019
15 Energy Management Information Services	9,392	78,157,513		49,908,871		8,136,712 74,855		4,803,798		12,940,510 66,247	72.9600473% 72.9600473%		9,441,402 48,334
16 Non Residential Smart Saver Energy Efficient Food Service Products	- 164	- 2,340,975		- 1,489,862		199,350		(8,608) 148,409		347,759	72.9600473%		46,534 253,725
17 Non Residential Smart Saver Energy Efficient HVAC Products	1,252	4,669,724		5,224,765		815,339		507,084		1,322,423	72.9600473%		964,840
18 Non Residential Smart Saver Energy Efficient Lighting Products	12,290	70,310,751		40,866,018		6,727,675		3,925,909		10,653,584	72.9600473%		7,772,860
19 Non Residential Smart Saver Energy Efficient Pumps and Drives Products	787	6,487,067		3,629,866		584,874		350,174		935,048	72.9600473%		682,212
20 Non Residential Smart Saver Energy Efficient IT Products	15	124,237		35,580		25,730		1,133		26,863	72.9600473%		19,599
21 Non Residential Smart Saver Energy Efficient Process Equipment Products	159	661,883		660,330		89,809		65,610		155,419	72.9600473%		113,394
22 Small Business Energy Saver	920	3,807,575		2,662,785		1,026,607		188,160		1,214,767	72.9600473%		886,295
23 Smart Energy in Offices	3,765	18,089,083		1,972,535		1,156,497		93,844		1,250,341	72.9600473%		912,250
24 Total for Non-Residential Energy Efficiency Programs	30,248	193,777,026	\$	113,309,256	\$	20,295,642	\$	10,696,565	\$	30,992,208		\$	22,611,930
											NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5 pg. 6)		D25*E25
				110 606 161		24.422.125		0.40= =00			44.240000257		
or Total DCM Drograms/2)			_		Ś	31,183,185	\$	9,487,532	\$	40,670,718	41.2108021%	S	16,760,729
25 Total DSM Programs(2)	785,740	-	\$	113,683,464	Ψ	31,103,103		3,407,332	Ψ	10,070,710		<del>-</del>	
25 Total DSM Programs(2) 26 Total Non-Residential Revenue Requirement	785,740	-	\$	113,683,464	Ψ	31,103,103	·	3,407,332	Ψ	10,070,713		\$	39,372,659
26 Total Non-Residential Revenue Requirement  Total DSM Program Breakdown		-	\$		·						NC Retail Peak Demand Allocation Factor (Miller Exhibit 5 pg. 5)	\$	39,372,659 D30* E30
26 Total Non-Residential Revenue Requirement  Total DSM Program Breakdown  27 Power Manager (Residential)	785,740 403,431	-	\$	58,390,087	\$	15,662,693	\$	4,913,650	\$	20,576,344	NC Retail Peak Demand Allocation Factor (Miller	\$	
26 Total Non-Residential Revenue Requirement  Total DSM Program Breakdown  27 Power Manager (Residential)  28 Power Share CallOption (Non-Residential)	403,431	-	\$	58,390,087	·	15,662,693		4,913,650		20,576,344	NC Retail Peak Demand Allocation Factor (Miller	\$	
26 Total Non-Residential Revenue Requirement  Total DSM Program Breakdown  27 Power Manager (Residential)		- -	\$ \$		·						NC Retail Peak Demand Allocation Factor (Miller	\$	

- (1) My Home Energy Report impacts reflect cumulative capability as of end of vintage year, including impacts for participants from prior vintage
- (2) Total System DSM programs allocated to Residential and Non-Residential based on contribution to retail system peak

## Duke Energy Carolinas, LLC Vintage 2016 Estimate for January 1, 2016 to December 31, 2016 Docket Number E-7, Sub 1073 Load Impacts and Estimated Revenue Requirements, excluding Lost Revenue by Program

				Α		В	C	C = (A-B) *11.5%		D= B+C	E NC Retail kWh Sales		sidential Revenue Requirement
Residential Programs	System kW Reduction - Summer Peak	System Energy Reduction (kWh)	-	stem NPV of voided Cost		System Cost	Earn	ed Utility Incentive		System Cost Plus Incentive	Allocation Factor (Miller Exhibit 5 pg. 6)		D * E
EE Programs													
1 Appliance Recycling Program	791	5,655,112	\$	2,213,692	\$	1,754,540	\$	52,802	\$	1,807,342	72.9600473%	\$	1,318,638
2 Energy Efficiency Education	691	6,580,248		4,153,775		2,474,928		193,067		2,667,995	72.9600473%		1,946,571
3 Energy Efficient Appliances and Devices	4,061	36,348,269		16,316,953		5,528,158		1,240,711		6,768,869	72.9600473%		4,938,570
4 HVAC Energy Efficiency	1,527	3,365,177		4,810,440		5,107,181		(34,125)		5,073,056	72.9600473%		3,701,304
5 Income Qualified Energy Efficiency and Weatherization Assistance	1,004	5,010,021		3,272,617		10,601,322				10,601,322	72.9600473%		7,734,730
6 Multi-Family Energy Efficiency	1,019	12,320,047		7,638,888		1,883,584		661,860		2,545,444	72.9600473%		1,857,157
7 Energy Assessments	934	7,546,592		7,985,154		3,010,149		572,126		3,582,275	72.9600473%		2,613,629
8 Subtotal	10,027	76,825,466	\$	46,391,519	\$	30,359,862	\$	2,686,442	\$	33,046,304		\$	24,110,599
9 My Home Energy Report (1)	55,319	204,879,939		17,362,165		12,206,008		592,958		12,798,966	72.9600473%		9,338,132
10 Total for Residential Energy Efficiency Programs	65,346	281,705,405	\$	63,753,684	\$	42,565,870	\$	3,279,400	\$	45,845,270		\$	33,448,730
											NC Residential Peak Demand Allocation Factor (Miller Exhibit 5 pg. 6)		D11* E11
11 Total DSM Programs (2)	928,994	-		104,996,908	\$	31,195,486	\$	8,487,164	\$	39,682,650	34.0209980%	\$	13,500,433
12 Total Residential Revenue Requirement												\$	46,949,164
	System kW Reduction -	System Energy	Sve	stem NPV of						System Cost Plus	NC Retail kWh Sales Allocation Factor (Miller		Residential Revenue Requirement
	Summer Peak	Reduction (kWh)	-	oided Cost		System Cost	Earn	ed Utility Incentive	•	Incentive	Exhibit 5 pg. 6)		D * E
Non-Residential Programs		•					1	•					
EE Programs													
13 Non Residential Smart Saver Custom Energy Assessments	2,001	17,528,673	\$	8,974,637	\$	2,811,494	ċ	708,761	\$	3,520,255	72.9600473%	\$	2,568,380
14 Non Residential Smart Saver Custom	8,954	78,437,169	Ą	42,388,414	Ų	9,835,671	Ą	3,743,565	Ų	13,579,236	72.9600473%	Ų	9,907,417
15 Non Residential Smart Saver Energy Efficient Food Service Products	120	1,656,886		769,076		243,073		60,490		303,563	72.9600473%		221,480
16 Non Residential Smart Saver Energy Efficient HVAC Products	2,912	7,233,762		10,449,359		1,923,416		980,483		2,903,899	72.9600473%		2,118,686
17 Non Residential Smart Saver Energy Efficient Lighting Products	13,942	83,856,747		49,163,384		7,813,306		4,755,259		12,568,565	72.9600473%		9,170,031
18 Non Residential Smart Saver Energy Efficient Pumps and Drives Products	876	7,239,343		3,067,346		954,985		242,922		1,197,907	72.9600473%		873,993
19 Non Residential Smart Saver Energy Efficient IT Products	137	5,572,871		1,786,471		584,982		138,171		723,153	72.9600473%		527,613
20 Non Residential Smart Saver Energy Efficient Process Equipment Products	19	97,022		74,035		33,279		4,687		37,966	72.9600473%		27,700
21 Small Business Energy Saver	16,596	68,899,042		48,587,924		21,459,213		3,119,802		24,579,015	72.9600473%		17,932,861
22 Smart Energy in Offices	8,073	38,787,988		5,203,117		4,360,574		96,892		4,457,466	72.9600473%		3,252,170
23 Total for Non-Residential Energy Efficiency Programs	53,630	309,309,503	\$	170,463,763	\$	50,019,993	\$	13,851,034	\$	63,871,027		\$	46,600,331
											NC Non-Residential Peak Demand Allocation Factor (Miller Exhibit 5 pg. 6)		D24*E24
24 Total DSM Programs(2)	928,994	_	Ś	104,996,908	\$	31,195,486	\$	8,487,164	\$	39,682,650	41.2108021%	¢	16,353,538
	9 <b>2</b> 0,33 <del>4</del>	-	ڔ	±∪ <del>+</del> ,⊅∂∪,∃U0	Ą	31,133,400	ب	0,407,104	Ą	33,002,030	<del>1</del> 1.2100021/0	<u>,</u>	
25 Total Non-Residential Revenue Requirement												>	62,953,869
Total DSM Program Breakdown	504,194		ċ	E0 00E 047	ċ	12 991 EGG	Ċ	E 416 002	ė	19 209 559	NC Retail Peak Demand Allocation Factor (Miller Exhibit 5 pg. 6)		D29* E29
26 Power Manager (Residential) 27 Power Share CallOption (Non-Residential)	504,194	-	Ş	59,985,847	\$	12,881,566	Ş	5,416,992	\$	18,298,558			
28 Power Share (Non-Residential)	424,800	-	\$	45,011,061	\$	18,313,920	\$	3,070,171	\$	21,384,091			
29 Total DSM	928,994	-	\$	104,996,908	\$		\$	8,487,164	\$		75.2318001%	\$	29,853,972

<sup>(1)</sup> My Home Energy Report impacts reflect cumulative capability as of end of vintage year, including impacts for participants from prior vintage

<sup>(2)</sup> Total System DSM programs allocated to Residential and Non-Residential based on contribution to retail system peak

## Duke Energy Carolinas, LLC For the Period June 1, 2009 - December 31, 2015 Docket Number E-7, Sub 1073 North Carolina Net Lost Revenues Summary

	Years 1 -2									
Vintage 1	2009	2010	2011	1 Mth 2012	2012	2013	2014	2015	2016	Total
Residential										
1 Residential Energy Assessments	\$ 44,297 \$	669,511 \$	752,197 \$	66,386 \$	- \$	- \$	- \$	- \$	- \$	1,532,39
2 Smart Saver® for Residential Customers	92,993	5,073,454	15,613,579	1,378,657	- ·	<u>-</u>	- -	-	-	22,158,68
3 Low Income Energy Efficiency and Weatherization Assistance	8,111	184,626	298,617	26,374	-	-	-	-	-	517,72
4 Energy Efficiency Education Program for Schools	980	52,034	109,867	9,700	-	-	-	-	-	172,58
5 Total Lost Revenues	146,381	5,979,625	16,774,260	1,481,117	-	-	-	-	-	24,381,38
6 Found Residential Revenues *	18,544	103,664	149,220	12,435	-	(0)	-	-	-	283,86
7 Net Lost Residential Revenues	\$ 127,836 \$	5,875,961 \$	16,625,041 \$	1,468,682 \$	- \$	0 \$	- \$	- \$	- \$	24,097,52
Non-Residential	2009	2010	2011	1 Mth 2012	2012	2013	2014	2015	2016	Total
8 Smart Saver® for Non-Residential Customers Lighting	\$ 267,995 \$	1,568,968 \$	2,140,019 \$	179,572 \$	- \$	- \$	- \$	- \$	- \$	4,156,55
9 Smart Saver® for Non-Residential Customers Motors	\$ 267,995 \$ 1,508	1,568,968 \$ 34,581	2,140,019 \$ 47,849	1/9,5/2 \$ 4,389	- Ş -	- ş -	- ş -	- Ş -	- \$	4,156,55 88,32
0 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	1,506	۸ ۱	47,849	4,303 1	<u>-</u>	<u>-</u>	<u>-</u> -	<b>-</b> -	<u>-</u> -	66,52 1
1 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	1,873	24,316	31,396	2,792	<del>-</del> -	<del>-</del>	_	<del>-</del> -		60,37
.2 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products	1,873 4,441	61,038	114,704	10,212	-	<u>-</u>	-	-	<u>-</u>	190,39
.3 Smart Saver® for Non-Residential Customers - Custom Rebate	170	129,797	423,378	38,673	_	_	_	-	_	592,01
4 Total Lost Revenues	275,987	1,818,705	2,757,356	235,639		<u> </u>			<u> </u>	5,087,68
5 Found Non-Residential Revenues*	196,302	1,171,619	1,621,460	135,122	_	0	_	_	_	3,124,5(
.6 Net Lost Non-Residential Revenues	\$ 79,685 \$	647,086 \$	1,135,896 \$	100,517 \$	- \$	(0) \$	- \$	- \$	- \$	1,963,18
						rs 1 -3				
Vintage 2	2009	2010 2	011 (1/2 year)	1 Mth 2012	2012	2013 <sup>(a)</sup>	2014	2015	2016	Total
Residential										
7 Residential Energy Assessments	\$ - \$	- \$	199,106 \$	- \$	416,418 \$	307,665 \$	- \$	- \$	- \$	923,18
8 Smart Saver® for Residential Customers	· ·	-	7,082,986	- -	17,639,492	13,038,388	-	-	-	37,760,86
9 Low Income Energy Efficiency and Weatherization Assistance	-	_	8,604	_	25,327	18,723	_	_	-	52,65
0 Energy Efficiency Education Program for Schools	-	_	26,046	-	56,110	41,483	_	-	-	123,63
1 Total Lost Revenues	-	-	7,316,742	-	18,137,348	13,406,259	-	-	-	38,860,34
2 Found Residential Revenues *		_							_	205,95
			46,409	-	91,169	68,377	(0)	-	-	
3 Net Lost Residential Revenues	\$ - \$	- \$	7,270,333 \$	- \$	91,169 <b>18,046,179</b> \$	68,377 <b>13,337,882</b> \$	(O) <b>O</b> \$	- \$	- \$	38,654,39
3 Net Lost Residential Revenues  Non-Residential	\$ - \$	- \$	•		· · · · · · · · · · · · · · · · · · ·	·		- \$		<b>38,654,39</b> Total
Non-Residential		- \$	7,270,333 \$	- \$	18,046,179 \$	13,337,882 \$	0 \$	·	- \$	Total
Non-Residential  4 Smart Saver® for Non-Residential Customers Lighting	2009	- <b>\$</b> 2010 2	<b>7,270,333</b> \$	- \$ 1 Mth 2012	<b>18,046,179</b> \$ 2012	13,337,882 \$ 2013 <sup>(a)</sup>	<b>0</b> \$	2015	- <b>\$</b> 2016	Total 4,642,67
Non-Residential  4 Smart Saver® for Non-Residential Customers Lighting 5 Smart Saver® for Non-Residential Customers Motors	\$ - \$	- \$ 2010 2 - \$	7,270,333 \$ 011 (1/2 year) 1,000,289 \$	- \$ 1 Mth 2012 - \$	18,046,179 \$ 2012 2,128,947 \$	13,337,882 \$ 2013 <sup>(a)</sup> 1,513,436 \$	<b>0</b> \$	2015	2016	Total 4,642,67 203,39
Non-Residential  4 Smart Saver® for Non-Residential Customers Lighting  5 Smart Saver® for Non-Residential Customers Motors  6 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	\$ - \$	- \$ 2010 2 - \$ - \$	7,270,333 \$  011 (1/2 year)  1,000,289 \$ 42,267	- \$ 1 Mth 2012 - \$ - \$	18,046,179 \$ 2012 2,128,947 \$ 92,407	13,337,882 \$ 2013 <sup>(a)</sup> 1,513,436 \$ 68,717	<b>0</b> \$	2015	2016	Total 4,642,65 203,39 35,73
Non-Residential  4 Smart Saver® for Non-Residential Customers Lighting 5 Smart Saver® for Non-Residential Customers Motors 6 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 7 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products	\$ - \$	- \$ 2010 2 - \$	7,270,333 \$  011 (1/2 year)  1,000,289 \$ 42,267 6,600	- \$ 1 Mth 2012 - \$ \$	2012 2,128,947 \$ 92,407 16,682	13,337,882 \$ 2013 <sup>(a)</sup> 1,513,436 \$ 68,717 12,451	<b>0</b> \$	2015	2016	Total 4,642,65 203,39 35,73 72,40
Non-Residential  4 Smart Saver® for Non-Residential Customers Lighting  5 Smart Saver® for Non-Residential Customers Motors  6 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)  7 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products  8 Smart Saver® for Non-Residential Customers - HVAC	\$ - \$	- \$ 2010 2 - \$	7,270,333 \$  011 (1/2 year)  1,000,289 \$ 42,267 6,600 14,315	- \$ 1 Mth 2012  - \$ -  -  -  -  -  -  -  -  -  -  -  -  -	18,046,179 \$  2012  2,128,947 \$ 92,407 16,682 33,354	13,337,882 \$  2013 <sup>(a)</sup> 1,513,436 \$ 68,717 12,451 24,736	<b>0</b> \$	2015	2016	Total 4,642,67 203,39 35,73 72,40 316,69
Non-Residential  4 Smart Saver® for Non-Residential Customers Lighting 5 Smart Saver® for Non-Residential Customers Motors 6 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 7 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 8 Smart Saver® for Non-Residential Customers - HVAC 9 Smart Saver® for Non-Residential Customers - Custom Rebate	\$ - \$	- \$ 2010 2 - \$	7,270,333 \$  011 (1/2 year)  1,000,289 \$ 42,267 6,600 14,315 53,349	- \$ 1 Mth 2012 - \$ - \$	2012 2,128,947 \$ 92,407 16,682 33,354 151,187	13,337,882 \$  2013 <sup>(a)</sup> 1,513,436 \$ 68,717 12,451 24,736 112,123	<b>0</b> \$	2015	2016	Total  4,642,67 203,39 35,73 72,40 316,65 3,062,05
Non-Residential  24 Smart Saver® for Non-Residential Customers Lighting 25 Smart Saver® for Non-Residential Customers Motors 26 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 27 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 28 Smart Saver® for Non-Residential Customers - HVAC 29 Smart Saver® for Non-Residential Customers - Custom Rebate 30 Smart Energy Now	\$ - \$	- \$ 2010 2 - \$	7,270,333 \$  011 (1/2 year)  1,000,289 \$ 42,267 6,600 14,315 53,349 595,732	- \$ 1 Mth 2012  - \$ -  -  -  -  -  -  -  -  -  -  -  -  -	18,046,179 \$  2012  2,128,947 \$ 92,407 16,682 33,354 151,187 1,414,842	13,337,882 \$  2013 <sup>(a)</sup> 1,513,436 \$ 68,717 12,451 24,736 112,123 1,051,484	<b>0</b> \$	2015 - \$ - - - -	2016	Total  4,642,67 203,39 35,73 72,40 316,65 3,062,05 1,598,87
Non-Residential  Non-Residential  Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) Smart Saver® for Non-Residential Customers - Energy Star Food Service Products Smart Saver® for Non-Residential Customers - HVAC Smart Saver® for Non-Residential Customers - HVAC Smart Saver® for Non-Residential Customers - Custom Rebate Smart Energy Now Total Lost Revenues Found Non-Residential Revenues*	\$ - \$	- \$ 2010 2 - \$ - \$	7,270,333 \$  011 (1/2 year)  1,000,289 \$ 42,267 6,600 14,315 53,349 595,732 124,537	- \$ 1 Mth 2012	18,046,179 \$  2012  2,128,947 \$ 92,407 16,682 33,354 151,187 1,414,842 846,457	13,337,882 \$  2013 <sup>(a)</sup> 1,513,436 \$ 68,717 12,451 24,736 112,123 1,051,484 627,884	<b>0</b> \$	2015 - \$ - - - -	2016	38,654,39  Total  4,642,67 203,39 35,73 72,40 316,65 3,062,05 1,598,87 9,931,79 2,808,79

							•	ls and Year 4 estimate		(-)		
Vintage 3	2009	2010		2011	1 Mth 2012	20	012 (1/2 year)	2013 <sup>(b)</sup>	2014	2015 <sup>(c)</sup>	2016	Total
Residential												
Appliance Recycling	\$ -	Ś	- \$		- \$	- \$	10,266 \$	45,180 \$	46,293 \$	35,330 \$	- \$	137,0
5 Residential Energy Assessments	-	•	- '		•	-	254,784	425,879	235,103	156,970	-	1,072,
5 Smart Saver® for Residential Customers	_		_		_	_	6,953,370	8,775,483	3,841,455	2,603,636	_	22,173,
7 Energy Efficiency Education Program for Schools	_		_		_	_	239,392	347,698	160,798	125,638	_	873,
Home Energy Comparison Report	_		_		_	_	1,523,842	-	-	-	-	1,523,
Residential Retrofit Pilot							_,=_5,5			_		_,===,
7 Total Lost Revenues			_		_	_	8,981,654	9,594,241	4,283,649	2,921,574	_	25,781
Found Residential Revenues *	_		_		_	_	32,870	39,068	7,442	2,511	_	81,
2 Net Lost Residential Revenues	\$ -	\$	- \$		- \$	- \$	8,948,784 \$	9,555,173 \$	4,276,207 \$	2,919,062 \$	- \$	25,699,
Non-Residential	2009	2010		2011	1 Mth 2012	20	012 (1/2 year)	2013 <sup>(b)</sup>	2014	2015 <sup>(c)</sup>	2016	Total
Non-Residential	2009	2010		2011	1 WILII 2012		012 (1/2 year)	2013	2014	2015	2016	TOLAI
3 Smart Saver® for Non-Residential Customers Lighting	\$ -	\$	- \$		- \$	- \$	978,762 \$	1,798,752 \$	1,157,277 \$	854,416 \$	- \$	4,789
4 Smart Saver® for Non-Residential Customers Motors	-		-		-	-	64,385	149,063	113,632	94,215	-	421
5 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	-		-		-	-	-	-	-	-	-	
Smart Saver® for Non-Residential Customers - Energy Star Food Service Products	-		-		-	-	14,096	33,415	32,665	20,026	-	100
7 Smart Saver® for Non-Residential Customers - HVAC	-		-		-	-	70,330	119,862	75,924	54,637	-	320
Smart Saver® for Non-Residential Customers - Custom Rebate	-		-		-	-	1,656,364	3,185,396	2,077,602	1,672,959	-	8,592
Smart Energy Now			-		-	-	478,449	329,918	-	-	-	808
Total Lost Revenues	-		-		-	-	3,262,386	5,616,407	3,457,100	2,696,252	-	15,032
1 Found Non-Residential Revenues *			-		-	-	445,846	761,963	145,136	78,259	-	1,431
2 Net Lost Non-Residential Revenues	\$ -	\$	- \$		- \$	- \$	2,816,540 \$	4,854,443 \$	3,311,964 \$	2,617,993 \$	- \$	13,600
								Year 3 and 4 Estimate			(d)	
Vintage 4	2009	2010		2011	1 Mth 2012			<b>Year 3 and 4 Estimate</b> 013 (1/2 year)	e <b>d</b> 2014	2015	2016 <sup>(d)</sup>	Total
Vintage 4 Residential	2009	2010		2011	1 Mth 2012					2015	2016 <sup>(d)</sup>	Total
Residential	2009 — \$ -		- \$	2011		- \$		013 (1/2 year)	2014			
Residential  Appliance Recycling			- \$ -	2011			2012 2	013 (1/2 year) 101,998 \$	240,815 \$	2015 238,449 \$ 354,699	136,270 \$	717
Residential  Appliance Recycling  Residential Energy Assessments			- \$ -	2011			2012 2	013 (1/2 year) 101,998 \$ 178,126	2014 240,815 \$ 358,256	238,449 \$ 354,699	136,270 \$ 175,570	717 1,066
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers			- \$ - -	2011			2012 2 - \$ -	013 (1/2 year) 101,998 \$ 178,126 3,015,924	240,815 \$ 358,256 5,890,655	238,449 \$ 354,699 5,829,586	136,270 \$ 175,570 2,792,637	717 1,066 17,528
Residential  3 Appliance Recycling  4 Residential Energy Assessments  5 Smart Saver® for Residential Customers  6 Low Income Energy Efficiency and Weatherization Assistance			- \$ - - -	2011			2012 2 - \$ -	013 (1/2 year) 101,998 \$ 178,126	2014 240,815 \$ 358,256	238,449 \$ 354,699	136,270 \$ 175,570	717 1,066 17,528
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program			- \$ - - -	2011			2012 2 - \$ -	101,998 \$ 178,126 3,015,924 12,238	240,815 \$ 358,256 5,890,655 44,504	238,449 \$ 354,699 5,829,586 44,084	136,270 \$ 175,570 2,792,637 31,908	717 1,066 17,528 132
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools			- \$ - - - -	2011			2012 2 - \$ -	101,998 \$ 178,126 3,015,924 12,238 136,637	240,815 \$ 358,256 5,890,655	238,449 \$ 354,699 5,829,586	136,270 \$ 175,570 2,792,637	717 1,066 17,528 132 732
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report			- \$ - - - -	2011		- \$ - - -	2012 2 - \$ - - - -	101,998 \$ 178,126 3,015,924 12,238 136,637 7,042,473	240,815 \$ 358,256 5,890,655 44,504 - 246,083	238,449 \$ 354,699 5,829,586 44,084 243,620	136,270 \$ 175,570 2,792,637 31,908 105,938	717 1,066 17,528 132 732 7,042
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report Total Lost Revenues			- \$ - - - - -	2011	- \$ - - - -	- \$ - - - -	2012 2 - \$ - - - - -	101,998 \$ 178,126 3,015,924 12,238 136,637 7,042,473 10,487,396	240,815 \$ 358,256 5,890,655 44,504 - 246,083 - 6,780,312	238,449 \$ 354,699 5,829,586 44,084 243,620 - 6,710,438	136,270 \$ 175,570 2,792,637 31,908 105,938	717 1,066 17,528 132 732 7,042 27,220
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report Total Lost Revenues Found Residential Revenues *	\$ - - - - - - -		- \$ - - - - - - -	2011	- \$ - - - - -	- \$ - - - -	2012 2 - \$ - - - - -	101,998 \$ 178,126 3,015,924 12,238 136,637 7,042,473	240,815 \$ 358,256 5,890,655 44,504 - 246,083	238,449 \$ 354,699 5,829,586 44,084 243,620	136,270 \$ 175,570 2,792,637 31,908 105,938	717 1,066 17,528 132 732 7,042 27,220 162
Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report Total Lost Revenues Found Residential Revenues * Net Lost Residential Revenues	\$ - - - - - - - - - - - -	\$	- - - - - -		- \$	- \$ - - - - -	2012 2 - \$	101,998 \$ 178,126 3,015,924 12,238  136,637 7,042,473 10,487,396 37,737 10,449,659 \$	240,815 \$ 358,256 5,890,655 44,504 - 246,083 - 6,780,312 62,416 6,717,896 \$	238,449 \$ 354,699 5,829,586 44,084 243,620 - 6,710,438 62,416 6,648,022 \$	136,270 \$ 175,570 2,792,637 31,908 105,938 3,242,322 24,679 3,217,642 \$	717 1,066 17,528 132 732 7,042 27,220 162 <b>27,057</b>
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report Total Lost Revenues Found Residential Revenues * Net Lost Residential Revenues  Non-Residential	\$ 2009	\$ \$ 2010	- - - - - - - \$	2011	- \$ 1 Mth 2012	- \$ - - - - - - - •	2012 2  - \$ 2012 2	101,998 \$ 178,126 3,015,924 12,238 136,637 7,042,473 10,487,396 37,737 10,449,659 \$	240,815 \$ 358,256 5,890,655 44,504 - 246,083 - 6,780,312 62,416 6,717,896 \$	238,449 \$ 354,699 5,829,586 44,084  243,620 - 6,710,438 62,416 6,648,022 \$	136,270 \$ 175,570 2,792,637 31,908 105,938 3,242,322 24,679 3,217,642 \$	717 1,066 17,528 132 732 7,042 27,220 162 <b>27,057</b>
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report Total Lost Revenues Found Residential Revenues * Net Lost Residential Revenues  Non-Residential  Smart Saver® for Non-Residential Customers Lighting	\$ - - - - - - - - - - - -	\$ \$ 2010	- - - - - -		- \$ 1 Mth 2012	- \$ - - - - -	2012 2 - \$	101,998 \$ 178,126 3,015,924 12,238  136,637 7,042,473 10,487,396 37,737 10,449,659 \$  013 (1/2 year)  1,382,839 \$	240,815 \$ 358,256 5,890,655 44,504 - 246,083 - 6,780,312 62,416 6,717,896 \$  2014 2,760,118 \$	238,449 \$ 354,699 5,829,586 44,084 243,620 - 6,710,438 62,416 6,648,022 \$  2015	136,270 \$ 175,570 2,792,637 31,908  105,938  3,242,322 24,679  3,217,642 \$  2016 <sup>(d)</sup> 1,362,938 \$	717 1,066 17,528 132 7,042 27,220 162 <b>27,057</b> Total
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report Total Lost Revenues Found Residential Revenues  Net Lost Residential Revenues  Non-Residential  Smart Saver® for Non-Residential Customers Lighting	\$ 2009	\$ \$ 2010	- - - - - - - \$		- \$ 1 Mth 2012	- \$ - - - - - - - •	2012 2  - \$ 2012 2	101,998 \$ 178,126 3,015,924 12,238 136,637 7,042,473 10,487,396 37,737 10,449,659 \$ 013 (1/2 year)  1,382,839 \$ 82,592	240,815 \$ 358,256 5,890,655 44,504 - 246,083 - 6,780,312 62,416 6,717,896 \$	238,449 \$ 354,699 5,829,586 44,084 243,620 - 6,710,438 62,416 6,648,022 \$  2015  2,769,348 \$ 173,141	136,270 \$ 175,570 2,792,637 31,908  105,938  3,242,322 24,679  3,217,642 \$  2016 <sup>(d)</sup> 1,362,938 \$ 89,216	717 1,066 17,528 132 732 7,042 27,220 162 <b>27,057</b> Total
Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report Total Lost Revenues Found Residential Revenues * Net Lost Residential Revenues  Non-Residential Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	\$ 2009	\$ \$ 2010	-		- \$ 1 Mth 2012	- \$ 	2012 2 - \$	101,998 \$ 178,126 3,015,924 12,238  136,637 7,042,473 10,487,396 37,737 10,449,659 \$  013 (1/2 year)  1,382,839 \$	240,815 \$ 358,256 5,890,655 44,504 - 246,083 - 6,780,312 62,416 6,717,896 \$  2014 2,760,118 \$	238,449 \$ 354,699 5,829,586 44,084 243,620 - 6,710,438 62,416 6,648,022 \$  2015  2,769,348 \$ 173,141 6,423	136,270 \$ 175,570 2,792,637 31,908  105,938  3,242,322 24,679  3,217,642 \$  2016 <sup>(d)</sup> 1,362,938 \$ 89,216 4,595	717 1,066 17,528 132 732 7,042 27,220 162 <b>27,057</b> Total
Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report Total Lost Revenues Found Residential Revenues * Net Lost Residential Revenues  Non-Residential Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment)	\$ 2009	\$ \$ 2010	-		- \$ 1 Mth 2012	- \$ 	2012 2 - \$	101,998 \$ 178,126 3,015,924 12,238 136,637 7,042,473 10,487,396 37,737 10,449,659 \$ 013 (1/2 year)  1,382,839 \$ 82,592	240,815 \$ 358,256 5,890,655 44,504 - 246,083 - 6,780,312 62,416 6,717,896 \$  2014  2,760,118 \$ 171,814	238,449 \$ 354,699 5,829,586 44,084 243,620 - 6,710,438 62,416 6,648,022 \$  2015  2,769,348 \$ 173,141	136,270 \$ 175,570 2,792,637 31,908  105,938  3,242,322 24,679  3,217,642 \$  2016 <sup>(d)</sup> 1,362,938 \$ 89,216	717 1,066 17,528 132 732 7,042 27,220 162 <b>27,057</b> Total
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report Total Lost Revenues Found Residential Revenues * Net Lost Residential Revenues  Non-Residential  Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) Smart Saver® for Non-Residential Customers - Energy Star Food Service Products	\$ 2009	\$ \$ 2010	-		- \$ 1 Mth 2012	- \$ 	2012 2 - \$	101,998 \$ 178,126 3,015,924 12,238 136,637 7,042,473 10,487,396 37,737 10,449,659 \$  013 (1/2 year)  1,382,839 \$ 82,592 1,852	240,815 \$ 358,256 5,890,655 44,504 246,083 6,780,312 62,416 6,717,896 \$  2014  2,760,118 \$ 171,814 6,401	238,449 \$ 354,699 5,829,586 44,084 243,620 - 6,710,438 62,416 6,648,022 \$  2015  2,769,348 \$ 173,141 6,423	136,270 \$ 175,570 2,792,637 31,908  105,938  3,242,322 24,679  3,217,642 \$  2016 <sup>(d)</sup> 1,362,938 \$ 89,216 4,595	717 1,066 17,528 132 732 7,042 27,220 162 <b>27,057</b> Total 8,275 516 19
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report Total Lost Revenues Found Residential Revenues* Net Lost Residential Revenues  Non-Residential Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) Smart Saver® for Non-Residential Customers - Energy Star Food Service Products Smart Saver® for Non-Residential Customers - HVAC	\$ 2009	\$ \$ 2010	-		- \$ 1 Mth 2012	- \$ 	2012 2 - \$	101,998 \$ 178,126 3,015,924 12,238  136,637 7,042,473 10,487,396 37,737 10,449,659 \$  013 (1/2 year)  1,382,839 \$ 82,592 1,852 14,181	240,815 \$ 358,256 5,890,655 44,504 246,083 6,780,312 62,416 6,717,896 \$  2014  2,760,118 \$ 171,814 6,401 37,136	238,449 \$ 354,699 5,829,586 44,084 243,620 - 6,710,438 62,416 6,648,022 \$  2015  2,769,348 \$ 173,141 6,423 37,387	136,270 \$ 175,570 2,792,637 31,908  105,938  3,242,322 24,679  3,217,642 \$  2016 <sup>(d)</sup> 1,362,938 \$ 89,216 4,595 23,154	717 1,066 17,528 132 732 7,042 27,220 162 27,057  Total  8,275 516 19 111 630
Residential  Appliance Recycling Residential Energy Assessments Smart Saver® for Residential Customers Low Income Energy Efficiency and Weatherization Assistance Residential Neighborhood Program Energy Efficiency Education Program for Schools Home Energy Comparison Report Total Lost Revenues Found Residential Revenues Net Lost Residential Revenues  Non-Residential Revenues  Non-Residential Smart Saver® for Non-Residential Customers Lighting Smart Saver® for Non-Residential Customers Motors Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) Smart Saver® for Non-Residential Customers - Energy Star Food Service Products Smart Saver® for Non-Residential Customers - HVAC Smart Saver® for Non-Residential Customers - Custom Rebate	\$ 2009	\$ \$ 2010	-		- \$ 1 Mth 2012	- \$ 	2012 2  - \$	101,998 \$ 178,126 3,015,924 12,238  136,637 7,042,473 10,487,396 37,737 10,449,659 \$  013 (1/2 year)  1,382,839 \$ 82,592 1,852 14,181 91,920	240,815 \$ 358,256 5,890,655 44,504 - 246,083 - 6,780,312 62,416 6,717,896 \$  2014  2,760,118 \$ 171,814 6,401 37,136 210,322	238,449 \$ 354,699 5,829,586 44,084  243,620 - 6,710,438 62,416  6,648,022 \$  2015  2,769,348 \$ 173,141 6,423 37,387 210,626	136,270 \$ 175,570 2,792,637 31,908  105,938  3,242,322 24,679  3,217,642 \$  2016 <sup>(d)</sup> 1,362,938 \$ 89,216 4,595 23,154 117,888	717 1,066 17,528 132 732 7,042 27,220 162 <b>27,057</b> Total 8,275 516 19 111 630
Residential  3 Appliance Recycling 4 Residential Energy Assessments 5 Smart Saver® for Residential Customers 6 Low Income Energy Efficiency and Weatherization Assistance 7 Residential Neighborhood Program 8 Energy Efficiency Education Program for Schools 9 Home Energy Comparison Report 10 Total Lost Revenues 1 Found Residential Revenues 2 Net Lost Residential Revenues  Non-Residential 8 Smart Saver® for Non-Residential Customers Lighting 4 Smart Saver® for Non-Residential Customers Motors 5 Smart Saver® for Non-Residential Customers - Other Prescriptive (Process Equipment) 6 Smart Saver® for Non-Residential Customers - Energy Star Food Service Products 7 Smart Saver® for Non-Residential Customers - HVAC 8 Smart Saver® for Non-Residential Customers - Custom Rebate 9 Smart Energy Now	\$ 2009	\$ \$ 2010	-		- \$ 1 Mth 2012	- \$ \$ \$	2012 2  - \$	101,998 \$ 178,126 3,015,924 12,238  136,637 7,042,473 10,487,396 37,737 10,449,659 \$  013 (1/2 year)  1,382,839 \$ 82,592 1,852 14,181 91,920 1,322,386	240,815 \$ 358,256 5,890,655 44,504 - 246,083 - 6,780,312 62,416 6,717,896 \$  2014  2,760,118 \$ 171,814 6,401 37,136 210,322	238,449 \$ 354,699 5,829,586 44,084  243,620 - 6,710,438 62,416  6,648,022 \$  2015  2,769,348 \$ 173,141 6,423 37,387 210,626	136,270 \$ 175,570 2,792,637 31,908  105,938  3,242,322 24,679  3,217,642 \$  2016 <sup>(d)</sup> 1,362,938 \$ 89,216 4,595 23,154 117,888	717, 1,066, 17,528, 132, 732, 7,042, 27,220, 162, 27,057,  Total  8,275, 516, 19, 111, 630, 8,888,
Residential  3 Appliance Recycling  4 Residential Energy Assessments  5 Smart Saver® for Residential Customers  6 Low Income Energy Efficiency and Weatherization Assistance  7 Residential Neighborhood Program  8 Energy Efficiency Education Program for Schools  9 Home Energy Comparison Report  0 Total Lost Revenues  1 Found Residential Revenues  2 Net Lost Residential Revenues	\$ 2009	\$ \$	-		- \$ 1 Mth 2012	- \$	2012 2  - \$	101,998 \$ 178,126 3,015,924 12,238  136,637 7,042,473 10,487,396 37,737 10,449,659 \$  013 (1/2 year)  1,382,839 \$ 82,592 1,852 14,181 91,920 1,322,386	240,815 \$ 358,256 5,890,655 44,504 - 246,083 - 6,780,312 62,416 6,717,896 \$  2014  2,760,118 \$ 171,814 6,401 37,136 210,322 2,957,110 -	238,449 \$ 354,699 5,829,586 44,084  243,620 - 6,710,438 62,416 6,648,022 \$  2015  2,769,348 \$ 173,141 6,423 37,387 210,626 2,977,938	136,270 \$ 175,570 2,792,637 31,908  105,938  3,242,322 24,679  3,217,642 \$  2016 <sup>(d)</sup> 1,362,938 \$ 89,216 4,595 23,154 117,888 1,630,601	717, 1,066, 17,528, 132, 732, 7,042, 27,220, 162, 27,057,

<sup>\*</sup> Found Revenues - see Barnes Exhibit 4

72.9600473%

<sup>(</sup>a) Vintage 2 Year 3 Lost Revenues represent January - September 24, 2013 lost revenues.

<sup>(</sup>b) Vintage 3 Year 2 Lost Revenues were based on Participants Jan-Jun'12 for Lost revenues until Sept. 24, 2013 and participants July - December 2012 for full year

<sup>(</sup>c) Vintage 3 Year 4 Lost Revenues represent only a 1/2 year for July - December 2012 participants due to half year convention used for Year 1 lost revenues

<sup>(</sup>d) Estimated Lost Revenues were estimated by allocating estimated system Lost Revenues per kWh sales. See Miller Exhibit 5 Page 5

## Barnes Exhibit 2, page 2

# Duke Energy Carolinas, LLC For the Period January 1, 2015 - December 31, 2015 Docket Number E-7, Sub 1073 North Carolina Net Lost Revenue Estimates for Vintages 2014 - 2016

			v	intage 2014			
Line	Residential		2014	2015	<b>2016<sup>(a)</sup></b>	_	Total
1	Energy Assessments	\$	310,215.00 \$	234,407	_	\$	544,622
	My Home Energy Report	*	6,638,564	-	-	•	6,638,564
	Energy Efficient Appliances and Devices		3,901,495	1,312,802	8,015,920		13,230,217
4	HVAC Energy Efficiency		117,007	249,615	16,765		383,387
5	Appliance Recycle Program		107,899	799,949	-		907,848
6	Income Qualified Energy Efficiency and Weatherization Assistance		85,575	522,101	158,572		766,248
7	Multi-Family Energy Efficiency		209,774	471,994	574,281		1,256,049
8	Energy Efficiency Education		130,780	286,135	322,985		739,900
9	Total Lost Revenues		11,501,309	3,877,003	9,088,523		24,466,835
10	Found Residential Revenues *						-
11	Net Lost Residential Revenues	\$	11,501,309 \$	3,877,003	\$ 9,088,523	\$	24,466,835

Non-Residential		2014	2015	2016 <sup>(a)</sup>	Total
12 Nonresidential Smart Saver Custom Energy Assessments	\$	166,013 \$	432,469 \$	226,174 \$	824,656
13 Non Residential Smart Saver Custom	•	1,190,583	1,935,145	1,973,711	5,099,439
14 Energy Management Information Systems			97,730	-	97,730
15 Non Residential Smart Saver Energy Efficient Food Service Products		43,798	31,378	75,852	151,028
16 Non Residential Smart Saver Energy Efficient HVAC Products		99,002	169,337	178,827	447,166
17 Non Residential Smart Saver Energy Efficient Lighting Products		1,309,866	1,981,220	2,443,628	5,734,714
18 Non Residential Smart Saver Energy Efficient Pumps and Drives Products		94,053	151,287	172,849	418,189
19 Non Residential Smart Saver Energy Efficient IT Products		419	82,353	3,133	85,905
20 Non Residential Smart Saver Energy Efficient Process Equipment Products		19,557	2,525	28,995	51,077
21 Smart Business Energy Saver		15,777		191,647	207,424
22 Smart Energy in Offices		116,474		799,334	915,808
23 Total Lost Revenues		3,055,541	4,883,444	6,094,150	14,033,135
24 Found Non-Residential Revenues *		1,512	(1,512)		(0)
25 Net Lost Non-Residential Revenues	\$	3,054,030 \$	4,884,956 \$	6,094,150 \$	14,033,136

			Vi	ntage 2015			
Line	Residential	2014		2015		2016 <sup>(a)</sup>	Total
26	Residential Energy Assessments		\$	117,203	\$	333,375 \$	450,578
	My Home Energy Report		•	7,195,091	•	-	7,195,091
28	Energy Efficient Appliances and Devices			729,170		2,257,784	2,986,954
29	HVAC Energy Efficiency			129,033		221,848	350,881
30	Appliance Recycle Program			399,974		262,360	662,334
31	Income Qualified Energy Efficiency and Weatherization Assistance			242,767		232,432	475,199
32	Multi-Family Energy Efficiency			249,457		485,043	734,500
33	Energy Efficiency Education	_		143,069		279,113	422,182
34	Total Lost Revenues			9,205,764		4,071,955	13,277,719
35	Found Residential Revenues *						
36	Net Lost Residential Revenues		\$	9,205,764	\$	4,071,955 \$	13,277,719

	Non-Residential	2014	2015	2016 <sup>(a)</sup>	Total
37	Nonresidential Smart Saver Custom Energy Assessments	\$	227,042 \$	290,657 \$	517,699
38	Non Residential Smart Saver Custom		1,015,964	1,946,849	2,962,813
39	Energy Management Information Services		-	-	-
40	Non Residential Smart Saver Energy Efficient Food Service Products		19,705	38,177	57,882
41	Non Residential Smart Saver Energy Efficient HVAC Products		89,689	192,709	282,398
42	Non Residential Smart Saver Energy Efficient Lighting Products		1,052,048	2,383,702	3,435,750
43	Non Residential Smart Saver Energy Efficient Pumps and Drives Products		79,426	184,145	263,571
44	Non Residential Smart Saver Energy Efficient IT Products		63,320	100,222	163,542
45	Non Residential Smart Saver Energy Efficient Process Equipment Products		1,317	3,070	4,387
46	Smart Business Energy Saver			1,986,875	1,986,875
47	Smart Energy in Offices			1,070,349	1,070,349
48	Total Lost Revenues		2,548,511	8,196,755	10,745,266
49	Found Non-Residential Revenues *		1,491	2,752	4,243
50	Net Lost Non-Residential Revenues	\$	2,547,020 \$	8,194,003 \$	10,741,023

## Barnes Exhibit 2, page 2a

			Vintage 2016	_	
Line	Residential	2014	2015	2016 <sup>(a)</sup>	Total
51	Residential Energy Assessments			\$ 180,515 \$	180,515
	My Home Energy Report			10,000,374	10,000,374
53	Energy Efficient Appliances and Devices			885,431	885,431
54	HVAC Energy Efficiency			79,543	79,543
55	Appliance Recycle Program			138,883	138,883
56	Income Qualified Energy Efficiency and Weatherization Assistance			117,454	117,454
57	Multi-Family Energy Efficiency			318,146	318,146
58	Energy Efficiency Education			153,421	153,421
59	Total Lost Revenues		-	11,873,767	11,873,767
60	Found Residential Revenues *				
61	Net Lost Residential Revenues		\$ -	\$ 11,873,767 \$	11,873,767

	Non-Residential	2014	2015	20	)16 <sup>(a)</sup>	Total
62 63	Nonresidential Smart Saver Custom Energy Assessments Non Residential Smart Saver Custom			\$	213,540 \$ .,008,577	213,540 1,008,577
	Energy Management Information Services			1	-	1,008,577
65	Non Residential Smart Saver Energy Efficient Food Service Products				18,783	18,783
66	Non Residential Smart Saver Energy Efficient HVAC Products				105,952	105,952
67	Non Residential Smart Saver Energy Efficient Lighting Products			1	,249,795	1,249,795
68	Non Residential Smart Saver Energy Efficient Pumps and Drives Products				70,833	70,833
69	Non Residential Smart Saver Energy Efficient IT Products				74,932	74,932
70	Non Residential Smart Saver Energy Efficient Process Equipment Products				1,497	1,497
71	Small Business Energy Saver			1	,210,438	1,210,438
72	Smart Energy in Offices				792,359	792,359
73	Total Lost Revenues			4	,746,706	4,746,706
74	Found Non-Residential Revenues *				1,391	1,391
75	Net Lost Non-Residential Revenues			\$ 4	,745,315 \$	4,745,315

(a) Estimated Lost Revenues were estimated by allocating estimated system Lost Revenues per kWh sales. See Miller Exhibit 5 Page 6

72.9600473%

Mar 04 2015

# Duke Energy Carolinas, LLC For the Period June 1, 2009 - December 31, 2013 Docket Number E-7 Sub 1073 Actual Program Costs for SAW programs

Line	SAW PROGRAMS		Costs	linas System - 6/1/2009 - /31/2009	Mo	olinas System Costs - 12 nths Ended 2/31/2010	Mo	olinas System Costs - 12 onths Ended 2/31/2011	Mo	linas System Costs - 12 nths Ended 2/31/2012	-	olinas System 12 Months Ended 2/31/2013
1	Residential Energy Assessments		\$	2,003,480	\$	2,632,637	\$	2,668,577	\$	2,807,908	\$	2,709,166
2	Residential Home Retrofit			-		-		118,811		157,393		5,792
3	Residential Neighborhood Program			-		-		-		110,001		600,407
4	Home Energy Comparison Report			-		-		711,131		3,012,860		7,441,231
5	Residential Smart Saver			2,639,505		25,972,993		23,006,146		19,502,040		14,341,695
6	Appliance Recycle Program					-		-		302,588		1,808,141
7	Low Income Services			106,530		396,691		1,296		20,167		9,812
8	Energy Efficiency Education			2,137,748		2,273,809		791,598		2,893,919		2,030,442
9	Nonresidential Energy Assessments			161,826		1,110,853		2,519,394		1,467,001		750,949
10	Nonresidential Smart Energy Now			-		-		2,069,672		1,062,135		1,477,300 (1)
11	Nonresidential Smart Saver			1,831,197		6,988,330		12,145,531		18,984,876		17,610,411
12	Power Manager			2,322,903		9,422,232		14,392,260		12,541,114		12,715,817
13	Power Share			759,147		7,964,184		13,774,440		15,379,288		15,005,089
14	Total Energy Efficiency & Demand Side Program Costs	Sum (Lines 1-13)	\$	11,962,336	\$	56,761,729	\$	72,198,856	\$	78,241,290	\$	76,506,252
15	NC Allocation Factor for EE programs	Miller Exhibit 5	-	73.0077318%	-	72.7072722%		72.6972151%	-	72.7194575%		72.5649061%
16	NC Allocation Factor for DSM programs-Residential	Miller Exhibit 5	3	33.9010659%	3	34.4404513%		32.2293181%	3	34.8388691%		32.1711350%
17	NC Allocation Factor for DSM programs-Non-Residential	Miller Exhibit 5	3	39.9179344%	4	40.3489126%		42.2350050%	3	39.8808428%		42.3392872%
			Costs	Allocated - 6/1/2009 - /31/2009	( Mo	C Allocated Costs - 12 nths Ended 2/31/2010	Mo	C Allocated Costs - 12 onths Ended 2/31/2011	Mo	C Allocated Costs - 12 nths Ended 1/31/2012	12 N	C Allocated - Months Ended 2/31/2013
18	Residential Energy Assessments	Line 1*Line 15	\$	1,462,695	\$	1,914,119	\$	1,939,981	\$	2,041,895	\$	1,965,904
19	Residential Home Retrofit	Line 2*Line 15		-		-		86,372		114,455		4,203
20	Residential Neighborhood Program	Line 3*Line 15		-		-		-		79,992		435,685
21	Home Energy Comparison Report	Line 4*Line 15		-		-		516,972		2,190,935		5,399,722
22	Residential Smart Saver	Line 5*Line 15		1,927,043		18,884,255		16,724,827		14,181,778		10,407,038
23	Appliance Recycle Program	Line 6*Line 15		-		-		-		220,040		1,312,076
24	Low Income Services	Line 7*Line 15		77,775		288,423		942		14,665		7,120
25	Energy Efficiency Education	Line 8*Line 15		1,560,721		1,653,224		575,470		2,104,442		1,473,388
26	Nonresidential Energy Assessments	Line 9*Line 15		118,145		807,671		1,831,529		1,066,795		544,925
27	Nonresidential Smart Energy Now	Line 10*Line 15		-		-		1,504,594		772,379		1,072,002
28	Nonresidential Smart Saver	Line 11 * Line 15		1,336,915		5,081,024		8,829,463		13,805,699		12,778,978
29	Power Manager	(Line 12+ Line 13)*Line 16		1,044,848		5,987,960		9,077,935		9,727,152		8,918,130
30	Power Share	(Line 12+ Line 13)*Line 17		1,230,291		7,015,230		11,896,207		11,134,892		11,736,834
31	Total Energy Efficiency & Demand Side Program Costs	Sum (Lines 18-30)	\$	8,758,434	\$	41,631,906	\$	52,984,294	\$	57,455,121	\$	56,056,005

<sup>(1)</sup> Represents January and February 2014 program costs related to the Smart Energy in Offices pilot program.

Mar 04 2015

Barnes Exhibit 3, page 2

### **Duke Energy Carolinas, LLC** For the Period January 1, 2014 - December 31, 2014 **Docket Number E-7 Sub 1073 Actual Program Costs for Vintage Years 2014**

			Carolinas System - 12 Months Ended 12/31/2014
1	Residential Energy Assessments		\$ 3,605,737
2	My Home Energy Report		8,285,066
3	Energy Efficient Appliances and Devices		14,738,129
4	HVAC Energy Efficiency		4,786,807
5	Appliance Recycle Program		1,515,867
6	Income Qualified Energy Efficiency and Weatherization Assistance		1,917,192
7	Multi family Energy Efficiency		1,442,533
8	Energy Efficiency Education		1,963,153
9	Nonresidential Smart Saver Custom Energy Assessments		1,458,195
10	Energy Management Information Systems		74,855
11 12	Non-Residential Smart Saver Custom		8,136,712 199,350
13	Non-Residential Energy Efficient Food Service Products Non-Residential Smart Saver Energy Efficient HVAC Products		815,339
14	Non-Residential Smart Saver Energy Efficient Lighting Products		6,727,675
15	Nonresidential Energy Efficient Pumps and Drives Products		584,874
16	Nonresidential Energy Efficient ITEE		25,730
17	Nonresidential Energy Efficient Process Equipment Products		89,809
18	Smart Energy In Offices		1,156,497
19	Small Business Energy Saver		1,026,607
20	Power Manager		15,662,693
21	Power Share		15,520,492
22	Total Energy Efficiency & Demand Side Program Costs	sum(Lines 1-20)	\$ 89,733,313
23 24 25	NC Allocation Factor for EE programs NC Allocation Factor for DSM programs-Residential NC Allocation Factor for DSM programs-Non-Residential	Miller Exhibit 5 Pg. 6, Line 4 Miller Exhibit 5 Pg. 6, Line 9 Miller Exhibit 5 Pg. 6, Line 10	72.9600473% 34.0209980% 41.2108021%
			NC Allocated - 12 Months Ended 12/31/2014
26	Residential Energy Assessments	Line 1 * Line 22	\$ 2,630,748
27	My Home Energy Report	Line 2 * Line 22	6,044,788
28	Energy Efficient Appliances and Devices	Line 3 * Line 22	10,752,946
29 30	HVAC Energy Efficiency	Line 4 * Line 22 Line 5 * Line 22	3,492,457
31	Appliance Recycle Program Income Qualified Energy Efficiency and Weatherization Assistance	Line 6 * Line 22	1,105,977 1,398,784
32	Multi family Energy Efficiency	Line 7 * Line 22	1,052,473
33	Energy Efficiency Education	Line 8 * Line 22	1,432,317
34	Nonresidential Smart Saver Custom Energy Assessments	Line 9 * Line 22	1,063,900
35	Energy Management Information Systems	Line 10 * Line 22	54,614
36	Non-Residential Smart Saver Custom	Line 11 * Line 22	5,936,549
37	Non-Residential Energy Efficient Food Service Products	Line 12 * Line 22	145,446
38	Non-Residential Smart Saver Energy Efficient HVAC Products	Line 13 * Line 22	594,872
39	Non-Residential Smart Saver Energy Efficient Lighting Products	Line 14 * Line 22	4,908,515
40	Nonresidential Energy Efficient Pumps and Drives Products	Line 15 * Line 22	426,724
41	Nonresidential Energy Efficient ITEE	Line 16 * Line 22	18,773
42 43	Nonresidential Energy Efficient Process Equipment Products Smart Energy In Offices	Line 17 * Line 22 Line 18 * Line 22	65,525 843 781
43 44	Small Business Energy Saver	Line 18 * Line 22 Line 19 * Line 22	843,781 749,013
45	Power Manager	(Line 19 + Line 20)* Line 23	10,608,831
46	Power Share	(Line 19 + Line 20) * Line 24	12,850,841
46	Total Energy Efficiency & Demand Side Program Costs	Sum (Lines 25-44)	\$ 66,177,873

## Barnes Exhibit 4, page 1

# Duke Energy Carolinas, LLC June 2009 - December 2014 Actuals January 2015 - December 2016 Estimates Docket Number E-7, Sub 1073 North Carolina Found Revenues

						Actual/Repor	ted KWH				Estimated	KWH	
		2009		2010		2011	2012		2013	2014	2015	2016	Decision Tree Node
Boilers (unmetered)		575,990		-		-	-		-	-	-	-	Box 6 - include
Boilers (metered)		-		-		-	-		-	-	-	-	Box 6 - include
Economic Development	9	3,990,900		104,307,244		117,082,542	416,539,426		136,948,900	166,234,550	-	-	Box 5 - exclude
Plug-in Electric Charging Station Pilot		-		-		8,246	218,311		238,696	238,696	-	-	Box 3 - exclude
Food Service		693,553		949,022		723,338	1,204,245		712,711	-	-	-	Box 6 - include
Process Heat		31,014		1,783,740		2,973,046	1,002,303		162,109	-	-	-	Box 6 - include
Lighting		-		-		-	-		-	-	-	-	
Residential		102,492		169,991		162,984	76,420		93,396	105,354	105,354	105,354	Box 6 - include
Non Residential (Regulated)		112,286		175,553		129,669	77,433		60,528	95,391	143,087	143,087	Box 6 - include
MV to LED Credit - Residential (Regulated)		-		-		-	-		-	(156,381)	(205,208)	(205,208)	Box 6 - include
MV to LED Credit - Non-Residential (Regulated)		-		-		-	-		-	(104,331)	(136,907)	(136,907)	Box 6 - include
Non Residential (Non Regulated)		3,630		3,630		2,146	0		0	0	-	-	Box 6 - include
Total KWH	9	5,509,866		107,389,180		121,081,971	419,118,139		138,216,340	166,413,279	(93,675)	(93,675)	
Total KWH Included		1,518,966		3,081,936		3,991,183	2,360,401		1,028,744	(59,967)	(93,675)	(93,675)	
		· · · · · · · · · · · · · · · · · · ·				-	· · · · · ·		<u> </u>	•	· · · · ·		
Total KWH Included (net of Free Riders 15%)	\$	1,291,121	\$	2,619,646	\$	3,392,506	\$ 2,006,341	\$	874,432	\$ (50,972) \$	(79,624)	\$ (79,624)	
,						, ,	, ,		•	, , , ,	, , ,	, , , ,	
Annualized Found Revenue - Non Residential	\$	509,839	\$	1,111,621	\$	1,374,530	\$ 967,572	\$	391,947	\$ (3,615) \$	2,752	\$ 2,567	
Annualized Found Revenue - Residential	\$	55,308	_	93,912	_	91,169			62,416				
	т		,		, ,	5-,-55	,,		0_,:=0	+ (	(10,000)	, (00)	
		2009		2010		2011	2012		2013	2014	2015	2016	
						<b>I</b>		<u> </u>		<u> </u>	<u> </u>		
Vintage 1 -2009 - Non Res	\$	196,302	\$	509,839	\$	509,839	313,537						
Vintage 1 -2010 - Non Res			\$			1,111,621	\$ 1,111,621		449,841				
Vintage 2011 - Non Res				•	\$	403,371		\$	1,374,530	971,160			
Vintage 2012 - Non Res					·		\$ 445,846		967,572	967,572	521,726		
Vintage 2013 - Non Res							,	\$	256,181	391,947	391,947	135,766	
Vintage 2014 - Non Res									•	1,512	(3,615)	(3,615)	
Vintage 2015 - Non Res										,	1,491	2,752	
Vintage 2016 - Non Res											•	1,391	
Vintage 2017 - Non Res												,	
Net Negative Found Revenues to Zero*													
Rate Case Adjustment - Non Res **							(1,290,036)		(999,083)	\$ (1,793,596) \$	(443,467)	\$ -	
Subtotal - Non Res	\$	196,302		1,171,619		2,024,831	1,955,498		2,049,042	538,594	468,081	136,294	
							•						
Vintage 1 -2009 - Residential	\$	18,544	\$	55,308	\$	55,308	36,764						
Vintage 1 -2010 - Residential			\$	48,357	\$	93,912			45,556				
Vintage 2011 - Res					\$	46,409		\$	91,169	44,760			
Vintage 2012 - Res							32,870		49,611	49,611	16,741		
Vintage 2013 - Res							•	\$	37,737	62,416	62,416	24,679	
Vintage 2014 - Res									-	(12,947)	(34,952)	(34,952)	
Vintage 2015 - Res										• • •	(38,408)	(70,908)	
Vintage 2016 - Res											•	(37,262)	
Vintage 2017 - Res												. , ,	
Net Negative Found Revenues to Zero*													
Rate Case Adjustment - Residential **							(118,241)		(78,890)	\$ (86,929) \$	(14,230)	\$ -	
Subtotal - Residential	\$	18,544	\$	103,664	\$	195,629		\$	145,182			\$ (118,442)	
	•	, .	•	,	•	,	,	•	, -	, ,	, ,, ,	. , , ,	
Total Found Revenues	\$	214,846	\$	1,275,283	\$	2,220,460	\$ 2,091,972	\$	2,194,224	\$ 595,505 \$	459,649	\$ 17,851	
	<u> </u>	•	•	. , -			. ,	<u> </u>	. ,		,		

<sup>\*</sup> Eliminates the inclusion of total negative found revenues at the Residential and Non-Residential Level

<sup>\*\*</sup> Removes amounts to be recovered in base rates.

Barnes Exhibit 5

Duke Energy Carolinas, LLC
System Event Based Demand Response January 1, 2014 - December 31, 2014
Docket Number E-7, Sub 1073

Date	State	Program Name	<b>Event Trigger</b>	Weather Condition	วกร	Numbers of Customers Notified / Enrolled	MW Reduction
1/7/2014	NC and SC	PowerShare Generator	Emergency	H 25	L5	9	12,60
1/7/2014	NC and SC	IS	Emergency	H 25	L5	61	145.51
1/7/2014	NC and SC	SG	Emergency	H 25	L S	80	30.16
1/7/2014	NC and SC	PowerShare Mandatory	Emergency	H 25	L5	184	284.50
1/8/2014	NC and SC	PowerShare Generator	Emergency	H 44 L	14	9	14.46
1/8/2014	NC and SC	IS	Emergency	H 44 L	14	61	151.42
1/8/2014	NC and SC	SG	Emergency	H 44 L	14	80	36.18
1/8/2014	NC and SC	PowerShare Mandatory	Emergency	H 44 L	14	184	358.72
1/23/2014	NC and SC	PowerShare Voluntary	Economic	H 40 L	18	134	3.32
6/5/2014	NC and SC	Power Manager	<b>SOC Test Event</b>	H 90 L	70	156,650	
6/10/2014	NC and SC	Power Manager	<b>SOC Test Event</b>	H 90 L	67	183,683	
6/18/2014	NC and SC	Power Manager	Economic	H 93 L	.70	183,683	BARNI Imports and conflicted at the time of this filling
9/2/2014	NC and SC	Power Manager	Economic	H 94 L	70	183,117	M&V impacts not available at the time of this filing.
9/11/2014	NC and SC	Power Manager	Economic	H 89 L	66	183,117	
9/16/2014	NC and SC	Power Manager	Economic	H 85 L	66	183,117	

#### Notes:

- 'Weather Conditions' is the averaged daily high/low temperature from 3 weather stations (Charlotte, Greensboro, Greenville/Spartanburg).
- 'Numbers of Customers Notified/Enrolled' is the number of participants notified to participate in the event. For Power Manager events, this is the monthly active switch count,
- 'MW Reduction' values are based on the average MW reduction across all hours of the event.
- A loss adjustment of 1.08 has been included in the 'MW Reduction' values to reflect "at the plant" values.

#### A. Description

The Appliance Recycling Program ("Program") promotes the removal and responsible disposal of operating refrigerators and freezers from Duke Energy Carolinas, LLC's (the "Company's") residential customers. The refrigerator or freezer must have a capacity of at least 10 cubic feet but not more than 30 cubic feet. The Program recycles approximately 95% of the material from the harvested appliances.

#### **Audience**

Eligible Program participants include the Company's residential customers who own operating refrigerators and freezers used in individually metered residences.

#### **B &C.** Impacts, Participants and Expenses

	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$10.1	\$1.8	17%
Program Cost	\$2.3	\$1.5	65%
MW	3.9	0.7	18%
MWH	16,819.4	5,100.5	30%
Units	16,688	9,753	58%

<sup>1)</sup> Values are reflected at the system level.

#### D. Qualitative Analysis

#### **Highlights**

#### **Incentive Increase**

In an effort to increase Program participation, the Company increased the customer incentive from \$30 to \$50 per recycled appliance. The incentive increase was implemented in compliance with the Flexibility Guidelines.

#### Marketing Efforts

A comprehensive marketing plan was developed and launched with print, broadcast, digital, media events including a "Pop Up Museum". The Program management team scheduled media coverage during a scheduled pick-up at a customer's home. This was used as an opportunity to market the Program while the pick-up occurred. Additional marketing activities were conducted that included educating elementary schools students studying recycling and other environmental efforts such as a Filet-A-Fridge demonstration which deconstructs a refrigerator.

#### ARP Supplier Consolidation

In 2014, the Company consolidated our two legacy ARP Suppliers, Appliance Recycle Centers of America (ARCA) and JACO Environmental, naming JACO as the Company's single ARP source in June 2014. The transition was well planned and executed with minimal impact to our customers.

#### E. Marketing Strategy

The marketing campaign incorporated multiple approaches to reach customers and promote the Program. The marketing outreach includes mass media/advertising, social media, bill inserts and the Program website.

<sup>2)</sup> Numbers rounded.

#### F. Evaluation, Measurement and Verification

The impact and process evaluation results for Appliance Recycling program years 2012 and 2013 is is included the Rider 7 filing as Ham Exhibit C. The process evaluation included interviews with program management, customer participants, and used appliance dealers.

The impact evaluation complies with the Department of Energy's Uniform Methods Protocols for appliance recycling programs and included a metering study of 24 refrigerators and 8 freezers to capture energy use of recycled units under actual in-home conditions. The per-unit impacts reported in the evaluation are shown in the following chart:

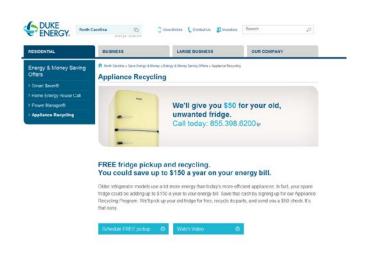
	Gross Savings		Net Savings	
	kWh	kW	kWh	kW
Overall	930	0.1275	485	0.0664
Refrigerators	952	0.1359	512	0.0731
Freezers	869	0.1035	410	0.0489

Process and impact evaluation work is underway for program years 2014 and 2015 with a report planned for completion in the fourth quarter of 2015. This report is planned to be combined for the Program in Duke Energy Carolinas and program year 2014 for Duke Energy Progress. The allocation of combined EM&V costs is proposed to be based on the projected number of participants in the Appliance Recycling program for each company.

The process evaluation will include interviews with program management and customer interivews. The impact evaluation will comply with the Department of Energy's Uniform Methods Protocols for appliance recycling programs and is planned to utilize data collected recently in the Carolinas and similar regions.

#### G. Appendix

#### **Web Pages**





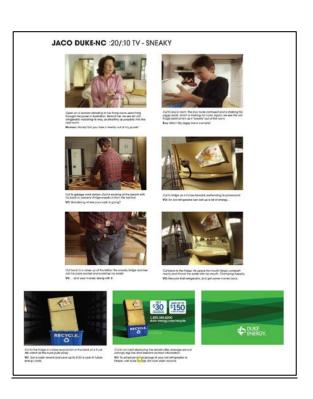
#### **Bill Insert**



#### **Direct Mail**



#### Television



## **Energy Efficiency Education Program**

#### A. Description

The Energy Efficiency Education Program ("Program") is an energy efficiency program offered in the Duke Energy Carolinas (the "Company" or "DEC") service territory. The Program is available to students in grades K-12 enrolled in public and private schools who reside in households served by the Company. The current curriculum administered by The National Theatre for Children ("NTC") targets K-8 grade students.

The Program provides principals and teachers with an innovative curriculum that educates students about energy, resources, how energy and resources are related, ways energy is wasted and how to be more energy efficient. The centerpiece of the curriculum is a live theatrical production focused on concepts such as energy, renewable fuels and energy efficiency performed by two professional actors. Teachers receive supportive educational material for classroom and student take home assignments. The workbooks, assignments and activities meet state curriculum requirements.

School principals are the main point of contact responsible for scheduling their school's performance at their convenience. Once the principal confirms the performance date and time, two weeks prior to the performance, all materials are delivered to the principal's attention for classroom and student distribution. Materials include school posters, teacher guides, and classroom and family activity books.

Students are encouraged to complete a home energy survey with their family (included in their classroom and family activity book) to receive an Energy Efficiency Starter Kit. The kit contains specific energy efficiency measures to reduce home energy consumption. The kit is available at no cost to all student households at participating schools, including customers and non-customers.

#### **Audience**

Eligible participants include the Company's residential customers who reside in households served by Duke Energy Carolinas with school-age children enrolled in public and private schools.

#### B &C. Impacts, Participants and Expenses

	Vintage 2014	Vintage 2014	% of
in millions, rounded	As Filed	YTD December 31, 2014	Target
IPV of Avoided Cost	\$2.9	\$5.2	176%
Program Cost	\$2.1	\$2.0	95%
иw	0.5	0.7	144%
иwн	5,226.0	7,098.1	136%
Jnits	24,000	28,316	118%

#### D. Qualitative Analysis

#### **Highlights**

The Company is supporting arts and theatre in schools while providing an important message about energy efficiency through an innovative delivery channel for children. Enhancing the message with a live theatrical production truly captivates the children's attention and reinforces the curriculum material provided by teachers.

During the 2014-2015 school year, National Theatre for Children introduced two new productions to students. Treasure Trove of Conservation Cove, a 25 minute production, is designed for elementary school aged students and teaches them how to use resources wisely through a fun pirate treasure hunt featuring a cast of colorful characters. The Resource Raider, a 40-minute program, is designed for middle school aged students. This production combines sketch comedy with improvisation and audience

## **Energy Efficiency Education Program**

participation to teach students about natural resources and energy efficiency while complimenting student studies in science and energy.

Approximately 1,000 school visits are expected in the DEC service territory during the 2014-2015 school year. During the 2014 fall school semester NTC conducted over 700 performances reaching approximately 266,000 students in the DEC service territory.

Once the completed energy efficiency survey is processed for an eligible customer, the energy efficiency starter kit is shipped and received within two to four weeks. To ensure customer satisfaction with the energy efficiency starter kit and the installation of items, an email reminder is sent monthly after successful kit delivery to encourage families to return their Business Reply Card (BRC). Qualified households that have submitted their energy efficiency survey and returned the BRC are automatically entered into the family contest drawing, sponsored by the NTC, for a \$2,500 cash prize. A fall and spring drawing will be held during the 2014-2015 academic year for all participating households in the Duke Energy Carolinas territory.

School contests encourage sign ups and for the fourth straight year, DEC and NTC awarded checks to schools whose students, along with their families completed home energy surveys and received energy efficiency kits as part of the Program. In the fall and spring of each year, a drawing is held selecting one school and one family contest winner. Brightwood Elementary in Greensboro, NC won \$10,000 in the fall 2014 school year. Principals, teachers and students may view their school's progress and compare the number of sign ups to other schools via the website, <a href="https://www.trackmysignups.org">www.trackmysignups.org</a>.

#### **Updates**

The Company has worked closely with NTC to enhance the Program by:

- Introducing two new productions to refresh and refocus the materials and scripts to keep participating schools engaged.
- Promoting the program through social media to encourage awareness, recognition and participation.
- Partnering with Duke Energy Account and District Managers to leverage existing relationships in the community to develop positive media stories while encouraging kit sign ups.

#### E. Marketing Strategy

The National Theatre for Children is responsible for all marketing campaigns and outreach. NTC utilizes direct mail and email sent directly to principals to market the Program.

#### F. Evaluation, Measurement and Verification

An impact and process evaluation report for the Energy Efficiency Education Program is scheduled for completion in the fourth quarter of 2015. The process evaluation of the Program will include program manager, implementer and teacher interviews to assess program operations, and student family surveys to assess program awareness, satisfaction, and compliance with installations and recommendations.

The goal of the impact evaluation is to assess the net energy savings attributable to the Program, as well as the persistence of the energy savings over time. The independent, third-party EM&V consultant will determine the detailed analysis methodologies, sample design and data collection activities. The impact evaluation for this Program is expected to consist of engineering estimates and a billing analysis.

Where applicable, a statistically representative sample of participants will be selected for the analysis. The Company intends to follow industry-accepted methodologies for all measurement and verification activities, consistent with International Performance Measurement Verification Protocol (IPMVP) Options A, C or D depending on the measure.

There is currently no planned difference in the EM&V plans for the Programs in DEC and DEP. However, due to the pre-established schedule of DEC evaluation and the launch schedule for the Program in DEP,

## **Energy Efficiency Education Program**

the evaluations will initially be performed separately at different times. Subsequent evaluations are expected to be combined for the Programs in DEC and DEP. At that time, the allocation of combined EM&V costs is proposed to be based on the projected number of participants of the Programs for each company.

## **Energy Assessments**

#### A. Description

The Home Energy House Call Program ("Program") is offered under the Energy Assessment Program. Duke Energy Carolinas, LLC (the "Company") partners with several key vendors to administer the Program.

The Program provides a free in-home assessment performed by a Building Performance Institute ("BPI") certified energy specialist designed to help customers reduce energy usage and save money. The BPI certified energy specialist completes a 60 to 90 minute walk through assessment of a customer's home and analyzes energy usage to identify energy savings opportunities. The energy specialist discusses behavioral and equipment modifications that can save energy and money with the customer. The customer also receives a customized report that identifies actions the customer can take to increase their home's efficiency. Examples of recommendations might include the following:

- Turning off vampire load equipment when not in use.
- Turning off lights when not in the room.
- Using CFLs in light fixtures.
- Using a programmable thermostat to better manage heating and cooling usage.
- Replacing older equipment.
- Adding insulation and sealing the home.

In addition to a customized report, customers receive an energy efficiency starter kit with a variety of measures that can be directly installed by the energy specialist. The kit includes measures such as energy efficiency lighting, low flow shower head, low flow faucet aerators, outlet/switch gaskets, weather stripping and an energy saving tips booklet.

#### **Audience**

Eligible Program participants are Company's residential customers that own a single-family residence with at least four months of billing history and have central air, electric heat or an electric water heater.

#### **B &C. Impacts, Participants and Expenses**

	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$2.2	\$12.8	574%
Program Cost	\$1.9	\$3.6	194%
MW	0.4	1.3	332%
MWH	3,396.3	10,599.3	312%
Units	5,000	10,753	215%

#### D. Qualitative Analysis

2) Numbers rounded.

#### **Highlights**

The Program's marketing campaign focuses on an energy expert which reinforces the Company's expert guide positioning. Based on previous online survey results, customers find the new campaign informative, relevant, attention-getting, and memorable. The Company continues with a multichannel marketing approach which includes the Program's website pages and banners, online services banner, email, bill inserts, mass media including television and radio and direct mail. Examples of online and direct mail promotion are included in the Appendix. The initial kick-off yielded positive response rates and enrollments in spite of vacation and holidays. We will continue to explore other channels for our

## **Energy Assessments**

marketing campaigns to reach our target audience and maximize both program performance as well as customer experience.

Communication channels amongst vendors, partners and the team at Duke Energy continue to be optimized to maximize collaboration regarding marketing initiatives, future scheduling, availability, routing, targeting, backlog, etc. to drive efficient operations as well as customer satisfaction. Additionally, the Program continues to utilize additional energy specialists to handle any over flow of appointments and ensure all customers are served in a timely fashion.

#### **Potential Changes**

Some program enhancements to increase the effectiveness of the Program being considered include:

- Evaluating energy efficient lighting offers such as LEDs, specialty bulbs and other measures for the energy efficiency kit and or moving away from a prepackaged kit.
- Enhancing the online enrollment experience to enable the customer to schedule, cancel, and/or modify their appointment time.
- Propensity modeling to allow for more targeting.
- Product training program to encourage cross sell or cross promotion of other relevant offers.
- · Refreshing marketing materials.

#### E. Marketing Strategy

Program participation continues to be driven through a multichannel approach including targeted mailings to pre-qualified residential customers, bill inserts, online promotions and online video. For those who elect to receive offers electronically, email marketing will be used to supplement direct mail. The Company has explored additional channels to drive awareness including but not limited to community outreach and event marketing. The marketing material continues to drive engagement and interest in the Program based on online survey results from a previous ad effectiveness study. Aligning with expert guide, messaging has continued to be simple and focused on key benefits (free energy expert advice, free inhome assessment and free starter kit) and three easy steps: you call, we come over, and you save.

Home Energy House Call program information and an online assessment request form are available at <a href="https://www.duke-energy.com">www.duke-energy.com</a>.

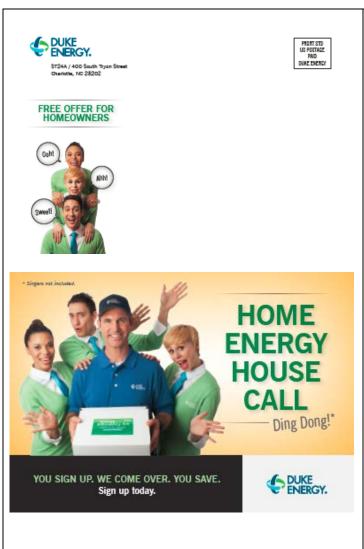
#### F. Evaluation, Measurement and Verification

There is currently no evaluation activity for this Program. The next process and impact evaluation report is scheduled for completion in third quarter of 2017 with activities beginning in 2016.

## **Energy Assessments**

#### G. Appendix

#### **Home Energy House Call Direct Mail**





#### A. Description

The Energy Efficient Appliances and Devices program ("Program") offers a variety of measures that allow eligible Duke Energy Carolinas, LLC (the "Company") customers to take action and reduce energy consumption. The Program includes offers for lighting measures, pool pumps, heat pumps water heaters and water measures.

#### **Compact Florescent Lamps Measure**

The Compact Fluorescent Lamps ("CFLs") measure is designed to increase the energy efficiency of residential customers by offering customers CFLs to install in high-use fixtures within their homes.

The CFLs are offered through multiple channels to eligible customers. The on-demand ordering platform enables eligible customers to request CFLs and have them shipped directly to their homes. Eligibility is based on past campaign participation (i.e., coupons, Business Reply Cards ("BRCs") and other Company programs offering CFLs). Bulbs are available in 3-, 6-, 8-, 12- and 15-pack kits that have a mixture of 13 watt and 20 watt bulbs. The maximum number of bulbs available for each household is 15, but customers may choose to order less.

Customers have the flexibility to order and track their shipment through three separate channels:

- Telephone: Customers may call a toll-free number to access the Interactive Voice Response ("IVR") system, which provides prompts to facilitate the ordering process. The IVR is designed to handle request for both English and Spanish-speaking customers. Customers may easily validate their account, determine their eligibility and order their CFLs over the phone.
- 2) The Company's Web Site: Customers can go online to order CFLs. Eligibility requirements and frequently asked questions are also available.
- 3) Online Services ("OLS"): Customers enrolled in the Company's Online Services may order CFLs through the Company's web site, if they are eligible.

#### **Specialty Lighting**

The Duke Energy Savings Store ("Store") is an extension of the on-demand ordering platform enabling eligible customers to purchase specialty bulbs and have them shipped directly to their homes. The Store launched on April 26, 2013 and offers a variety of CFLs and Light Emitting Diodes lamps ("LEDs") including; Reflectors, Globes, Candelabra, 3 Way, Dimmable and A-Line type bulbs. The incentive levels vary by bulb type and the customer pays the difference, including shipping. The maximum number of bulbs eligible for the Company offered incentive for each household varies by category, but customers may choose to order additional bulbs but will not receive the Company offered incentive.

Customers can check eligibility and shop for specialty bulbs through three separate channels:

- The Company Web Site: Customers can go online to visit the Store and purchase specialty bulbs. Frequently asked questions and a savings calculator are available to help customers understand how much they can save and how sustainable they can be by purchasing and using CFL and LED lighting.
- 2) Online Services: Customers enrolled in the Company's Online Services may visit the Store and purchase specialty bulbs. Upon login, eligible customers are intercepted with the Store offer. Customers can select "Shop Now" or "No Thanks". Additional links and promos within OLS are also available for customers to access the Store.
- 3) Phone Ordering: In September of 2014, customers were provided with the opportunity to order by phone. A toll free phone number is now provided on all promotional pieces for the

program and customers can place their orders over the phone directly with the programs third party vendor.

The Store is managed by a third party vendor, Energy Federation Inc. ("EFI"). EFI is responsible for maintaining the Store website and fulfilling all customer purchases. The Store's landing page provides information about the store, lighting products, account information and order history. Support features include a toll free number, package tracking and frequently asked questions.

An educational tool is available to help customers with their purchase decisions. The interactive tool provides information on bulb types, application types, savings calculator, lighting benefits, understanding watts versus lumens (includes a video) and recycling/safety tips. Each wireframe within the educational tool provides insight on the types of bulbs customers can purchase and/or provides answers to questions they have about the products or savings.

Product pages for each bulb category include application photos, product images, product specifications, purchase limits and program pricing. Customers may place items in their shopping carts to purchase at a later time. Customers can pay for their purchase with a credit card or by check.

Benefits of the three distinct channels for the CFL and Savings Store include:

- Improved customer experience
- Advanced inventory management
- Simplified program coordination
- Enhanced reporting
- Increased program participation
- Reduced program costs
- · Quick and convenient
- Discounted pricing

#### **Water Measures**

The Save Energy and Water Kit Program ("SEWK") is designed to increase the energy efficiency of residential customers by offering customers low flow water fixtures and insulated pipe tape for use within their homes.

The SEWK program is offered through a selective ordering platform, enabling eligible customers to request a kit and have it shipped directly to their homes. Customer who reside in a single-family home with an electric water heater and have not received similar measures through another Company-offered energy efficiency program. Kits are available in 3 sizes for homes with 1, 2 or 3 full bathrooms and contain varying quantities of shower heads, bathroom aerators, kitchen aerator and insulated pipe tape. Program participants with at least one electric water heater are eligible for one kit shipped free of charge to their home.

Customers are pre-screened based on the eligibility requirements and mailed a BRC. Upon receiving the BRC from the customer, the Company will ship the eligible kit to the customer. Due to the unique eligibility requirements of this program, the BRC is only channel the Company is currently employing to offer the kits to customers.

#### **High Efficiency Pool Pumps**

The High Efficiency Pool Pumps measure ("Pool Energy Efficiency Program") is designed to encourage the purchase and installation of energy efficient variable speed pool pumps for residential in-ground swimming pools. Eligible customers receive an incentive of \$300 for the replacement of an eligible single-speed pool pump with a new Energy Star certified variable speed pump. New swimming pool construction

is also eligible for the rebate. The program is marketed through a network of participating contractors ("Trade Allies") that interface directly with the customer, as well as through various marketing channels such as direct mail, email, company website, bill inserts and other customer communications. Eligible customers include single-family, owner-occupied residential customers with an in-ground pool in the Duke Energy Carolinas service territory. Builders of single-family residences are eligible for new residence construction that includes an in-ground swimming pool.

#### **High Efficiency Heat Pump Water Heater**

The High Efficiency Heat Pump Water Heater measure is designed to encourage the installation and adoption of heat pump water heaters. Eligible customers receive an incentive of \$350 for the replacement of an existing electric water heater with an Energy Star certified heat pump water heater having an Energy Factor (EF) rating of 2.0 or higher. The program is marketed through a network of participating contractors ("Trade Allies") that interface directly with the customer, as well as through various marketing channels such as direct mail, email, company website, bill inserts and other customer communications. Eligible customers include single-family, owner-occupied residential customers with electric water heating in the Duke Energy Carolinas service territory. Builders of single-family residences that include an eligible heat pump water heater are also eligible for the rebate.

#### **Audience**

Customers who meet the Program eligibility requirements.

#### **B &C.** Impacts, Participants and Expenses

	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$10.6	\$50.8	481%
Program Cost	\$5.9	\$14.7	249%
MW	2.9	18.4	625%
MWH	27,602.5	167,039.2	605%
Units	715,209	5,069,137	709%

#### D. Qualitative Analysis

2) Numbers rounded.

#### CFL

#### **Highlights**

Many customers have participated in the CFL Program by ordering bulbs through the IVR, OLS and the Company's website. Customers view this process as simple and enjoy the convenience of having bulbs shipped directly to their homes. Over 324,000 orders were placed in 2014. Participation is tracked at the account level which allows the Company to focus its attention and resources on non-program participants. Over 45 percent of the orders were placed through the toll-free phone number, while 18 percent of the orders were placed through OLS and 37 percent through the Company's website.

#### **Issues**

Analyzing customer data and finding ways to effectively market to non-participating customers.

#### **Potential Changes**

Innovative marketing campaigns will be utilized to improve awareness for hard-to-reach and late-adopter customers and cross promote the Store.

#### **Specialty Lighting**

#### **Highlights**

Customers are responding well to the discounted specialty lamps offered via the Store. The Store provides functionality allowing customers to purchase CFLs and LEDs at any time. The 31,000 orders placed in 2014 resulted in over 452,000 bulbs. Over 76 percent of customer accessed the Store via the public website, while 24 percent accessed the store by logging into their on-line services account.

#### Issues

Educating and bringing awareness of the Store to eligible customers. Allowing customers without internet access or computers to order via mail-in order form or by calling the vendor and ordering by phone.

#### **Potential Changes**

Minimize or removing shipping cost from customer orders and continue to build the product portfolio for more lighting options and technologies. Implement a mail-in order form and/or provide a toll free number to call and order bulbs directly from the vendor, EFI.

#### Save Energy and Water Kit Program

#### **Highlights**

The SEWK program was launched in April 2014 and 61,240 BRCs were mailed by the Company through the end of 2014. The adoption rate for 2014 was approximately 14 percent, resulting in the distribution of approximately 8,930 kits to customers.

#### Issues

The Company continues to analyze data from non-respondents of the BRC offer to identify opportunities to increase the adoption rate.

#### **Potential Changes**

Innovative marketing campaigns will be utilized to improve awareness for hard to reach and late adopter customers. In 2015, the program may be added to our website where customers could check eligibility and enroll in the program.

#### **High Efficiency Pool Pumps**

#### **Highlights**

The program was launched in May 2014 with Trade Ally recruitment and training. Development of marketing material and customer-facing program information followed in June 2014. The Company partnered with several wholesale distributers across North Carolina and South Carolina during 2014 to serve as distribution channels for program awareness and developing the Trade Ally Network. Trade Allies are important to the program's success and will be targeted through these channels because they interface with the customer during the decision-making process.

#### Issues

Customer buy-in and participation of the Trade Ally network is vital to the success of the program. With the program launching in May 2014, the recruitment window for a seasonal product was challenging and proved to be slow until contractors had more time to focus on upcoming opportunities for their businesses which was outside of the participation window.

#### **High Efficiency Heat Pump Water Heater**

#### **Highlights**

The program was launched in June 2014 with Trade Ally recruitment and training. Development of marketing material and customer-facing program information followed in July 2014. The Company partnered with several manufactures and national retailers across North Carolina and South Carolina during 2014 to increase program awareness and gain maximum exposer at the time of purchase. Contractors who were registered for the HVAC program were recruited to offer the program in an extension to their current service opportunities.

#### Issues

Educating and bring awareness of the program to both customers and potential contractors.

Educating contractors was addressed through Trade Ally marketing, recruitment and training but remained slow do to the re-emerging technology of heat pump water heaters and willingness to adopt more services to be offered. Customer awareness is being addressed through program design and marketing tactics but will be primarily targeted as a joint effort with manufactures and national retailers. Their willingness to co-brand and the frequency of those campaigns will be critical in reaching our customer base.

#### E. Marketing Strategy

#### **CFL**

The overall strategy of the program is to reach residential customers who have not adopted CFL bulbs. The Company will continue to educate customers on the benefits of CFLs while addressing barriers for customers who have not participated in the program. Additionally, the ease of Program participation will also be highlighted to encourage use of the on-demand ordering platform. The CFL and Specialty Lighting offers utilize the same ordering platform which allows the Company to promote both lighting offers efficiently and bring awareness to non-adopters.

Direct mail marketing has generated a significant number of orders in both North Carolina and South Carolina. New customers are made aware of the offer through a quarterly letter which has an average response rate of 15 percent Samples of the marketing collateral used for these campaigns are available in the Appendix.

#### **Specialty Lighting**

Since the launch of the Store, the marketing efforts include bill messages, bill inserts, email campaigns and direct mail. Examples of the marketing pieces can be found in the Appendix. Awareness and education will be the main focus in collateral messages to eligible customers.

#### Save Energy and Water Kit Program

The overall strategy of the program is to reach residential customers who have not adopted low flow water devices. The Company will continue to educate customers on the benefits of low flow water devices while addressing barriers for consumers who have not participated in the program.

Direct mail marketing in the form of BRCs is the only marketing channel being utilized by this program in the Carolinas. The Company may add a web-based ordering platform in 2015.

#### **High Efficiency Pool Pumps**

The Company implemented several customer marketing campaigns in 2014 which leveraged channels such as email, paid search, and display ads to build awareness of the program. The programs website was launched and provided a more thorough explanation of the benefits these services offer and how to find a participating contractor.

#### **High Energy Efficiency Heat Pump Water Heater**

The Company implemented several customer marketing campaigns in 2014 which leveraged channels such as bill inserts, email, paid search, and display ads to build awareness of the program. Other channels such as co-branded retail displays with selected manufactures and national retailers were utilized to create awareness for the program. The programs website was launched and provided a more thorough explanation of the benefits these services offer and how to find a participating contractor or retailer.

#### F. Evaluation, Measurement and Verification

The impact and process evaluation results for Energy Efficiency Appliances and Devices, Specialty Bulbs is included the Rider 7 filing as Ham Exhibit E. The process evaluation included interviews with program management, customer participants, and customer non-participants.

The impact evaluation utilized established algorithms to calculate impacts, utilizing data from participant surveys. The per-unit impacts reported in the evaluation are shown in the following chart:

	Gross	Net
Indoor Reflector (Recessed)	39.5	30.0
Dimmable Reflector (Recessed	38.3	29.1
Outdoor Reflector (Recessed	100.4	76.2
Reflector (Recessed LED)	67.4	51.2
Globe	22.3	17.0
Candelabra	18.6	14.1
Three Way Spiral	53.1	40.3
Dimmable Spiral	59.0	44.8
Capsule (A Line)	34.6	26.3
Capsule (A Line LED)	37.6	28.5

Currently, evaluation work is underway on the Residential CFL measure with a report scheduled to be completed in third quarter of 2015 and on single family water energy efficiency measures with a report scheduled to be completed in fourth quarter of 2015. The evaluation schedule of the single family water energy efficiency measures has been adjusted to be aligned with the launch that occurred in April 2014. In addition, participation is being monitored for heat pump water heaters and pool pump measures with an evaluation report tentatively scheduled for first quarter of 2016.

#### G. Appendix

#### CFL - Direct Mail Campaign



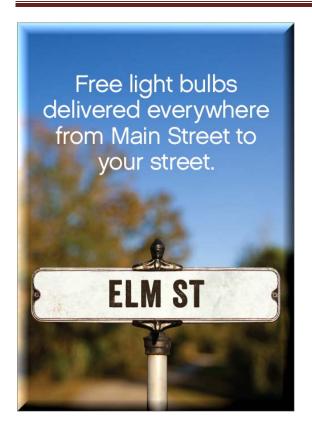














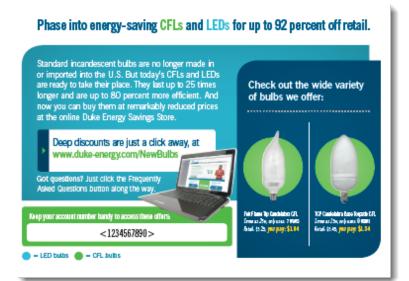
#### Savings Store - Specialty Bulbs















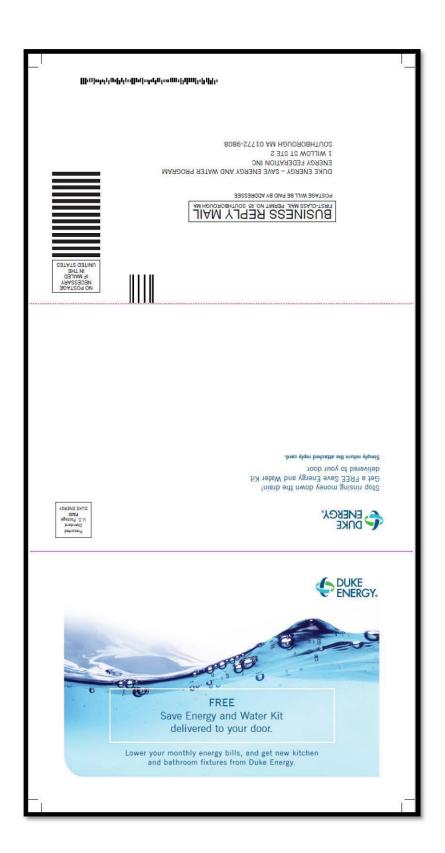


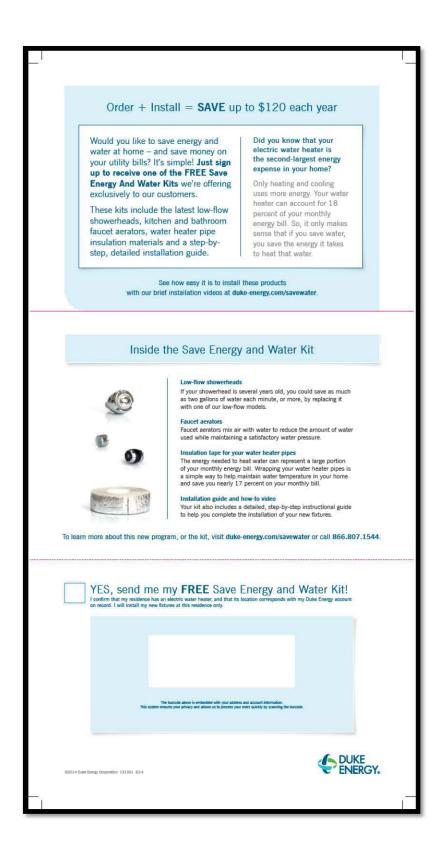












#### **High Efficiency Pool Pump Customer Factsheet**



#### High Efficiency Pool Pump Display Ad



#### **High Efficiency Pool Pumps Product Webpage**





If you have a single-speed pool pump, or your pump is more than seven years old, installing an ENERGY STAR® qualified variable-speed pool pump will help you lower your monthly bills and use less energy. And, we'll help you pay for it.

An energy-efficient pool pump will help:

- Reduce your energy usage by 50 to 70 percent\*\*
- · Save up to \$200 a year on average†
- · Improve water filtration and extend the life of your equipment
- · Reduce operating noise

And the best part? After you purchase an eligible variable-speed pool pump, we'll give you a \$3.00 rehatel

## Switching to a more energy-efficient pool pump can save you big.

Did you know that inefficient, single-speed pool pumps account for up to 20 percent of a home's total annual energy usage?\* Only your central air conditioner uses more electricity in the summertime.

Cut your pool energy use in half by installing a variable-speed pool pump. With the Smart \$aver® Pool Energy Efficiency program, the benefits add up.

#### Eligibility requirements

- You must be an electric service customer residing in a single-family residence with a new or existing in-ground swimming pool. Customers living in apartments and multifamily homes are not eligible at this time.
- Your new variable-speed pool pump must be installed by a participating contractor and operable before you submit your rebate application.
- Homeowners or builders must fill out and submit the rebate application within 90 days of the installation to receive a rebate check by mail.



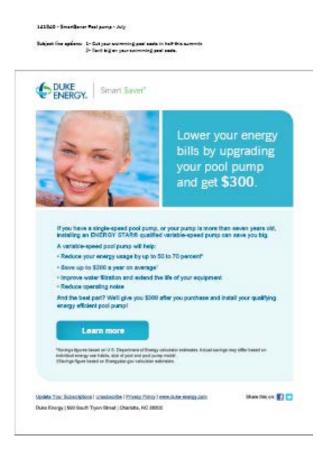


Variable-speed pool pumps work at the minimum speed necessary to clean your pool. This means they use less energy, make less noise, last longer and actually filter your water more thoroughly.



#### Frequently asked questions

#### **High Efficiency Pool Pump Email**



#### High Efficiency Heat Pump Water Heater National Retailer Display



#### **Heat Pump Water Heater Bill Insert**



#### **Heat Pump Water Heater Co-Branded Campaign**









#### **Heat Pump Water Heater Email**



#### A. Description

The Residential HVAC Energy Efficiency Program ("Program") offers measures that allow eligible Duke Energy Carolinas, LLC (the "Company") customers to take action and reduce energy consumption in the their home, including direct action against the home's single-largest user. The Program offering provides incentives for the purchase and installation of eligible central air conditioner or heat pump replacement. In addition, Program participants may receive an incentive for central air conditioner tune up, heat pump tune up, attic insulation, air sealing, duct sealing and duct insulation.

Program staff is responsible for establishing relationships with HVAC and home performance contractors as well as home builders ("Trade Allies") who interface directly with residential customers. These Trade Allies market and leverage the Program to assist with selling these products and services to customers. Once the Trade Ally has sold the service/product, they adhere to Program requirements for completion and submit incentive applications on behalf of the customer. An incentive check is disbursed to the customer and/or Trade Ally after the application has been approved and processed.

Duke Energy contracts with third party vendor who is responsible for application processing, incentive payment disbursement, and Trade Ally and customer call processing.

#### **Audience**

The Company's residential customers that meet the eligibility requirements of the Program.

#### **B &C. Impacts, Participants and Expenses**

HVAC Energy Efficiency <sup>1</sup>			
	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$12.9	\$7.1	55%
Program Cost	\$6.3	\$4.8	76%
MW	3.6	2.5	69%
MWH	8,026.7	4,526.2	56%
Units	16,153	12,866	80%

<sup>1)</sup> Values are reflected at the system level.

#### D. Qualitative Analysis

#### Highlights

The Company partnered with select participating Trade Allies across North Carolina and South Carolina during 2014 to offer discounted heat pump and central air conditioner tune ups and home energy audits to eligible customers. The campaigns received a positive reaction from customers as well as Trade Allies. The Company is evaluating additional opportunities to structure the program to hedge against additional efficiency standard changes and increased building code requirements while continuing to operate under the traditional cost effective models.

#### **Issues**

The buy-in and participation of the Trade Ally network is vital to the success of the Program. The Program aims to transform the market; shifting market practices away from some of the more commonly utilized practices which rely heavily on decentralized training and varying knowledge levels, as well as imprecise

<sup>2)</sup> Numbers rounded.

and manual field calculations, towards industry trained and certified trade allies using higher quality diagnostic instruments and processes. The Company has struggled to gain contractor acceptance with the tune and seal measures due to the required diagnostic equipment purchases, obtaining additional industry certifications and altering current business practices. The Company has had to remove many of the early adopting Trade Allies from the Program due to disengagement and inability to perform according to the program requirements. The seasonality of the tune-up program was affected by the cooler weather in the fourth quarter which did not allow for the minimum outdoor temp of 65 degrees to be reached to implement the programs Check Me diagnostic software and ultimately affected year-end participation.

In addition to not meeting the filed participation, the program performed an impact evaluation which determined that impacts associated with most of the tune and seal measures fell below previous assumptions. This was due to several factors which included: Participants having ductwork sealed or insulated in unconditioned basements and crawlspaces where the impacts are lower than the participants where the service was performed in unconditioned attics. A small number of participants also had ductwork sealed and insulated in what was considered conditioned basements which provided no savings.

The evaluation for the tune-up measures noted that 30 percent of the participants did not require significant refrigerant charge or air flow adjustments which equated to minimal efficiency gains and some participants had data quality issues which also contributed to the savings degradation.

#### E. Marketing Strategy

Promotion of the HVAC segment of the Program is primarily targeted to HVAC and home performance contractors as well as new home builders. Trade Allies are important to the Program's success because they interface with the customer during the decision-making event, which does not occur often for most customers.

Program information and Trade Ally enrollment forms are available on the Program's re-designed website to educate customer about the Program and encourage participation. By increasing the overall awareness of the Program and the participation of Trade Allies, it ensures more customers are discussing the benefits of the Program at time of purchase.

The Company implemented several customer marketing campaigns during 2014 which leveraged channels such as direct mail and email to build awareness of the program. Other channels such as a paid search and co-branded direct mail campaigns with selected Trade Allies were also utilized to create awareness for the program. The Program website was re-designed to provide a more thorough explanation of the benefits these services offer which included more visual examples from the previous site.

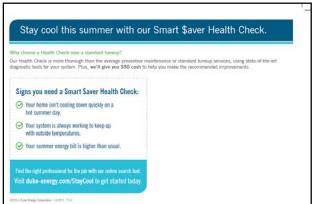
#### F. Evaluation, Measurement and Verification

The impact evaluation report for the HVAC Energy Efficiency Tune and Seal measures was completed near the end of 2014. The report is included the Rider 7 filing as Ham Exhibit F. The evaluation included telephone surveys with Trade Allies and customer participants. Impacts were calculated through an engineering analysis, utilizing data in the program tracking database and program application information. The per-unit impacts reported in the evaluation are shown in the following chart:

	Gross kWh	Net kWh
Attic insulation and air leakage sealing	1,163	1,051
Duct sealing	255	231
Duct insulation	519	469
Air Conditioner tune-up	70	63
Heat Pump tune-up	237	214

#### G. Appendix

#### Residential HVAC - Direct Mail





#### Residential HVAC - Email Message



#### Residential HVAC - Bill Insert



#### Residential HVAC - Co-Branded Campaigns





### Residential HVAC - Website Re-Design



#### Residential HVAC - Email Message



### Residential HVAC - Website Re-Design



#### Residential HVAC - Website



#### A. Description

The purpose of the Low Income Energy Efficiency and Weatherization Assistance Program ("Program") is to assist low income customers with energy efficiency measures in their homes to reduce energy usage. There are three offerings currently in the Program: the Residential Neighborhood Program ("RNP"), the Weatherization and Equipment Replacement Program ("WERP"), and the Refrigerator Replacement Program ("RRP").

WERP and RRP are available for qualified customers in Duke Energy Carolinas, LLC's (the "Company's") service territory for existing, individually metered, single-family, condominiums, and mobile homes. Funds are available for (i.) weatherization measures, and/or (ii.) heating system replacement with a 14 or greater SEER heat pump, and/or (iii.) refrigerator replacement with an Energy Star appliance. The measures eligible for funding will be determined by a full energy audit of the residence. Based on the results of the audit, customers are placed into a tier based on energy usage, allowing high energy users to receive more extensive weatherization measures. WERP and RRP are delivered in coordination local agencies that administer state weatherization programs.

Customers participating in the RNP receive a walk-through energy assessment to identify energy efficiency opportunities in the customer's home and a one-on-one education on energy efficiency techniques and measures. Additionally, the customer receives a comprehensive package of energy efficient measures. RNP participants may have the measures listed below installed in their home based on the opportunity identified from the energy assessment.

- Compact Fluorescent Bulbs Up to 15 compact fluorescent bulbs to replace incandescent bulbs.
- 2. Electric Water Heater Wrap and Insulation for Water Pipes.
- 3. Electric Water Heater Temperature Check and Adjustment.
- 4. Low-Flow Faucet Aerators Up to three low-flow faucet aerators.
- 5. Low-Flow Showerheads Up to two low-flow showerheads.
- 6. Wall Plate Thermometer.
- 7. HVAC Winterization Kits Up to three winterization HVAC kits for wall/window air conditioning units will be provided along with education on the proper use, installation and value of the winterization kit as a method of stopping air infiltration.
- 8. HVAC Filters A one-year supply of HVAC filters will be provided along with instructions on the proper method for installing a replacement filter.
- 9. Change Filter Calendar.
- 10. Air Infiltration Reduction Measures Weather stripping, door sweeps, caulk, foam sealant and clear patch tape will be installed to reduce or stop air infiltration around doors, windows, attic hatches and plumbing penetrations.

#### **Audience**

WERP is available to qualified customers in existing individually-metered, owner-occupied single-family residences, condominiums or manufactured homes.

RRP is available to qualified customers in individually-metered residences irrespective of whether the property owner or the tenant owns the refrigerator.

RNP is available to individually-metered residential customers in neighborhoods with approximately 50% of the homes identified as low income based on third party and census data, which includes income level and household size. Areas targeted for participation in RNP will typically have approximately 50% or more of the households with an income equal to or less than 200% of the poverty level established by the federal government.

### **B &C. Impacts, Participants and Expenses**

	Vintage 2014	Vintage 2014	% of
<u>\$ in millions, rounded</u>	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$6.2	\$1.7	27%
Program Cost	\$11.3	\$1.9	17%
MW	2.4	0.8	33%
MWH	10,977.5	3,374.8	31%
Units	11,244	9,082	81%

<sup>2)</sup> Numbers rounded.

#### D. Qualitative Analysis

### **Highlights**

Through the end of 2014, RNP offered free walk-through energy assessments to qualifying neighborhoods in Durham, NC; Kannapolis, NC; Charlotte, NC; Greensboro, NC; Burlington, NC; Gastonia, NC; Salisbury, NC; Mt. Airy, NC; Hickory, NC; Eden, NC; Marshville, NC; Winston Salem, NC; Thomasville, NC; Lancaster, SC; Spartanburg, SC; Chester, SC; Greenwood, SC; and Anderson, SC. Neighborhood events have included support from community groups and speakers such as elected officials, community leaders and community action agency representatives.

In addition to formal kick-off events, the Company has introduced "tent events" in select neighborhoods to allow customers to visit an information tent at their convenience for additional information about the RNP.

Due to changes in the program administrator, the Company plans to launch the WERP and RRP at the end of the first quarter of 2015 in North Carolina and South Carolina. The Company selected the program administrator, North Carolina Community Action Agency (NCCAA), in December 2014 via a request for proposal.

#### E. Marketing Strategy

The WERP and RRP plan to piggy-back the marketing efforts of the current state Weatherization Assistance Programs administered by the NCAAA and their respective weatherization service providers. Additionally, agencies may utilize referrals generated from other Company energy efficiency programs as well as from their existing pool of weatherization applicants.

The RNP continues to target neighborhoods with a significant low-income customer base using a grassroots marketing approach to interact on an individual customer basis to gain trust. Participation is driven through a neighborhood kick-off event that includes trusted community leaders and local and state officials explaining the benefits of the Program. The purpose of the kick-off event is to rally the neighborhood around energy efficiency and to educate customers on methods to lower their energy bills. Customers have the option to make an appointment for an energy assessment at the time of the event.

In addition to the kick-off event, the Company plans to use the following avenues to inform potential customers about the Program:

- Direct mail (letters and reminder post cards)
- Door hangers
- · Press releases
- Community presentations and partnerships
- Inclusion in community publications such as newsletters, etc.

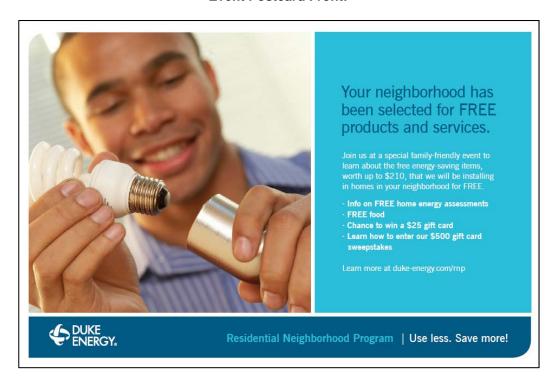
### F. Evaluation, Measurement and Verification

There is currently no evaluation activity for this Program. The impact and process report for the Residential Neighborhood Program is included in the Rider 7 filing as Ham Exhibit D. The next process

and impact evaluation report is scheduled for completion in fourth quarter of 2016 with activities beginning in 2016.

#### G. Appendix

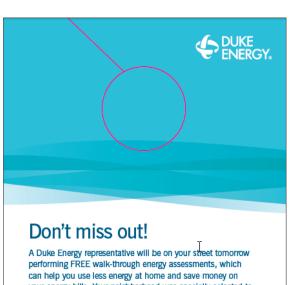
#### **Event Postcard Front:**



#### **Event Postcard Back:**



#### **Don't Miss Out Doorhanger**



your energy bills. Your neighborhood was specially selected to receive these FREE assessments - don't miss out! You'll get:

- · A walk-through assessment to show you where your home is wasting energy.
- Up to 16 energy-saving products and services that could help you save money on your electric bill. (These energy-saving measures can cost up to \$210, but we'll give them to you for free - and we'll install
- · Free energy tips to help you save even more.

We will be on your street Energy Specialist's name: \_ Phone number:

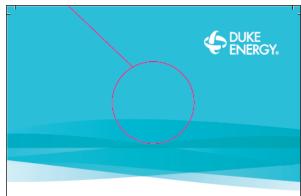
To take advantage of this free program, an adult occupant must be home at the time of our visit.

#### Learn more at duke-energy.com/rnp

\*Landlord consent is required before an assessment can be performed.
Renters can download an Owner Authorization Form at duke-energy.com/rnp.

Residential Neighborhood Program Use less. Save more!

#### Sorry We Missed You Doorhanger



### We're sorry we missed you!

An Energy Specialist from Duke Energy was here to help you find ways to save energy, and save money on your energy bills. Your neighborhood was selected for this FREE service through our Residential Neighborhood Program. We're offering FREE walk-through energy assessments and energy-saving products to homes in your neighborhood. But don't worry - we can come back at another time.

Please contact me to set up a time that is convenient for you.

Energy	Specialists	name:	 		
Phone	number:				

As a part of this program, you'll get:

- · A walk-through assessment to show you where your home is wasting energy.
- · Up to 16 energy-saving products and services that could help you save money on your electric bills. (These energysaving measures can cost up to \$210, but we'll give them to you for free - and we'll install them, too.)
- · Free energy tips to help you save even more.

To take advantage of this free program, an adult occupant must be home at the time of our visit.

#### Learn more at duke-energy.com/rnp

\*Landlord consent is required before an assessment can be performed. Renters can download an Owner Authorization Form at duke-energy.com/mp.

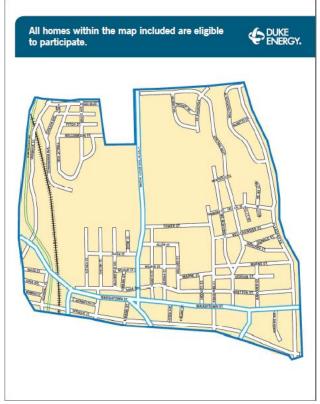
> Residential Neighborhood Program Use less. Save more!

### **Event Flyer**

### **Front of Flyer**

### **Back of Flyer**





#### A. Description

The Multi-Family Energy Efficiency program ("Program") provides energy efficient lighting and water measures to reduce energy usage in eligible multi-family properties. The Program allows Duke Energy Carolinas, LLC (the "Company") to utilize an alternative delivery channel which targets multi-family apartment complexes. The measures are installed in permanent fixtures by Franklin Energy, the program administrator or the property management staff. The program administrator manages the distribution of measures and partners with property managers in the Company's service territory to enroll multi-family properties.

The Program helps property managers upgrade lighting with energy efficient 13 watt CFLs and also saves energy by offering water measures such as bath and kitchen faucet aerators, water saving showerheads and pipe wrap. The water measures are available to eligible customers with electric water heating. These measures assist with reducing maintenance costs while improving tenant satisfaction by lowering energy bills.

The Program offers a direct install ("DI") option service by Franklin Energy. However, property managers still have the option for their property maintenance crews to complete the installations. The Program has 132 properties enrolled in the Program of which only one had their maintenance crews install the measures.

The lighting measures and water measures are installed during scheduled direct install visits by Franklin Energy crews or routine maintenance visits by property personnel. In the case of direct installs, crews carry tablets to keep track of what is installed in each apartment. In the case of DIY installations, the property maintenance crew tracks the number of measures installed and reports them back to Franklin Energy. Franklin Energy then validates this information and submits the results to the Company.

After installations are completed, Quality Assurance ("QA") inspections are conducted on 20 percent of properties that completed installations in a given month. The QA inspections are conducted by an independent third party.

#### **Audience**

The target audience is property managers who have properties that consist of four or more units and are served on an individually metered residential rate schedule. In order to receive water measures, apartments must have electric water heating.

Properties that have already been served by the Property Manager CFL program are only eligible for water measures.

#### **B &C. Impacts, Participants and Expenses**

	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$5.5	\$5.6	102%
Program Cost	\$2.7	\$1.4	54%
MW	0.9	1.0	116%
MWH	9,813.1	11,588.9	118%
Units	145,151	162,241	112%

#### D. Qualitative Analysis

#### **Highlights**

The Program enrolled 132 properties in 2014 and accounting over 19,000 units. The Program installed 112% of the overall participation in comparison to the as filed participation. Lighting measures reflect 48% of the participation and water measures reflect 52% of the participation. During the 2014 calendar year, Franklin Energy identified opportunities to install additional lighting measures in larger apartments. The Program adopted a tier structure to determine the number of lighting measures installed in apartments. Franklin Energy may install up to 12 bulbs in a one bedroom apartment, up to 15 bulbs in a two bedroom apartment and up to 18 bulbs in a three bedroom apartment.

#### **Potential Change**

A potential program currently being evaluated revolves around the current kitchen aerator offering. Through customer feedback via customer satisfaction surveys and QA visits, there appears to be a desire for a higher gallons per minute offering. This is currently under review by program management.

#### E. Marketing Strategy

With the program officially launching in March, Franklin Energy conducted an outbound call campaign to solicit initial interest in the program from property managers in the Company's service territory. On-site visits by appointment were also used as a way to attract properties to participate in the Program.

In addition to proactively marketing the Program using these tactics, a Multi-Family Energy Efficiency promo and public website landing were developed for property managers to learn more about the Program. The Program brochure and a frequently asked question sheet are available for download. Once enrolled, Franklin Energy provides property managers with a variety of marketing tools to create awareness of the Program to their tenants. The tools include Program posters to display in common areas and letters for tenants focused at educating them about measures being installed and when the installation will occur. In addition, tenants are provided an educational leave-behind brochure when the installation is complete. This provides additional details on the installed measures as well as tear-off customer satisfaction survey to fill out and mail back to the Company to provide valuable Program feedback.

Another way a property manager may learn more about this Program is through the MyDuke Portal, an online tool, when they login to pay the bills of vacant units at their property. The MyDuke Portal presents a promo that directs the user to the Program website for more information.

#### F. Evaluation, Measurement and Verification

Currently, evaluation work is underway on the water measures in the Program, with a report scheduled to be completed in fourth quarter of 2015.

Samples of participants are selected for the process and impact studies. For the impact evaluation, the evaluator plans to collect data from participants to be used in engineering-based estimation. Participant surveys will also collect information needed to estimate net impacts and for the process evaluation.

#### G. Appendix

#### **State Landing Page Promotion**



#### **Program Web Page**



#### **Tenant Leave-Behind**



Duke Energy Multifamily Energy Efficiency Program













Address.	Unit #	City					9	iz te.		ZIF		
was notified in advance of this work	. □ Yes □ No											
I was at home while the technicions i	natelled the products.	☐ Yes □	No									
The technicians' ID badges were visib	ie. D'Yes D'No D	INA										
Uning a scale of sito so, please rate you	level of agreement wi	th the folio	wing	/to I	e cwi	nin:	(Circl	eyo.	rne	poni	d	
				de							tone	ng siid
Overall, I was satisfied with the Duke Officiency Program.	Energy Multiformity E	ued).	1	2	3	4	8	6	7	8	9	10
The technicians respected my propert	y and left it in good o	andition.	1	2	3	4	8	6	7	8	9	10
			1	2	3.	4	8	6	7	8	9	10
The technicians treated me with court	tesy:											
The technicians treated me with court The technicians installed the publicise			1	2	3	4	8	6	7	8	9	10
The technicians installed the publiciss The technicians were knowledgeable	ed iberna.	nd				4		6	7	8	9	10
The technicians installed the publicis	ed items. about the products an	nd	1	2	3		8			-		







### **Program Brochure**















Start saving now with the latest COMPLIMENTARY energy-saving products.





### My Home Energy Report

#### A. Description

The My Home Energy Report ("MyHER" or the "Program"), is a periodic comparative usage report that compares a customer's energy use to similar residences in the same geographical area based upon the age, size and heating source of the home. Energy saving recommendations are included in the report to encourage energy saving behavior.

The reports are distributed up to 12 times per year (delivery may be interrupted during the off-peak energy usage months in the fall and spring). The report delivers energy savings by encouraging customers to alter their energy use. Customer's usage is compared to the average home (top 50 percent) in their area as well as the efficient home (top 25 percent). Suggested energy efficiency improvements, given the usage profile for that home, are also provided. In addition, measure-specific offers, rebates or audit follow-ups from other Company offered programs are offered to customers, based on the customer's energy profile.

#### Audience

Target customers reside in individually-metered, single-family residences with an active account and concurrent service from Duke Energy Carolinas, LLC (the "Company").

#### B & C. Impacts, Participants and Expenses

My Home Energy Report <sup>1</sup>						
	Vintage 2014	Vintage 2014	% of			
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target			
NPV of Avoided Cost	\$12.2	\$12.2	100%			
Program Cost	\$8.5	\$8.3	97%			
MW	35.2	38.6	110%			
MWH <sup>2</sup>	149,783.5	142,881.7	95%			
Units	668,314	728,626	109%			

<sup>1)</sup> Values are reflected at the system level.

#### D. Qualitative Analysis

As customers receive subsequent reports, their engagement increases as they learn more about their specific energy use and how they compare to their peer group. The report then provides customers tools to reduce their usage in the form of targeted energy efficiency tips that provide customers with actionable ideas to help them become more efficient. Program participants are encouraged to contact the Company with their questions, comments and report corrections. Report corrections continue to generate the largest number of inquiries. Customers wishing to be removed from the Program represent less than one percent of Program participants.

#### **Highlights**

The Company filed notification<sup>1</sup> on under the Flexibility Guidelines with the North Carolina Utilities Commission to add an interactive/electronic report and expanded the MyHER to approximately 325,000 additional customers that are eligible to participate in the Program. This expansion started in January 2015.

<sup>2)</sup> Numbers rounded.

<sup>&</sup>lt;sup>1</sup> The notification was filed on November 7, 2014 in Docket No. E-7, Sub 1032.

## My Home Energy Report

#### **Potential Changes**

The Company has developed an interactive online portal which allows customers to further engage and learn more about their energy use and opportunities to reduce their usage. Customers will be able to set goals, track their progress to goal, interact with calculators to assess the value of changing their behavior (i.e. turn thermostat up two degrees) and receive more targeted tips. This portal will be available to customers by the end of first quarter of 2015.

#### E. Marketing Strategy

Marketing for the Program consists of proactive communication through distribution of reports supported by a program website featuring additional information on the reports, Frequently Asked Questions ("FAQs") and contact resources. The online component once live will be marketed in the printed report.

#### F. Evaluation, Measurement and Verification

The impact and process evaluation results for the Program is included the Rider 7 filing as Ham Exhibit A. The process evaluation included interviews with program management and customer participants.

The impact evaluation consisted of an analysis of consumption data for treatment group and control group customers. The per-unit impacts reported in the evaluation are 184 kWh net savings.

#### A. Description

The Non-Residential Smart \$aver® Prescriptive Program ("Program") provides incentives to Duke Energy Carolinas, LLC's (the "Company's") commercial and industrial customers to install high efficiency equipment in applications involving new construction and retrofits and to replace failed equipment. Incentives are provided based on the Company's cost effectiveness modeling to assure cost effectiveness over the life of the measure.

Commercial and industrial customers can have significant energy consumption but may lack knowledge and understanding of the benefits of high efficiency alternatives. The Program provides financial incentives to help reduce the cost differential between standard and high efficiency equipment, offer a quicker return on investment, save money on customers' utility bills that can be reinvested in their business, and foster a cleaner environment. In addition, the Program provides market demand where the dealers and distributors (or market providers) will stock and provide these high efficiency alternatives as they see increased demand for the products. Higher demand can result in lower prices.

The Program promotes prescriptive incentives for the following technologies – lighting, HVAC, pumps, variable frequency drives, food services and process equipment. Equipment and incentives are predefined based on current market assumptions and engineering analysis. The eligible measures, incentives and requirements for both equipment and customer eligibility are listed in the applications posted on the Company's Business and Large Business websites for each technology type.

Beginning in March 2014, the Company developed an internal data processing, mining, tracking and reporting tool in order to gain efficiencies in program implementation and to rely less on a third party vendor for data. This tool was implemented in December of 2014. Ecova remains engaged as a staffing resource for processing applications, validating requirements and as an outreach channel for programs.

#### **Audience**

All of the Company's non-residential opt-in customers billed on an eligible Duke Energy Carolinas rate schedule

#### B & C. Impacts, Participants and Expenses<sup>1</sup>

Non Residential Smart Saver Prescriptive			
	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$43.6	\$51.9	119%
Program Cost	\$9.6	\$8.4	88%
MW	12.9	14.7	114%
MWH	70,435.3	84,594.6	120%
Units	277,985	1,230,830	443%

<sup>1)</sup> Values are reflected at the system level.

#### D. Qualitative Analysis

#### **Highlights**

Smart \$aver Prescriptive midstream delivery channel was launched in 2014, providing instant Smart \$aver Prescriptive incentives through participating distributors. The program management team plans to expand the current lighting and food service participants, and to begin phasing in HVAC distributors within the next year.

The Program administrator identified dedicated resources to build and maintain relationships with trade allies. Trade ally buy-in has proven to be the most effective way to promote the Program to the Company's

<sup>2)</sup> Numbers rounded.

<sup>&</sup>lt;sup>1</sup> The information reflects results for the Non-Residential Smart \$aver Prescriptive program in aggregate. Reference the Appendix for results by technology.

business customers. The Smart \$aver outreach team builds and maintains relationships with trade allies associated with the technologies in and around the Company's service territory. Existing relationships continue to be cultivated while recruitment of new trade allies also remains a focus. The name and contact information for each trade ally company appears on the trade ally search tool located on the Program's website. This tool was designed to help customers, who are not aware of a local trade ally, locate a trade ally in their area who can serve their needs. The tool has been revised to incorporate enhanced search criteria functionality. The Company continues to look for ways to engage the trade allies in promotion of the Program as well as more effective targeting of trade allies based on market opportunities.

The Online Portal application submittal is projected to launch in the second quarter of 2015. The tool provides the functionality for customers and trade allies to register and establish online profiles for Energy Efficiency projects. The Online Portal will allow participants to apply for incentives, save their progress and track projects throughout the submission process.

The Company offers a co-marketing trade ally campaign to encourage trade allies to include Smart \$aver program messaging and information in their marketing. If trade ally marketing efforts are approved by the Duke Energy program managers, the Company will pay up to 50% of the marketing cost with a maximum of \$2,000. To date, we have approved five applications for marketing items including brochures, lunch and learns, and large events.

The Company launched the Duke Energy Online Savings Store ("Store") via the web. The Program has achieved increased participation in 2014 with lighting offered via the Store. This channel will continue to be utilized to drive interest in advanced technologies and other low cost energy efficiency measures

The Company supports several channels to offer instant prescriptive incentives that reduce the price of energy efficient products at the time of purchase. Channels may include the online Store, customer purchases made through a distributor, and other channels which will increase participation in the program. The incentives offered through these channels will be consistent with current program incentive levels.

#### Issues

Throughout 2014, participation for lighting technology exceeded as filed participation. However, the Program includes measures, such as process equipment, with little or no participation. The Company continues to work with outside consultants and internal resources to develop strategies to understand equipment supply and value chains and increase awareness of these measures going forward. Additionally, evaluations of alternative HVAC incentive designs geared to drive early equipment replacements continue.

#### **Potential Changes**

Standards continue to change and new more efficient technologies continue to emerge in the market. The Company will continue evaluating the opportunity to add measures to the approved Program that provide incentives for a broader suite of energy efficient products. Utilizing the DSMTracker tool, an internal data base and processing tool, will provide a deeper understanding of market needs and allow for multiple directions in reaching additional market segments and customers. Analyzing this data provides a cleaner understanding of customer participation which will help in development of additional programs and measure offerings. In 2014, new lighting, HVAC, and Foodservice measures were added to the Prescriptive portfolio. Work continues in 2015 with CleaRESult to review the current measures, incentive levels, requirements and technology offerings. Duke Energy plans to update the portfolio with the findings of the review in 2015.

#### E. Marketing Strategy

Non-residential customers are informed of programs via targeted marketing material and communications. Information about incentives is also distributed to trade allies, who in turn sell equipment and services to all sizes of nonresidential customers. Large business or assigned accounts are targeted primarily through assigned Company account managers. Program managers for this Program believe engagement with small to medium size customer will continue to increase. In 2014, the Company added additional internal roles to focus on increasing small to medium business program participation. Specifically, the Company added five business energy advisors to the Carolinas area to perform outreach to unassigned small and medium business customers. The business energy advisors follow up on customer leads to assist with program questions and

steer customers to the trade ally search tool who are not already working with a trade ally. In addition, the business energy advisors are contacting customers with revenue between \$60,000 and \$250,000 to promote the Smart \$aver programs.

The internal marketing channel is comprised of assigned Large Business Account Managers, Segment Managers and Local Government and Community Relations who all identify potential opportunities as well as distribute program collateral and informational material to customers and trade allies. In addition, the Economic and Business Development groups also provide a channel to customers who are new to the service territory.

In February 2014, regional seminars were held throughout the Company's service territory to educate trade allies on new measures that were added to the Program. The seminars were well-received and drew a large number of attendees.

In September 2014, we held regional two-day energy efficiency training for trade allies. The training provided information about the Program as well as practical ways to promote and sell energy efficiency to customers.

#### F. Evaluation, Measurement and Verification

Currently, evaluation work is underway on measures in all the Smart \$aver prescriptive technologies, with reports scheduled for lighting to be completed in the second quarter of 2016 and other technologies to be completed in the first quarter of 2016.

Samples of participants are selected for the process and impact studies. For the impact evaluation, some blend of selective monitoring and site visits are being performed at a sample of facilities, with engineering-based estimation and participant billing analysis to be determined by the evaluator. Participant surveys are being conducted to collect information needed to estimate net impacts and for the process evaluation.

### G. Appendix

Non Residential Smart Saver Energy Efficient Food Service Products<sup>1</sup>

	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$0.5	\$1.5	279%
Program Cost	\$0.1	\$0.2	148%
MW	0.1	0.2	244%
MWH	1,066.4	2,341.0	220%
Units	679	2,325	342%

- 1) Values are reflected at the system level.
- 2) Numbers rounded.

Non Residential Smart Saver Energy Efficient HVAC Products<sup>1</sup>

	Vintage 2014	Vintage 2014	% of
<u>\$ in millions, rounded</u>	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$8.7	\$5.2	60%
Program Cost	\$1.4	\$0.8	58%
MW	2.3	1.3	55%
MWH	5,934.4	4,669.7	79%
Units	53,118	925,410	1742%

- 1) Values are reflected at the system level.
- 2) Numbers rounded.

Non Residential Smart Saver Energy Efficient Lighting Products<sup>1</sup>

<i>57</i>	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$31.2	\$40.9	131%
Program Cost	\$6.9	\$6.7	97%
MW	9.7	12.3	126%
MWH	54,688.9	70,310.8	129%
Units	212,753	295,023	139%

- 1) Values are reflected at the system level.
- 2) Numbers rounded.

Non Residential Energy Efficient Pumps and Drives Products<sup>1</sup>

J.	Vintage 2014	Vintage 2014	% of
<u>\$ in millions, rounded</u>	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$2.3	\$3.6	157%
Program Cost	\$0.7	\$0.6	78%
MW	0.7	0.8	114%
MWH	5,698.0	6,487.1	114%
Units	5,331	5,258	99%

- 1) Values are reflected at the system level.
- 2) Numbers rounded.

Non Residential Energy Efficient ITEE<sup>1</sup>

S,	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$0.8	\$0.0	4%
Program Cost	\$0.3	\$0.0	8%
MW	0.1	0.0	19%
MWH	2,970.7	124.2	4%
Units	5,726	1,364	24%

- 1) Values are reflected at the system level.
- 2) Numbers rounded.

Non Residential Energy Efficient Process Equipment Products<sup>1</sup>

	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$0.1	\$0.7	1129%
Program Cost	\$0.0	\$0.1	455%
MW	0.0	0.2	1033%
MWH	76.8	661.9	862%
Units	378	1,450	384%

<sup>1)</sup> Values are reflected at the system level.

<sup>2)</sup> Numbers rounded.

### Non-Residential Smart \$aver® Custom Assessment

#### A. Description

Duke Energy Carolinas, LLC's (the "Company's") Non-Residential Smart \$aver® Custom Assessment (the "Program") offers financial assistance to qualifying commercial, industrial, and institutional customers to help fund an energy assessment designed to identify the overall energy efficiency of a building(s) or system and to provide a list of suggested capital measures that will reduce energy costs with the intent of also helping customers to utilize the Non-Residential Smart \$aver® Custom Program. The deliverable of the Program is a detailed energy report that includes the above as well as the technical data needed for the Non-Residential Smart \$aver® Custom Program and to provide assistance with the Non-Residential Smart \$aver® Custom Application. All kWh and kW savings identified from measures implemented as a result of the pre-qualified assessments are solely counted to the Program.

The intent of the Program is to encourage the implementation of energy efficiency projects that would not otherwise be completed without the Company's technical and financial assistance. The Program's application requires pre-qualification for eligibility. All assessments are performed by professional engineering firms that have been pre-selected and contracted by the Company. The current engineering firms include: Building Intelligence Group, LLC, CB&I, Inc., ThermalTech Engineering, Inc., and Mazzetti. Each offers a diversified set of skills that allow all qualifying commercial, industrial, and institutional customers to be supported.

#### **Audience**

Pre-qualified non-residential electric customers, except those that choose to opt-out of the Program, are eligible.

#### B & C. Impacts, Participants and Expenses

	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$8.2	\$6.9	84%
Program Cost	\$3.7	\$1.5	40%
MW	1.9	1.5	79%
MWH	16,694.3	9,128.2	55%
Units	13,526	75	1%

#### D. Qualitative Analysis

#### **Highlights**

Customers continue to show interest in the Program. In 2014, 45 new customers expressed interest in the Program of which 27 have completed assessments or are in process of completing assessments. One-third of the participants did not proceed to implement measures after the completion of the assessment. The main reasons for incompletion are lack of capital available within the business or the energy efficiency measures identified do not meet the internal criteria needed for a capital project. Over 9.7 million kWh and 1,571 kW in energy savings were achieved through the Program in 2014. On average, the portion of the assessment subsidized by the Company exceeds \$10,000 while the kWh reduction exceeds 500,000 per customer.

#### Issues

Prior to 2014, the Program had been considered too diversified with many contracted vendors, inconsistent deliverables, and variable pricing. A vendor Request for Proposal ("RFP") was launched at

### Non-Residential Smart \$aver® Custom Assessment

the end of 2013. Review and selection of the aforementioned four vendors was completed in second quarter of Q2 2014 in order to provide the Program the stability that was needed. Customers now experience a consistent pricing structure, process, support, and deliverable.

Even with the consolidation of the engineering firms, the Program supports all market segments, building types, and various industry specific systems (i.e. compressed air systems) while continuing to meet each customer's specific needs and individual building characteristics.

#### E. Marketing Strategy

The marketing strategy for the Program is to work with those customers that need technical and financial assistance as a companion to their internal resources. Given the facility-wide approach, many of the energy savings opportunities are complex and interactive in nature which fits well with the end-to-end involvement utilized in the Program. Typical customer marketing activity involves direct marketing from assigned Account Managers, electronic postcards, information attained through the Company's website, and direct customer inquiries.

#### F. Evaluation Measurement and Verification

An evaluation report for Smart \$aver custom assessment measures is scheduled to be completed in second guarter of 2017.

Samples of participants are selected for the process and impact studies. For the impact evaluation, some blend of selective monitoring and site visits are being performed at a sample of facilities, with engineering-based estimation and participant billing analysis to be determined by the evaluator. Evaluation analysis may include identification of spillover impacts from the process of engaging customers in the energy assessment. Participant surveys are planned to collect information needed to estimate net impacts and for the process evaluation.

### Non-Residential Smart \$aver® Custom

#### A. Description

Duke Energy Carolinas, LLC's (the "Company's") Non-Residential Smart \$aver® Custom Incentives (the "Program") offers financial assistance to qualifying commercial, industrial and institutional customers (that have not opted-out) to enhance their ability to adopt and install cost-effective electrical energy efficiency projects.

The Program is designed to meet the needs of the Company's customers with electrical energy saving projects involving more complicated or alternative technologies, or those measures not covered by the Non-Residential Smart \$aver Prescriptive Program. The intent of the Program is to encourage the implementation of energy efficiency projects that would not otherwise be completed without the Company's technical or financial assistance.

The Program's application is for projects that are not addressed by the applications for the Non-Residential Smart \$aver Prescriptive Program. Unlike the Non-Residential Smart \$aver Prescriptive Program, the Program requires pre-approval prior to the project implementation. Proposed energy efficiency measures may be eligible for customer incentives if they clearly reduce electrical consumption and/or demand.

The two approaches for applying for incentives for this Program are Classic Custom and Custom-to-Go. The difference between the two approaches focuses on the method by which energy savings are calculated. The documents required as part of the application process vary slightly.

Currently the applications forms listed below are located on the Company's website under the Smart \$aver<sup>®</sup> Incentives (Business and Large Business tabs).

- Custom Application Administrative Information
- Energy Savings Calculations & Basis
  - o Classic Custom approach (> 700,000 kWh or no Applicable Custom-to-Go calculator)
    - Variable Frequency Drives
    - Energy Management Systems
    - Compressed Air
    - Lighting
    - General
  - o Custom to Go Calculators (< 700,000 kWh and Applicable Custom-to-Go Calculator)
    - Energy Management Systems

The Company contracts with Ecova to perform the administrative review of applications and to provide training and technical support to our trade ally network. The engineering firm AESC performs the technical review of custom applications. All other analysis is performed internally at the Company.

#### **Audience**

All of the Company's non-residential electric accounts billed on eligible rate schedules, except those that choose to opt-out of the Program, are eligible.

#### B & C. Impacts, Participants and Expenses

	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$38.5	\$49.9	130%
Program Cost	\$8.6	\$8.1	95%
MW	8.5	9.4	110%
MWH	74,701.1	78,157.5	105%
Units	60,524	32,451	54%

### Non-Residential Smart \$aver® Custom

#### D. Qualitative Analysis

#### **Highlights**

Customers continue to identify energy efficiency offers eligible under this Program. Program results in 2014 in comparison to as filed for avoided cost and impacts are significantly higher than as filed. An average of 14 new pre-approval applications per month was received in 2014, down from 18 in 2013. Customers are consistently investing in efficiency projects that are not addressed by the prescriptive incentives.

Efforts to educate trade allies and vendors who sell energy efficient equipment have been very successful. In many cases, vendors will submit the paperwork for the customer which eliminates a barrier for customers that do not have the resources to devote to completing the application.

#### Issues

The Program application process is considered burdensome by some customers due to the technical review required for all projects applying for a custom incentive. The technical review often requires customers (or their vendor) to quantify the projected energy savings from the proposed project. This can be a lengthy process that may require some level of engineering expertise. Where required, this requirement will continue, thus ensuring that incentives are being paid for cost-effective verifiable efficiency gains. Those technologies that seem to be a good fit for the Non-Residential Smart \$aver Prescriptive Program will be recommended for addition to the prescriptive application. The more measures offered through the Non-Residential Smart \$aver Prescriptive Program, the fewer burdens there are on the customer that prevents participation in the Smart \$aver program.

#### **Potential Changes**

In 2014, the Company launched a user-friendly energy savings calculation tool for energy management systems ("EMS") which is intended to streamline the application process and increase participation for small to medium-sized energy efficiency projects. For 2015, the Company is adding additional calculators to this suite, including HVAC, Lighting, VFDs, and Compressed Air. The entire suite is called "Custom-to-Go". The Smart \$aver Custom webpage has been updated to accommodate these additions. Additionally, the Custom Program is evaluating the application of a "flat rate" incentive rate value for Custom applications.

Furthermore, the Custom program continues to evaluate additional improvements to enhance participation and program efficiency.

#### E. Marketing Strategy

The marketing strategy for the Program is the same as the Non-Residential Smart \$aver Prescriptive Program. The strategy is to promote prescriptive incentives, which show pre-approved incentive amounts that get customers interested in a project and are designed for a high volume of applications. Then, if a customer's project does not fall under prescriptive incentives, the custom application is there to offer an alternative. The program is promoted through but not limited to the following:

- Trade ally outreach
- Account Managers
- Company website

#### F. Evaluation, Measurement and Verification

Currently, evaluation work is underway on Smart \$aver custom measures, with a report scheduled to be completed in second quarter of 2017. Samples of participants are selected for the process and impact studies. For the impact evaluation, some blend of selective monitoring and site visits are being performed

# Non-Residential Smart \$aver® Custom

at a sample of facilities, with engineering-based estimation and participant billing analysis to be determined by the evaluator. Participant surveys are being conducted to collect information needed to estimate net impacts and for the process evaluation.

#### A. Description

Power Manager® ("Program") is a demand response program that cycles residential central air conditioning usage during summer peak demand conditions. Duke Energy Carolinas, LLC (the "Company") installs a load cycling device to the outdoor unit of a qualifying air conditioner. This enables the customer's air conditioner to be cycled off and on when the Company initiates a Power Manager event. In addition, the Company can perform cycling or full shed interruption of participating customers' air conditioning systems at any time due to capacity problems, including generation, transmission or distribution capacity problems or reactive power problems.

Program participants receive a financial incentive as a bill credit in the amount of \$8 per month from July through October (\$32 annually).

The cycling of the customer's air-conditioning system has shown that there is no adverse impact on the operation of the air-conditioning system. The load control device has built-in safe guards to prevent the "short cycling" of the air-conditioning system. Cycling simply reduces the amount of time the air-conditioning system runs, which is no different from what it does on milder days. Additionally, the indoor fan will continue to run and circulate air during the cycling event.

#### **Audience**

The Program is available to the Company's residential customers residing in owner-occupied, single-family residences with a qualifying outdoor central air-conditioning unit.

#### B & C. Impacts, Participants and Expenses

PowerManager <sup>1</sup>			
	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$51.8	\$58.4	113%
Program Cost	\$14.6	\$15.7	107%
MW <sup>2</sup>	354.3	403.4	114%
MWH	N/A	N/A	-
Units <sup>3</sup>	333,524	379,812	114%
Notes on Tables:			
1) Values are reflected at the system level.			
2) MW capability derived from the average re	duction from cycling of	participating air conditioners	
during the June - September control season.			
3) Units included in filing represented average	KW at the meter durin	g the June - September control s	eason,
rather than number of switches. The average	switch count for that s	same period was 183,310.	
4) Numbers rounded.			

#### D. Qualitative Analysis

#### **Power Manager Events**

During the summer of 2014, the Company called six Power Manager events. The first two of these were conducted in early June to test various capabilities of the Power Manager hardware, communications, and software systems. The remaining four events were initiated to help avoid the cost of bringing additional capacity online.

#### Power Manager Device Replacement

In 2014, over 60,000 older Power Manager devices have been removed from participating customers' homes as part of the replacement effort. The vast majority of these were replaced with new Power Manager devices. Those not replaced were the result of customers' requests to be taken off the program. The device replacement project will be completed prior to the 2015 Power Manager event season.

#### E. Marketing Strategy

In 2014, the Company increased marketing for Power Manager, while continuing to focus its resources on replacing/removing older Power Manager devices.

At the of the 2014 calendar year, over 9,000 new air conditioners had been added to the Power Manager program. These additions are the result of outbound telephone marketing and two email offers. The telephone marketing has been very successful and represents 90% of the new participants. This continues to be a very cost effective marketing channel with a low acquisition cost and produces more enrollments per contact than previously used channels.

Program information and enrollment form are available to customers on the Power Manager website located at <a href="http://www.duke-energy.com/north-carolina/savings/power-manager.asp">http://www.duke-energy.com/north-carolina/savings/power-manager.asp</a>.

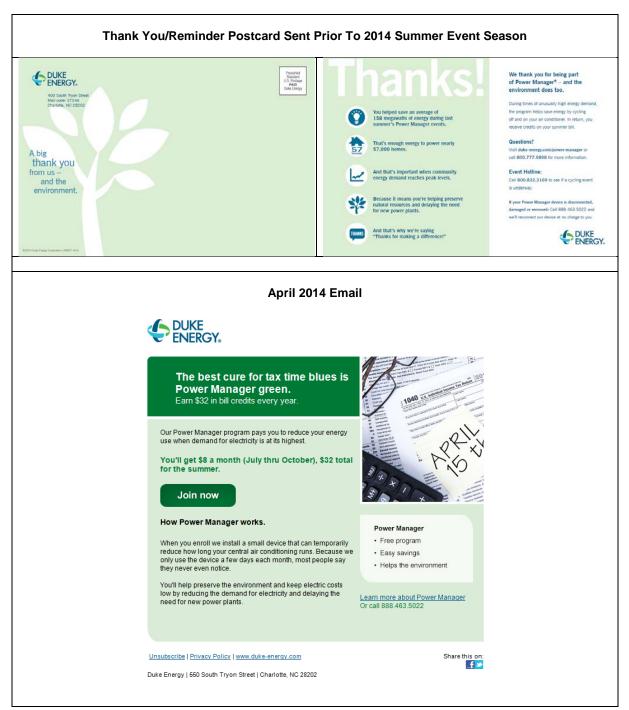
#### F. Evaluation, Measurement and Verification

The Impact and Process evaluations for Power Manager program are included in the Rider 7 as Ham Exhibit G and Ham Exhibit H. Impact and Process evaluation results for the 2014 season will be available and presented in 2015.

#### 2013 EM&V Highlights

- There were seven (7) Power Manager events and one (1) test event in 2013.
- The switch replacement program that is in effect continues to provide increased capability and quality control measures for Power Manager in DEC.
- Operability rates for switches remains was reported to be above 94% in 2013.
- Power Manager continues to achieve high customer satisfaction ratings with program participants.
- Participants awareness of actual events remains low, while discomfort attributed to Power Manager events does not affect customer perceptions of the program.
- Power Manager continues to provide a significant resource of both economic and emergency capacity for summer months (177.5 MW Cycling and 327.8 MW Full Shed).

#### G. Appendix



#### October 2014 Email

#### **Device Replacement Postcard**





She simply lets us cycle her AC's runtime a few days a year when energy demand is at its highest. She doesn't even notice when it happens. And we pay her, just for participating.

Power Manager helps us meet our customers' energy needs more efficiently. That keeps everyone's rates down, and it's good for the environment. It's also freel

So why not join your energy-saving neighbors? Learn more.

#### Sign up now

Or call 888.463.5022 to enroll by phone

### Power Manager is making

- a difference.
- 157,000 Power Manager participants in the Carolinas
  Saved 158 megawatts of electricity in 2013
- That's enough to power 57,000 homes
- \$ And each of them gets \$32 off their summer electric bills

www.duke-energy.com/powermanager

Update Your Subscriptions | Unsubscribe | Privacy Policy | www.duke-energy.com

Duke Energy | 550 South Tryon Street | Charlotte, NC 28202



#### Important Information about Duke Energy's Power Manager® Program

Thank you for participating in Power Manager\* a voluntary program that pays you for allowing Duke Energy to reduce your air conditioning runtime when electricity demand is especially high. Reducing electricity use during peak periods lessens our dependence on less efficient and more expensive power sources, resulting in savings to you and benefits to the environment.

In the coming weeks, a technician from our partner GoodCents, will replace the Power Manager device near your air conditioning unit outside your home at

By upgrading older devices, we are increasing the program's effectiveness. And like your old device, the new one is completely safe and does not harm your air conditioning unit. All work will be done outside your home and completed at no cost to you.

In most cases, you do not need to be present. If your property has a locked fence or outdoor pets we need to know about, or you have questions, please contact us:

Phone: 800-777-9898 select option 4

To learn more about Power Manager, visit www.duke-energy.com/PowerManager.
Thank you for making a difference.

### PowerShare®

#### A. Description

PowerShare® ("Program") is a demand response program offered to commercial and industrial customers. The Program is comprised of Mandatory ("PS-M"), Generator ("PS-G"), Voluntary ("PS-V") and CallOption options, and customers can choose from a variety of offers. Under PS-M, PS-G and CallOption, customers receive capacity credits for their willingness to shed load during times of peak system usage. Energy credits are also available for participation (shedding load) during curtailment events. The notice to curtail under these offers can be rather short (15-30 minutes), although every effort is made to provide as much advance notification as possible. Failure to comply during an event will result in penalties.

#### **Audience**

The Program is offered to Duke Energy Carolinas, LLC's (the "Company's") non-residential customers who have not opted-out and are able to meet the load shedding requirements.

#### B & C. Impacts, Participants and Expenses

PowerShare <sup>1</sup>			
	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$62.8	\$55.3	88%
MW <sup>2</sup>	430.9	382.0	89%
MWH	N/A	N/A	N/A
Units <sup>3</sup>	405,646	359,926	89%

#### Notes on Tables:

- 1) Values are reflected at the system level.
- 2) MW capability derived by taking average over specific PowerShare contract periods.
- 3) Units included in filing represented KW at meter, rather than number of participants. The average participation for 2014 was 187.
- Numbers rounded.

PowerShare CallOption<sup>1</sup>

· or cronare campaion			
	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$4.0	\$0.0	0%
MW <sup>2</sup>	28.7	0	0%
MWH	N/A	N/A	N/A
Units <sup>3</sup>	27,000	0	0%

#### Notes on Tables:

- 1) Values are reflected at the system level.
- 2) MW capability derived by taking average over specific PowerShare contract periods.
- 3) Units included in filing represented KW at meter, rather than number of participants. There was no participation in 2014.
- 4) Numbers rounded.

### D. Qualitative Analysis

#### **Highlights**

PS-Mandatory and PS-Generator have been well received by customers in both North Carolina and South Carolina. Most customers previously enrolled in Interruptible Power Service ("IS") and Standby Generator ("SG") programs in South Carolina transitioned to PS-M and PS-G, respectively. Program modifications made in response to recently implemented EPA regulations have also led to the transition of many North Carolina SG participants to PS-G.

### **PowerShare®**

#### Issues

The Company entered into an agreement with interested parties in 2011 to create a new measure offer for PowerShare® CallOption. This offer would allow for up to 200 hours of "economic curtailments" and pay the customer a \$50/kW per year capacity credit. Due to changes in operations, the original interested parties decided not to participate. Duke Energy Carolinas has been unable to generate interest in any of the CallOption offerings since the sole participant transitioned to PS-M in June 2013.

#### **Potential Changes**

The Program management team received feedback from customers requesting the ability to provide a different kW capability value for summer and winter peak. The third-party evaluator included this recommendation in the 2013 PowerShare Impact Evaluation report presented to members of the Duke Energy Carolinas Collaborative on December 4, 2014.

Commercial and industrial customers prefer to participate concurrently in PS-M and PS-V rather than CallOption for the opportunity of both emergency and economic dispatch scenarios. Due to little to no participation, the Company is evaluating discontinuing the PowerShare CallOption program.

The Company plans to submit a regulatory filing with the Public Service Commission of South Carolina and North Carolina Utilities Commission to reflect the proposed changes.

#### E. Marketing Strategy

To date, marketing efforts for the Program have focused on the relationship between the Company's account executives and their assigned customers. As part of their normal contact with customers, the account executives introduce the Program, including any new options/offers, while explaining the value proposition to the customer. Account executives share in-house analytical spreadsheets that show the specific incentives for each offer as applied to the customer's specific load profile as well as collateral to explain the details of all the Program offers.

In consideration of the number of qualifying customers that do not meet the criteria for being assigned to account executives, the Company continues to explore both internal and external marketing opportunities to enhance our outreach and increase program participation.

#### F. Evaluation, Measurement and Verification

The Impact and Process evaluation for PowerShare for program year 2013 is included the Rider 7 filing as Ham Exhibit I. The Impact and Process evaluation results for the 2014 season will be available and presented in 2015.

#### 2013 EM&V Highlights

- During the winter of 2012/2013, there were no PowerShare events.
- During the summer of 2013, there were no PowerShare events due to the mild weather and low marginal energy prices.
- Effort has been placed on developing tools to help educate smaller customers on incentives, events, and kW calculations. This also includes educating customers about wintertime events such as the Winter 2013/14 'Polar Vortex' event.
- The 2013 Impact and Process Evaluation Report reflects the positive program feedback from customers on marketing, enrollment, and information provided to PowerShare customers.
- Winter 2014 events did provide an opportunity to engage customers and provided valuable feedback regarding communication of events and potential changes to facilitate summer/winter capabilities of customers.

### **Small Business Energy Saver**

#### A. Description

The purpose of Duke Energy Carolinas, LLC's (the "Company's" or "DEC") Small Business Energy Saver program (the "Program") is to reduce energy usage through the direct installation of energy efficiency measures within qualifying small non-residential customer facilities. All aspects of the Program are administered by a single Company-authorized vendor. Program measures address major end-uses in lighting, refrigeration, and HVAC applications.

Program participants receive a free, no-obligation energy assessment of their facility followed by a recommendation of energy efficiency measures to be installed in their facility along with the projected energy savings, costs of all materials and installation, and up-front incentive amount from the Company. Upon receiving the results of the energy assessment, if the customer decides to move forward with the proposed energy efficiency project, the customer makes the final determination of which measures will be installed. The energy efficiency measure installation is then scheduled at a convenient time for the customer and the measures are installed by electrical subcontractors of the Company-authorized vendor.

The Program is designed as a pay-for-performance offering, meaning that the Company-authorized vendor administering the Program is only compensated for energy savings produced through the installation of energy efficiency measures.

#### **Audience**

The Program is available to existing non-residential customers that are not opted-out of the EE portion of the Company's EE/DSM rider, Rider EE. Program participants must have an average annual demand of 100 kW or less per active account.

#### B & C. Impacts, Participants and Expenses

Small Business Energy Saver <sup>1</sup>			
	Vintage 2014	Vintage 2014	% of
<u>\$ in millions, rounded</u>	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	N/A	\$2.7	-
Program Cost	N/A	\$1.0	-
MW	N/A	0.9	-
MWH	N/A	3,807.6	-
Units <sup>3</sup>	N/A	4,023,251	-

- 1) Values are reflected at the system level.
- 2) Numbers rounded.
- 3) Units reflect gross kWh.
- 4) As filed values not included as program was not included in filing.

#### D. Qualitative Analysis

#### **Highlights**

The Program launched in September of 2014. Lime Energy, who specializes in small business direct install program management, was awarded the contract to administer the Program through a competitive bid process. Lime Energy is the Program administrator for DEC and Duke Energy Progress, LLC ("DEP").

Due in large part to the fact that Lime Energy administered the Program in the DEP territory since 2013, the Program was able to be implemented and become fully operational in DEC relatively quickly and efficiently. Over 200 projects were completed through the Program by the end of 2014 resulting in more than three million kWh saved.

#### Issues

The majority of issues encountered in 2014 were related to program start-up and the lack of customer awareness about the Program. Customers overwhelmingly responded favorably to the Program once

## **Small Business Energy Saver**

they learned of and became comfortable with the offer and Program process. However, there were a few customers who were initially skeptical and questioned the Program and Lime Energy's legitimacy as the Company-authorized vendor. The Company expects issues with customer skepticism to significantly decrease as Program marketing and outreach efforts increase in 2015 and beyond.

#### **Potential Changes**

With the Program being a new offering in DEC, no changes are expected at this time.

#### E. Marketing Strategy

The Company will expand and increase the Program marketing efforts in 2015 through various marketing channels that include but are not limited to:

- Direct mail (letters and postcards to qualifying customers)
- Duke Energy Carolinas website
- · Community outreach events
- Small Business Group outreach events
- · Paid advertising/mass media
- Social media promotions

These marketing efforts are designed to create customer awareness of the Program, to educate customers on energy saving opportunities and to emphasize the convenience of Program participation.

#### F. Evaluation, Measurement and Verification

The process and impact evaluation report is scheduled for completion in second quarter of 2016 with activities beginning in 2015. There is currently no planned difference in the EM&V plans for the Program in the Duke Energy Carolinas, LLC and Duke Energy Progress, Inc. ("DEP") service territory. Pending the participation ramp-up for the Program in DEC, evaluation of the Program is expected to be combined for DEC and DEP. The allocation of combined EM&V costs is proposed to be based on the projected number of participants in the Small Business Energy Saver Program for each company.

The process evaluation will include interviews with program management, implementation contractors, and customer participants. Customer interviews will include data collection for use in the spillover and free ridership analysis.

The impact evaluation will focus on verifying the key inputs to the engineering algorithms for lighting measures. If participation increases in non-lighting measures, the evaluator may elect to adjust this approach for those measures.

# **Smart Energy in Offices**

#### A. Description

The purpose of Duke Energy Carolinas, LLC's (the "Company's) Smart Energy in Offices Program ("Program") is to increase the energy efficiency of program participants. The Program leverages communities to target owners and managers by providing participants with detailed information of the account/building's energy usage, support to launch energy saving campaigns, information showing comparisons between their building's energy performance and others within their community and actionable recommendations to improve their energy performance.

#### **Audience**

Non-residential customers with 12 months of usage history with business operations in building with a minimum of 10,000 square feet and 50% of the space is dedicated to office space who meet the Program's eligibility requirements.

#### B & C. Impacts, Participants and Expenses

Smart Energy in Offices <sup>1</sup>	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	N/A	\$2.0	-
Program Cost	N/A	\$1.2	-
MW	N/A	3.8	-
MWH	N/A	18,089.1	-
Units <sup>3</sup>	N/A	20,768,337	-

- 1) Values are reflected at the system level.
- 2) Numbers rounded.
- 3) Units reflect square feet.
- 4) As filed values not included as program was not included in filing.

#### D. Qualitative Analysis

A key component of the Program is community engagement from the time of enrollment in the Program and on-going throughout the Program. Program participants identify a single point of contact that is responsible for working with the Program management team or the Company selected vendor. This person is responsible for interfacing with Company representatives on all aspects of the Program, including providing assistance to the Company as it relates to coordinating live events, meetings and seminars and assisting with the distribution of written materials. The customer representatives are also responsible for dedicating time/resources and implementing the recommendations and guidance provided by the Company. This person also provides the names and contact information for additional customer champions. The energy champions provide a "grassroots" deployment of energy campaigns to ensure employees are aware and participate in the energy campaigns. In addition, Program participants maintain high levels of engagement with the Company as check-ins are conducted quarterly. The check-in provides the Company and customer an opportunity to discuss campaigns that have been conducted or planned in the near future.

#### **Highlights**

The Company received regulatory approval from the Commission to implement the Program in third quarter of 2014. Upon approval, the Program management team scheduled customer meetings with Smart Energy in Now pilot participants and other non-residential customers to educate them on the scope and enhancements of the commercialized program in order to gain their commitment to participate in

<sup>&</sup>lt;sup>1</sup> The North Carolina Utilities Commission issued an Order in Docket No. E-7, Sub 961 on August 13, 2014 and Public Service Commission of South Carolina issued an Order in Docket No. 2014-253-E- on July 9, 2014 approving the Smart Energy in Offices program.

# **Smart Energy in Offices**

Smart Energy in Offices. Additionally, a strategy to educate and reach a broader market of qualifying customers was implemented. Smart Energy in Offices was officially launched September 3, 2014.

#### **Potential Changes**

There are no potential changes at this time.

#### E. Marketing Strategy

In 2014, a number of these marketing channels were used including print media, social media, and presentations at public events. Examples include print ads in Building Owners and Managers Association (BOMA) and US Green Building Council (USGBC) Green Gala event publications. There were also print and digital ads in the Charlotte Business Journal and the Charlotte Observer. We have also received numerous invitations from Property Managers to speak to their tenants about the Program. Additionally, we continue to provide tips on how to reduce wasted energy in the office by utilizing our social media channel -- Twitter.

#### F. Evaluation, Measurement and Verification

The impact evaluation results for the Smart Energy Now Pilot Program is included the Rider 7 filing as Ham Exhibit B. The impact evaluation involved a combination of pre/post billing data analysis and engineering analysis linked to occupant and building operator surveys about what actions were taken and the motivation for those actions. The reported net savings are 6.2 percent of the baseline energy consumption for the program overall, with buildings greater to or equal to 100,000 sq. ft. with 6.4 percent net savings and buildings smaller than 100,000 sq. ft. with 1.1 percent net savings.

# **Smart Energy in Offices**

#### G. Appendix





Smart Energy in Offices, a free program offered by Duke Energy, puts the power to save energy in your

hands, and helps you every step of the way. Get in touch to find out more.

www.smartenergyinoffices.com info@smartenergyinoffices.com

# **Executive Summary**

#### A. Description

During the Duke Energy Carolinas Collaborative meeting held in the first quarter of 2015, Duke Energy Carolinas, LLC (the "Company") provided an update on the performance of its energy efficiency and demand side management programs/pilots for Vintage 2014. The Company's product managers prepared reports on each program/pilot describing the offerings and detailing each program's performance. This Executive Summary describes how the Company performed in regards to the energy efficiency and demand side management program/pilot performance on the aggregate during Vintage 2014 in comparison to as filed information. Program-specific details are provided in the individual reports.

#### Program reports include:

Program	Category	Customer
Non-Residential Smart \$aver Prescriptive	EE	Non-residential
Non-Residential Smart \$aver Custom	EE	Non-residential
Non-Residential Smart \$aver Custom Assessment	EE	Non-residential
Smart Energy in Offices	EE	Non-residential
Small Business Energy Saver	EE	Non-residential
PowerShare	DR	Non-Residential
Energy Assessments	EE	Residential
HVAC Energy Efficiency Program	EE	Residential
Income Qualified Energy Efficiency and Weatherization	EE	Residential
Assistance		
Energy Efficiency Education Program	EE	Residential
My Home Energy Report	EE	Residential
Appliance Recycling Program	EE	Residential
Energy Efficient Appliances and Devices	EE	Residential
Multi-Family Energy Efficiency	EE	Residential
Power Manager	DSM	Residential

#### **Audience**

All retail Duke Energy Carolinas customers who have not opted out.

#### **B &C.** Impacts, Participants and Expenses

The tables below include actual results for Vintage 2014 in comparison to as filed data for Vintage 2014. The Company's avoided costs reflect the present value of the avoided costs as determined by the rates approved by the North Carolina Utility Commission (the "Commission" or the "NCUC").

The Company includes the number of units achieved and a percentage comparison to the as filed values. The unit of measure varies by measure as a participant, for example, may be a single CFL bulb, a kW, a household or a square foot. Due to the multiple measures in a given program or programs, units may appear skewed and are not easily comparable.

For Vintage 2014, energy efficiency impacts have primarily been driven by lighting measures for both residential and non-residential customers. This is a result of a higher take-rate for lighting offerings than originally projected.

# **Executive Summary**

Carolinas System Summary <sup>1</sup>			
	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$272.5	\$324.1	119%
Program Cost	\$100.9	\$89.7	89%
MW <sup>2</sup>	887.5	879.8	99%
MWH	396,906.5	545,985.7	138%
Units	2,723,317	8,033,868	295%

- 1) Numbers rounded.
- 2) As filed MW are annual maximum peak. Coincident peak is tracked for impacts.

Carolinas Conservation Summary <sup>1</sup>			
	Vintage 2014	Vintage 2014	% of
<u>\$ in millions, rounded</u>	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$153.9	\$210.4	137%
Program Cost	\$63.1	\$58.5	93%
MW <sup>2</sup>	73.7	94.3	128%
MWH	396,906.5	545,985.7	138%
Units	1,957,147	7,294,130	373%

- 1) Numbers rounded.
- 2) As filed MW are annual maximum peak. Coincident peak is tracked for impacts.
- 3) YTD units exclude Small Business Energy Saver and Smart Energy in Offices which were not included in the filing. Units for these programs are per kWh and per square foot.

Carolinas Demand Response Summary <sup>1</sup>			
	Vintage 2014	Vintage 2014	% of
\$ in millions, rounded	As Filed	YTD December 31, 2014	Target
NPV of Avoided Cost	\$118.6	\$113.7	96%
Program Cost	\$37.7	\$31.2	83%
MW <sup>2</sup>	813.8	785.5	97%
MWH	N/A	N/A	-
Units <sup>3</sup>	766,170	739,738	97%

- 1) Numbers rounded.
- 2) MW capability derived by taking the average over the PowerShare and PowerManager contract periods.
- 3) Units included in filing represented MW at meter, rather than number of participants. YTD value reflects average participation for 2014.
- 4) Numbers rounded.

#### D. Qualitative Analysis

The tables above include actual results for Vintage 2014 in comparison to as filed data for Vintage 2014. The Company's avoided costs reflect the present value of the avoided costs as determined by the rates approved by the North Carolina Utility Commission (the "Commission" or the "NCUC").

The Company includes the number of units achieved and a percentage comparison to the as filed values. The unit of measure varies by measure as a participant, for example, may be a single CFL bulb, a kW, a household or a square foot. Due to the multiple measures in a given program or

# **Executive Summary**

programs, units may appear skewed and are not easily comparable.

For Vintage 2014, energy efficiency impacts have primarily been driven by lighting measures for both residential and non-residential customers. This is a result of a higher take-rate for lighting offerings than originally projected.

#### **Highlights**

#### **Energy Efficiency**

To date, customer participation has been driven primarily by lighting and assessments programs. These measures provide customers with a relatively low cost efficiency upgrade, with minimal hassle, creating a positive initial energy efficiency experience. The Energy Assessments and Energy Efficient Appliances and Devices programs significantly exceeded as file avoided cost and impacts.

The Non-Residential Smart \$aver Custom program has achieved greater than expected participation with lower than projected program cost. The established trade ally network has enabled the Company to minimize acquisition costs by using trade allies as an extended sales force. Providing the trade ally network information on our incentive structure has enabled them to market the incentives to customers.

#### Demand Side Management (DSM)

The DSM portfolio is comprised of the PowerShare (non-residential) and Power Manager (residential) programs. The avoided cost achievement is marginally below the as filed values. Program costs are low in comparison to achieved avoided cost.

#### **Issues**

There have been a number of issues that have negatively impacted Company-specific energy efficiency programs. These programs include Appliance Recycling Program and Income Qualified Energy Efficiency and Weatherization Assistance. Each program update addresses the issues and the Company's plans to overcome them in the future.

#### **Potential Changes**

Several programs are reviewing their current processes and are considering potential changes to increase customer adoption. Potential changes are discussed in individual program reports.

#### E. Marketing Strategy

Located in individual reports.

#### F. Evaluation, Measurement and Verification

Located in individual program reports.

# Duke Energy Carolinas, LLC Estimate- January 1, 2016 to December 31, 2016 Docket Number E-7, Sub 1073

Updated Projected Program/Portfolio Cost Effectiveness - Vintage 2016

Program	UCT	TRC	RIM	PCT
Residential Programs				
Appliance Recycling Program	1.32	1.95	0.59	
Energy Education Program	1.76	2.29	0.89	
Energy Efficient Appliances & Devices	3.10	3.43	0.92	6.58
HVAC Energy Efficiency	0.99	0.74	0.79	1.22
Income-Qualified Energy Efficiency & Weatherization Services	0.32	1.16	0.28	
Multi-Family Energy Efficiency	4.26	5.85	1.17	
My Home Energy Report	1.49	1.49	0.67	
Power Manager	4.89	8.86	4.89	
Energy Assessments	2.79	2.93	1.42	
Residential Total	2.34	3.14	1.31	10.19
Non-Residential Programs				
Non-Residential Smart \$aver Custom Assessment	3.35	1.24	1.40	1.27
Non-Residential Smart \$aver Custom	4.53	1.83	1.57	1.77
Non-Residential Smart \$aver Food Service Products	3.32	1.09	1.42	1.10
Non-Residential Smart \$aver HVAC Products	5.70	2.86	2.82	1.78
Non-Residential Smart \$aver Lighting Products	6.61	2.60	1.76	2.25
Non-Residential Smart \$aver Pumps & Drives Products	3.37	2.23	1.43	2.35
Non-Residential Smart \$aver Information Technology Products	3.21	1.13	1.08	1.35
Non-Residential Smart \$aver Process Equipment Product	2.34	2.06	1.33	3.74
Small Business Energy Saver	2.38	1.91	1.20	2.24
Smart Energy in Offices	1.25	1.63	0.79	
PowerShare CallOption <sup>1</sup>				
PowerShare	2.58	20.97	2.58	
Non-Residential Total	3.31	2.46	1.61	2.19
Overall Portfolio total	2.88	2.67	1.49	2.82

<sup>&</sup>lt;sup>1</sup>The Vintage 2016 projection does not reflect projected participation or program cost.

# Duke Energy Carolinas, LLC Changes to DSM/EE Cost Recovery Vintage 2014 True Up January 1, 2014 - December 31, 2014 Changes from Prior Filing Due to Application of EM&V and Participation

# System kWh and kW Impacts Net Free Riders at the Plant Docket Number E-7, Sub 1073

# **Residential Programs**

			Filed in Docket	E-7,						Variance due to Chang	e in Impacts and	Variance due to	Change in		
	Filed in Docket E-	-7, Sub 1032	Sub 1073		Overall Var	iance	E-7 Sub 1032	E-7 Sub 1073	Delta	Measure I	Mix	Participa <sup>s</sup>	tion	Sum of Varia	ances
Program Name	kWh	kW	kWh	kW	kWh	kW	System Par	ticipation	Participation	kWh	kW	kWh	kW	kWh	kW
Appliance Recycling Program	16,819,425	3,949	5,100,458	709	(11,718,967)	(3,240)	16,688	9,753	(6,935)	(4,729,351)	(1,599)	(6,989,616)	(1,641)	(11,718,967)	(3,240)
Energy Efficiency Education	5,225,951	518	7,098,145	746	1,872,194	228	24,000	28,316	4,316	932,332	134	939,862	93	1,872,194	228
Energy Efficient Appliances and Devices	27,602,478	2,946	167,039,197	18,424	139,436,719	15,478	715,209	5,069,137	4,353,928	(28,596,963)	(2,454)	168,033,681	17,932	139,436,719	15,478
HVAC Energy Efficiency	8,026,733	3,623	4,526,177	2,509	(3,500,556)	(1,114)	16,153	12,866	(3,287)	(1,867,183)	(376)	(1,633,373)	(737)	(3,500,556)	(1,114)
Income Qualified Energy Efficiency and Weatherization Assistance	10,977,497	2,405	3,374,813	792	(7,602,684)	(1,612)	11,244	9,082	(2,162)	(5,491,737)	(1,150)	(2,110,947)	(462)	(7,602,684)	(1,612)
Multi-Family Energy Efficiency	9,813,098	859	11,588,887	993	1,775,789	134	145,151	162,241	17,090	620,400	32	1,155,389	101	1,775,789	134
Energy Assessments	3,396,342	396	10,599,335	1,312	7,202,993	917	5,000	10,753	5,753	3,295,161	461	3,907,831	455	7,202,993	917
My Home Energy Report	149,783,507	35,166	142,881,676	38,579	(6,901,831)	3,413	668,314	8,787,142	8,118,828	(1,826,505,392)	(423,789)	1,819,603,560	427,202	(6,901,831)	3,413
PowerManager	-	354,265	-	403,431	-	49,166	333,524	4,436,186	4,102,662	-	(4,308,628)	-	4,357,794	-	49,166
Residential Programs Total	231,645,031	404,126	352,208,687	467,495	120,563,656	63,369	1,935,283	18,525,476	16,590,193	(1,862,342,732)	(4,737,369)	1,982,906,388	4,800,738	120,563,656	63,369

# Non-Residential Programs

Ethalta Baal a E									Variance due to Chang	c iii iiiipacts aiia	Variance due to	Change in		
Filed in Docket E-	7, Sub 1032	Sub 1073		Overall Var	riance	E-7 Sub 1032	E-7 Sub 1073	Delta	Measure I	Mix	Participat	ion	Sum of Vari	ances
kWh	kW	kWh	kW	kWh	kW	System Par	ticipation	Participation	kWh	kW	kWh	kW	kWh	kW
16,694,327	1,906	9,128,218	1,504	(7,566,108)	(402)	13,526	75	(13,451)	9,035,650	1,494	(16,601,759)	(1,895)	(7,566,108)	(402)
74,701,126	8,528	78,157,513	9,392	3,456,388	864	60,524	32,451	(28,073)	38,105,200	4,820	(34,648,812)	(3,955)	3,456,388	864
3,430,703	571	-	-	(3,430,703)	(571)	3,353	-	(3,353)	-	-	(3,430,703)	(571)	(3,430,703)	(571)
1,066,435	67	2,340,975	164	1,274,541	97	679	2,325	1,646	(1,308,914)	(66)	2,583,454	163	1,274,541	97
5,934,420	2,285	4,669,724	1,252	(1,264,695)	(1,033)	53,118	925,410	872,292	(98,718,223)	(38,555)	97,453,527	37,523	(1,264,695)	(1,033)
54,688,895	9,730	70,310,751	12,290	15,621,856	2,560	212,753	295,023	82,270	(5,525,945)	(1,203)	21,147,801	3,763	15,621,856	2,560
5,698,027	689	6,487,067	787	789,040	98	5,331	5,258	(73)	866,907	107	(77,868)	(9)	789,040	98
2,970,668	80	124,237	15	(2,846,431)	(65)	5,726	1,364	(4,362)	(583,411)	(4)	(2,263,020)	(61)	(2,846,431)	(65)
76,829	15	661,883	159	585,054	144	378	1,450	1,072	367,198	100	217,856	44	585,054	144
-	-	18,089,083	3,765	18,089,083	3,765	-	20,768,337	20,768,337	-	-	18,089,083	3,765	18,089,083	3,765
-	-	3,807,575	920	3,807,575	920	-	4,023,251	4,023,251	-	-	3,807,575	920	3,807,575	920
-	28,679	-	-	-	(28,679)	27,000	-	(27,000)	-	-	-	(28,679)	-	(28,679)
-	430,872	-	382,309	-	(48,563)	405,646	4,316,021	3,910,375	-	(4,202,112)	-	4,153,549	-	(48,563)
165,261,428	483,423	193,777,026	412,558	28,515,599	(70,864)	788,034	30,370,965	29,582,931	(57,761,536)	(4,235,420)	86,277,135	4,164,556	28,515,599	(70,864)
396,906,459	887,548	545,985,713	880,053	149,079,254	(7,495)	2,723,317	48,896,441	46,173,124	(1,920,104,268)	(8,972,789)	2,069,183,523	8,965,294	149,079,254	(7,495)
	kWh 16,694,327 74,701,126 3,430,703 1,066,435 5,934,420 54,688,895 5,698,027 2,970,668 76,829 165,261,428	kWh         kW           16,694,327         1,906           74,701,126         8,528           3,430,703         571           1,066,435         67           5,934,420         2,285           54,688,895         9,730           5,698,027         689           2,970,668         80           76,829         15           -         -           -         28,679           -         430,872           165,261,428         483,423	kWh         kW         kWh           16,694,327         1,906         9,128,218           74,701,126         8,528         78,157,513           3,430,703         571         -           1,066,435         67         2,340,975           5,934,420         2,285         4,669,724           54,688,895         9,730         70,310,751           5,698,027         689         6,487,067           2,970,668         80         124,237           76,829         15         661,883           -         -         18,089,083           -         -         3,807,575           -         28,679         -           -         430,872         -           165,261,428         483,423         193,777,026	kWh         kW         kWh         kW           16,694,327         1,906         9,128,218         1,504           74,701,126         8,528         78,157,513         9,392           3,430,703         571         -         -           1,066,435         67         2,340,975         164           5,934,420         2,285         4,669,724         1,252           54,688,895         9,730         70,310,751         12,290           5,698,027         689         6,487,067         787           2,970,668         80         124,237         15           76,829         15         661,883         159           -         -         18,089,083         3,765           -         -         3,807,575         920           -         28,679         -         -           -         430,872         -         382,309           165,261,428         483,423         193,777,026         412,558	kWh         kW         kWh         kWh         kWh           16,694,327         1,906         9,128,218         1,504         (7,566,108)           74,701,126         8,528         78,157,513         9,392         3,456,388           3,430,703         571         -         -         (3,430,703)           1,066,435         67         2,340,975         164         1,274,541           5,934,420         2,285         4,669,724         1,252         (1,264,695)           54,688,895         9,730         70,310,751         12,290         15,621,856           5,698,027         689         6,487,067         787         789,040           2,970,668         80         124,237         15         (2,846,431)           76,829         15         661,883         159         585,054           -         -         18,089,083         3,765         18,089,083           -         -         3,807,575         920         3,807,575           -         28,679         -         -         -           -         430,872         -         382,309         -           165,261,428         483,423         193,777,026         412,558	kWh         kW         kWh         kW         kWh         kW           16,694,327         1,906         9,128,218         1,504         (7,566,108)         (402)           74,701,126         8,528         78,157,513         9,392         3,456,388         864           3,430,703         571         -         -         (3,430,703)         (571)           1,066,435         67         2,340,975         164         1,274,541         97           5,934,420         2,285         4,669,724         1,252         (1,264,695)         (1,033)           54,688,895         9,730         70,310,751         12,290         15,621,856         2,560           5,698,027         689         6,487,067         787         789,040         98           2,970,668         80         124,237         15         (2,846,431)         (65)           76,829         15         661,883         159         585,054         144           -         -         18,089,083         3,765         18,089,083         3,765           -         -         3,807,575         920         3,807,575         920           -         28,679         -         -         -	kWh         kW         kWh         kW         kWh         kWh         kW         System Par           16,694,327         1,906         9,128,218         1,504         (7,566,108)         (402)         13,526           74,701,126         8,528         78,157,513         9,392         3,456,388         864         60,524           3,430,703         571         -         -         (3,430,703)         (571)         3,353           1,066,435         67         2,340,975         164         1,274,541         97         679           5,934,420         2,285         4,669,724         1,252         (1,264,695)         (1,033)         53,118           54,688,895         9,730         70,310,751         12,290         15,621,856         2,560         212,753           5,698,027         689         6,487,067         787         789,040         98         5,331           2,970,668         80         124,237         15         (2,846,431)         (65)         5,726           76,829         15         661,883         159         585,054         144         378           -         -         18,089,083         3,765         18,089,083         3,765         -<	kWh         kW         kWh         kW         kWh         kW         System Participation           16,694,327         1,906         9,128,218         1,504         (7,566,108)         (402)         13,526         75           74,701,126         8,528         78,157,513         9,392         3,456,388         864         60,524         32,451           3,430,703         571         -         -         (3,430,703)         (571)         3,353         -           1,066,435         67         2,340,975         164         1,274,541         97         679         2,325           5,934,420         2,285         4,669,724         1,252         (1,264,695)         (1,033)         53,118         925,410           54,688,895         9,730         70,310,751         12,290         15,621,856         2,560         212,753         295,023           5,698,027         689         6,487,067         787         789,040         98         5,331         5,258           2,970,668         80         124,237         15         (2,846,431)         (65)         5,726         1,364           76,829         15         661,883         159         585,054         144         378	kWh         kW         kWh         kWh         kWh         kWh         kWh         kWh         participation         Participation           16,694,327         1,906         9,128,218         1,504         (7,566,108)         (402)         13,526         75         (13,451)           74,701,126         8,528         78,157,513         9,392         3,456,388         864         60,524         32,451         (28,073)           3,430,703         571         -         -         (3,430,703)         (571)         3,353         -         (3,353)           1,066,435         67         2,340,975         164         1,274,541         97         679         2,325         1,646           5,934,420         2,285         4,669,724         1,252         (1,264,695)         (1,033)         53,118         925,410         872,292           54,688,895         9,730         70,310,751         12,290         15,621,856         2,560         212,753         295,023         82,270           5,698,027         689         6,487,067         787         789,040         98         5,331         5,258         (73)           2,970,668         80         124,237         15         (2,846,431)	kWh         kW         kWh         kWh         kWh         kWh         kWh         System Participation         Participation         kWh           16,694,327         1,906         9,128,218         1,504         (7,566,108)         (402)         13,526         75         (13,451)         9,035,650           74,701,126         8,528         78,157,513         9,392         3,456,388         864         60,524         32,451         (28,073)         38,105,200           3,430,703         571         -         -         (3,430,703)         (571)         3,353         -         (3,353)         -           1,066,435         67         2,340,975         164         1,274,541         97         679         2,325         1,646         (1,308,914)           5,934,420         2,285         4,669,724         1,252         (1,264,695)         (1,033)         53,118         925,410         872,292         (98,718,223)           54,688,895         9,730         70,310,751         12,290         15,621,856         2,560         212,753         295,023         82,270         (5,525,945)           5,698,027         689         6,487,067         787         789,040         98         5,331         5,258	kWh         kW         kWh         kWh <td>kWh         kW         kWh         kWh<td>kWh         kW         kWh         kW         kWh         kW         System Participation         Participation         kWh         kW         kWh         kW         kWh         kWh         kWh         kWh         kW         kWh         kWh<td>kWh         kW         kWh         kW         kWh         kW         System Participation         Participation         kWh         kW         kWh         kW         kWh         kWh</td></td></td>	kWh         kW         kWh         kWh <td>kWh         kW         kWh         kW         kWh         kW         System Participation         Participation         kWh         kW         kWh         kW         kWh         kWh         kWh         kWh         kW         kWh         kWh<td>kWh         kW         kWh         kW         kWh         kW         System Participation         Participation         kWh         kW         kWh         kW         kWh         kWh</td></td>	kWh         kW         kWh         kW         kWh         kW         System Participation         Participation         kWh         kW         kWh         kW         kWh         kWh         kWh         kWh         kW         kWh         kWh <td>kWh         kW         kWh         kW         kWh         kW         System Participation         Participation         kWh         kW         kWh         kW         kWh         kWh</td>	kWh         kW         kWh         kW         kWh         kW         System Participation         Participation         kWh         kW         kWh         kW         kWh         kWh

# NOTE - The actual per unit impacts are reflective of the following EM&V reports:

Program Name As Filed	Docket	Report Reference	Effective Date
Smart Saver® for Residential Customers	E-7, Sub 1031	Rider 5 - Exhibit F - Residential Smart \$aver CFL Process and Impacts.pdf	3/1/2012
	E-7, Sub 1050	Exhibit A - Process and Impact Evaluation of Duke Energy's Residential Smart \$aver: Property Manager CFLs in the Carolinas (February 18, 2013)	10/1/2012
Residential Energy Assessments	E-7, Sub 1050	Exhibit B - Process and Impact Evaluation of the Residential Energy Assessments Program (Home Energy House Call) in the Carolina System (February 19, 2013)	12/1/2012
Smart Saver® for Residential Customers	E-7, Sub 1050	Exhibit C - Impact Evaluation of the Residential Smart \$aver® HVAC Program in the Carolina System (February 28, 2013)	10/1/2012
Residential Energy Assessments	E-7, Sub 1050	Exhibit E - Process and Impact Evaluation of the Residential Energy Assessments Program (Personalized Energy Report®) in the Carolina System (March 29, 2013)	9/1/2012
Smart Saver® for Non-Residential Customers Lighting	E-7, Sub 1050	Exhibit F - Process and Impact Evaluation of the Non-Residential Smart \$aver® Prescriptive Program in the Carolina System: Lighting and Occupancy Sensors (April 5, 2013)	10/1/2012
PowerManager	E-7, Sub 1050	Exhibit G - Impact Evaluation and Review of the 2012 Power Manager® Program in the Carolina System (June 11, 2013)	1/1/2012
PowerShare	E-7, Sub 1050	Exhibit H - Impact Evaluation and Review of the 2012 PowerShare® Program in the Carolina System (June 11, 2013)	1/1/2012
Energy Efficiency Education Program for Schools	E-7, Sub 1050	Exhibit J - Impact Evaluation of the Energy Efficiency for Schools Program (The National Theatre for Children (NTC)) in the Carolinas System (August 21, 2013)	9/1/2012
My Home Energy Report	E-7, Sub 1073	Exhibit A - Process and Impact Evaluation of the My Home Energy Report (MyHER) Program in the Carolina System (February 20, 2014)	11/1/2013
Smart Energy Now Pilot	E-7, Sub 1073	Exhibit B - Impact Evaluation of the Smart Energy Now Program (NC) (Pilot) (February 21, 2014)	1/1/2011
Appliance Recycling	E-7, Sub 1073	Exhibit C - Process and Impact Evaluation of Duke Energy's Residential Appliance Recycling Program (ARP) in the Carolina System (April 25, 2014)	1/1/2012
Income Qualified Energy Efficiency: Neighborhoods	E-7, Sub 1073	Exhibit D - Process and Impact Evaluation of the 2013-2014 Residential Neighborhood Program in the Carolina System (November 14, 2014)	1/1/2012
Energy Efficient Appliances and Devices: Specialty Bulbs	E-7, Sub 1073	Exhibit E - Process and Impact Evaluation of the Residential Energy Efficient Appliance and Devices: Lighting - Specialty Bulbs Program in the Carolina System (November 19, 2014)	4/1/2013
HVAC Energy Efficiency: Tune & Seal	E-7, Sub 1073	Exhibit F - Evaluation of the Residential Smart \$aver® Additional Measures Program in the Carolina System (December 10, 2014)	8/1/2012

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
1520 SOUTH BOULEVARD LLC	1	1	2
200 NORTH COLLEGE CHARLOTTE LLC		1	1
301 S MCDOWELL STREET HOLDING LLC		1	1
A & T STATE UNIV	1	3	4
A W NORTH CAROLINA INC	4	4	8
ABERCROMBIE TEXTILES LLC	1		1
ABSS FACILITIES DEPT	2	2	4
ADIDAS GROUP LLC	1	1	2
AFFILIATED COMPUTER SERVICE	2	2	4
AFL TELECOMMUNICATIONS LLC	6	6	12
AIR PRODUCTS & CHEMICALS, INC	1	1	2
ALADDIN MANUFACTURING CORPORATION	2	2	4
ALCAN PACKAGING FOOD AND TOBACCO,INC	1	1	2
ALDERSGATE	2	2	4
ALEXANDER COUNTY SCHOOLS	2	2	4
ALFMEIER FRIEDRICHS & RATH, LLC		2	2
ALLIED DIE CASTING CO OF NC	1	1	2
ALLSTATE INSURANCE	1	1	2
ALLTRISTA PLASTICS CORPORATION	3	3	6
ALLVAC, A DIVISION OF TDY INDUSTRIES, INC	1	1	2
ALUMINA LLC	1	1	2
AMAZON.COM.DEDC LLC	1	1	2
AMERESCO PALMETTO, LLC	1	1	2
AMERICAN & EFIRD LLC	5	4	9
AMERICAN CAMPUS LLC		1	1
AMERICAN EXPRESS TRAVEL RELATED SERV CO, INC	1		1
AMERICAN FIBER & FINISHING	1	1	2

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
ANDALE INC	2	2	4
ANDERSON DIST 3 SCHOOLS		1	1
ANDERSON SCHOOL DISTRICT #5	9	9	18
ANDERSON UNIVERSITY	1	1	2
ANMED HEALTH	2	1	3
APPLE INC	1	1	2
ARCHER-DANIELS-MIDLAND CO	2	2	4
ARMACELL LLC	3	4	7
ASHLAND INC	2	2	4
ASHLEY FURNITURE	1	1	2
AT&T BELLSOUTH	3	3	6
AT&T MOBILITY LLC		1	1
AT&T WIRELESS SERVICE	1		1
BAKER FURNITURE COMPANY		4	4
BALDOR ELECTRIC COMPANY	4	4	8
BANK OF AMERICA	3	6	9
BARNET POLYMERS,LLC	1	1	2
BARNHARDT MANUFACTURING COMPANY INC		3	3
BASF CORPORATION	14	14	28
BAUSCH & LOMB	2	2	4
BAY STATE MILLING	4	4	8
BB&T	6	7	13
BELL SOUTH MOBILITY	1	1	2
BELLSOUTH	5	7	12
BELLSOUTH BSC	7	8	15
BELLSOUTH COMMUNICATIONS, LLC		1	1
BELTON INDUSTRIES	2	2	4

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
BEMIS MANUFACTURING CO	1	1	2
BENJAMIN COOPER	1		1
BENTELER AUTOMOTIVE CORPORATION	1	1	2
BERICAP SC, LLC	1	1	2
BERNHARDT FURNITURE COMPANY		4	4
BERRY TRI PLASTICS	1		1
BESTSWEET INC	3	3	6
BIC CORPORATION	1	1	2
BI-LO, LLC	23		23
BIOMERIEUX, INC	1	3	4
BISSELL CO		3	3
BISSELL COMPANIES		25	25
BISSELL GOLF		1	1
BISSELL HOTEL 6 LLC		1	1
BISSELL HOTELS 8, LLC		1	1
BJ'S WHOLESALE CLUB	2	2	4
BLARNEY CREEK COMPANY LLC	1	1	2
BLUE RIDGE COMMUNITY COLLEGE	1	1	2
BLUE RIDGE HEALTH CARE		1	1
BMW MANUFACTURING CO, LLC		4	4
BOB JONES UNIVERSITY	3	3	6
BOISE CASCADE WOOD PRODUCTS LLC	1		1
BONSET AMERICA CORP	1		1
BORAL STONE PRODUCTS, LLC	1	1	2
BORG WARNER AUTOMOTI	1	1	2
BOSCH REXROTH CORPORATION	2	3	5
BOSTIK INC	1	1	2

Duke Energy Carolinas, LLC List of Industrial and Commercial Customers that have opted-out Docket Number E-7, Sub 1073

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
BOWERS FIBERS INC	1		1
BOYLE BUILDING, LLC		1	1
BOYLE BUILDING,LLC		1	1
BREVARD COLLEGE	1	1	2
BSN MEDICAL INC	2	2	4
BURLINGTON TECHNOLOGIES INC	1		1
BURNSTEIN VON SEELEN PRECISION CASTINGS CORPORATION	3	3	6
C & S WHOLESALE GROCERS INC	1	1	2
CAMFIL USA INC	2	2	4
CAPITAL BROADCASTING COMPANY		5	5
CAPSUGEL MANUFACTURING, INC.	4	4	8
CARAUSTAR INC	3	3	6
CARAUSTAR INDUSTRIAL AND CONSUMER PRODUCTS GROUP INC	1	1	2
CARAUSTAR INDUSTRIES	2	3	5
CARAUSTAR MILL GROUP INC	1	1	2
CARDINAL FLOAT GLASS	1	1	2
CARGILL, INCORPORATED	4	4	8
CARLISLE FOOD SERVIC	1	1	2
CAROLINA CONTAINER	4	4	8
CAROLINA MFG	1	1	2
CAROLINA PERLITE CO	1	1	2
CAROLINA PLATING	7	7	14
CAROLINA TRACTOR & EQUIPMENT COMPANY	1	1	2
CAROLINA VILLAGE	2	2	4
CAROLINA YARN	2	2	4
CAROLINAS HEALTHCARE SYSTEM	3	14	17
CAROTELL PAPER CO	1	1	2

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
CASE FARMS	1	1	2
CASTLE & COOKE NORTH CAROLINA LLC	2	2	4
CATAWBA COLLEGE		1	1
CATAWBA RIVER WATER PLT		3	3
CATAWBA VALLEY MEDICAL CENTER	1	1	2
CATERPILLAR	2	2	4
CATERPILLAR INC	2	2	4
CBL ASSOCIATES MANAGEMENT, INC	6	6	12
CELANESE LTD	7	7	14
CELGARD, LLC	4	4	8
CENTRAL TEXTILES	2	1	3
CENTURION MOREHEAD LLC		1	1
CENTURY FURNITURE, LLC	11	5	16
CERAMTEC NORTH AMERICA INNOV	1	1	2
CERTAINTEED CORP	2	2	4
CHAPEL HILL/ CARRBORO SCHO		9	9
CHARLOTTE COUNTRY DAY SCHOOL	2	2	4
CHARLOTTE LATIN SCHOOLS, INC	1	1	2
CHARLOTTE OBSERVER PUBLISHING COMPANY	2	2	4
CHARLOTTE PIPE & FOUNDRY	3	3	6
CHEMTURA CORPORATION	1	1	2
CHESAPEAKE TREATMENT COMPANY, LLC	1		1
CHESTER COUNTY SCHOOLS		4	4
CHEVRON PHILLIPS CHEMICAL CO, LP	1	1	2
CINEBARRE, LLC	1	1	2
CITY OF ASHEVILLE	1		1
CITY OF BURLINGTON	3	5	8

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
CITY OF CHARLOTTE		17	17
CITY OF DURHAM	4	4	8
CITY OF GREENSBORO	16	15	31
CITY OF HENDERSONVILLE	1	1	2
CITY OF HICKORY	3		3
CITY OF KANNAPOLIS	1		1
CITY OF LANCASTER	1		1
CITY OF WINSTON SALEM	13	9	22
CK THREE TOWER CENTER,LLC		1	1
CLARIANT CORPORATION	5	5	10
CLARION TECHNOLOGIES, INC	1	1	2
CLEMENT PAPPAS NC, INC	2	4	6
CLEMSON INSTITUTE FOR ENVIRONMENTAL TOXICOLOGY	1	1	2
CLEMSON UNIVERSITY	7	7	14
CLEMSON UNIVERSITY REAL-ESTATE FOUNDATION	1	1	2
CLENDENIN LUMBER COMPANY LP	3	5	8
CLEVELAND COUNTY SCHOOLS		7	7
CLONDALKIN PHARMA & HEALTHCARE, INC	4	4	8
CLOVER SCHOOL DIST 2		2	2
CMBE		41	41
CMC-NORTHEAST INC		6	6
CMHA		2	2
COATS AMERICAN	3	3	6
COCA COLA BOTTLING CO CON	2		2
COLE CREDIT INCOME OPERATING PARTNERSHIP LP	2	2	4
COLONIAL PIPELINE	9	1	10
COMMISSION OF PUBLIC WORKS	1		1

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
COMMONWEALTH BRANDS	2	2	4
COMMSCOPE, INC.	1		1
COMPX SECURITY PRODUCTS	1	1	2
CONSOLIDATED METCO INC	1		1
CONTINENTAL AUTOMOTIVE SYSTEMS, INC	2	2	4
CONVERSE COLLEGE	1	1	2
COOPER INDUSTRIES	1	1	2
COOPER STANDARD AUTOMOTIVE INC	1	1	2
COPLAND FABRICS INC	1		1
CORMETECH INC	1	1	2
CORNING CABLE SYSTEMS	2	4	6
CORNING INC	2	2	4
COSTCO WHOLESALE INC	5	5	10
COVIDIEN LP	1		1
CPCC	1	8	9
CREE INC	6	6	12
CROWN CASTING INC	1	1	2
CSHV SOUTHPARK 6100 FAIRVIEW, LLC	1	1	2
CULP INC	2	2	4
CUTLER HAMMER	1	1	2
DAA DRAEXLMAIER AUTO OF A		3	3
DAIRY FRESH	1	1	2
DALCO NONWOVENS, LLC	2	2	4
DAVIDSON COLLEGE	1	1	2
DELTA APPAREL, INCORPORATED	1	1	2
DETROIT FORMING INC	2	2	4
DIAMOND VIEW I LLC		1	1

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
DIAMOND VIEW II	1	1	2
DISNEY WORLDWIDE SERVICES INC	1	1	2
DISPOZ-O-PLASTICS	2	2	4
DOOSAN INFRACORE PORTABLE POWER - A DIVISION OF CLARKE EQUIPMENT	1	1	2
DRIVE AUTOMOTIVE IND	1	1	2
DUKE SANDWICH PRODUCTIONS INC	1	1	2
DUKE UNIVERSITY	11	11	22
DURACELL	1	1	2
DURHAM COUNTY GOVERNMENT	2	2	4
DURHAM COUNTY HOSPITAL CORPORATION	1	1	2
E I DUPONT CO	1	1	2
EASLEY CUSTOM PLASTICS, INC	1		1
EASTERN BAND OF CHEROKEE INDIANS	2	2	4
EATON CORP	1	1	2
EATON CORPORATION "EATON HYDRAULICS"	2	3	5
EISAI INC	1	1	2
ELASTIC FABRICS OF AMERICA	1	1	2
ELASTRIX LLC	1	1	2
ELECTROLUX HOME PRODUCTS	1	1	2
ELON UNIVERSITY	1	1	2
EMC CORPORATION	2	2	4
EMITEC INC	1	1	2
ENCORE OF GREENVILLE		1	1
ENGINEERED CONTROLS INTERNATIONAL INC	4	4	8
EPSILON PLASTICS INC	1	1	2
EUROKERA NORTH AMERICA	1	1	2
EVONIK STOCKHAUSEN,INC	1	1	2

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
FAURECIA EMISSIONS CONTROL TECHNOLOGIES	1	1	2
FAURECIA INTERIOR SYSTEMS, INC	1		1
FERGUSON SUPPLY & BOX	1	1	2
FIRESTONE BUILDING PRODUCTS, CO		1	1
FIRESTONE FIBERS & TEXTILES COMPANY, LLC		2	2
FIRST STATES INVESTORS 104,LLC		1	1
FITESA NONWOVEN INC	2	2	4
FITESA SIMPSONVILLE, INC	1	1	2
FLEXIBLE TECHNOLOGIES	3	3	6
FLEXTRONICS AMERICA, LLC	3	3	6
FLINT TRADING CO	2	2	4
FOOD LION	160	208	368
FRAM GROUP OPERATIONS LLC	1	1	2
FREIGHTLINER CORP		4	4
FREIGHTLINER OF CLEVELAND, LLC		3	3
FREUDENBERG IT LP	2	2	4
FREUDENBERG NONWOVEN	1	1	2
FRITO-LAY, INC	1	1	2
FRONTIER SPINNING MILLS, INC	2		2
FURMAN UNIVERSITY	1	1	2
FURNITURELAND SOUTH		5	5
G & I V RESOURCE SQUARE 5 LP	1		1
GAF MATERIALS CORPORATION	1	1	2
GALENOR DESIGNS, LLC	1	1	2
GARDNER WEBB UNIV	1		1
GASTON COLLEGE		2	2
GBORO NEWS & RECORD	1	1	2

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
GE LIGHTING SOLUTIONS LLC	1	1	2
GENERAL ELECTRIC	1	2	3
GENPAK LLC	2	2	4
GERDAU AMERISTEEL US INC	3	2	5
GILDAN ACTIVE WEAR INC		1	1
GILDAN YARNS, LLC	2	1	3
GLAXOSMITHKLINE LLC	4	4	8
GLEN RAVEN INC	2	2	4
GREENFIELD INDUSTRIES, INC	1	1	2
GREENVILLE COUNTY SCHOOLS	27	28	55
GREENVILLE HEALTH SYSTEM	17	16	33
GREENVILLE SPARTANBURG AIRPORT DISTRICT		1	1
GREENVILLE TECH	5	5	10
GREENVILLE WATER SYSTEM	3	3	6
GREENWOOD METROPOLITAN COMMISSION	1		1
GREENWOOD MILLS, INC	1		1
GREENWOOD PACKING PLT	3	3	6
GREG L TAYLOR	1	1	2
GUILFORD COLLEGE	1	1	2
GUILFORD COUNTY SCHOOLS	41	42	83
GUILFORD TECH COMM COLL	1	1	2
HALYARD NORTH CAROLINA, INC	1		1
HAMRICK MILLS	3		3
HANES COMPANIES INC	1	1	2
HANSON AGGREGATES SOUTHEAST	4	3	7
HANSON BRICK EAST LLC	3	3	6
HARRIS TEETER INC	67	67	134

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
HARTNESS INTERNATIONAL	1	1	2
HENDERSON COUNTY GOVERNMENT		3	3
HENDERSON COUNTY SCHOOLS	1	1	2
HENKEL CORPORATION	12	12	24
HERITAGE HOME GROUP LLC	2	1	3
HICKORY CITY SCHOOLS		3	3
HICKORY READY MIXED	1	1	2
HIGHWOODS PROPERTIES	12	12	24
HIGHWOODS REALTY LIMITED PARTNERSHIP	1	1	2
HIGHWOODS REALTY LTP	1	1	2
HINES GLOBAL REIT HOCK PLAZA I LLC	1	1	2
HINES INTEREST LIMITED PARTNERSHIP		2	2
HITACHI METALS NC LTD	1	1	2
HOME DEPOT		8	8
HONDA POWER EQUIPMENT	1	1	2
HONEYWELL INTERNATIONAL INC	1	1	2
HORSEHEAD CORPORATION	1	1	2
IAC SPARTANBURG, INC	1	1	2
IBM CORPORATION		1	1
ILJIN USA CORPORATION	4	4	8
INCHEM CORPORATION		2	2
INDUSTRIAL TIMBER &		2	2
ING CLARION REALTY SERVICES LLC		3	3
INGLES MARKETS, INC.	64	64	128
INGREDION INCORPORATED	1	1	2
INMAN MILLS	3		3
INNOVATIVE FIBERS LLC	1	1	2

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
INSURANCE INSTITUTE FOR BUSINESS & HOME SAFETY	1	1	2
INTERNATIONAL PAPER	11	12	23
INTERNATIONAL TEXTILE GROUP INC	2	2	4
INTIER AUTOMOTIVE INTERIORS OF AMERICA INC	2	2	4
IPEX USA, INC		1	1
ISOMEDIX,INC		1	1
ISOTHERMAL COMM COLLEGE	2	2	4
ITRON	2	2	4
IWG HIGH PERFORMANCE CONDUCTORS INC	2	2	4
JACKSON BOE	2	2	4
JACKSON PAPER MFG CO	1	1	2
JOHNSON CONTROLS BATTERY GROUP, INC		1	1
JOHNSON CONTROLS BATTERY GROUP, INC. POLY III FACILITY	1		1
JPS COMPOSITE MATERIALS CORP	2	1	3
JPS CONVERTER & INDUSTRIAL CORP	1		1
JTEKT AUTOMOTIVE SOUTH CAROLINA INC	2	2	4
K M FABRICS	1		1
KAPSTONE CHARLESTON KRAFT LLC	2	2	4
KAYSER ROTH CORPORATION	1		1
KEATING GRAVURE USA, LLC	1	1	2
KEMET ELECTRONICS CO	1	1	2
KENDRION-SHELBY	2	2	4
KENTWOOL COMPANY	1		1
KERRS HMR CONCRETE	1	1	2
KEYS PRINTING CO		1	1
KIMBERLY CLARK	1	1	2
KINDER MORGAN SOUTHEAST TERMINAL	1	1	2

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
KINDER MORGAN TRANSMIX GROUP	1	1	2
KMART CORP	2	2	4
KOHLER COMP		1	1
KOHLER COMPANY	1	1	2
KOURY CORPORATION	9	9	18
KROGER CO	5	5	10
KROGER LIMITED PARTNERSHIP I	1	1	2
KSM CASTINGS NC INC	1	1	2
KYOCERA INDUSTRIAL	2	2	4
L B PLASTICS INC	3	3	6
L S STARRETT CO	2	1	3
LACKS INDUSTRIES	1	1	2
LAND-O-SUN DAIRIES,LLC	3	3	6
LEIGH FIBERS INC	1	1	2
LENOVO INC	1	1	2
LEXINGTON FURNITURE IND	1	1	2
LINCOLN HARRIS	1	1	2
LINDE LLC	1	1	2
LOCKHEED AEROMOD	1	1	2
LORILLARD CORP	1	1	2
LORILLARD TOBACCO CO	1	1	2
LOUISIANA-PACIFIC CORPORATION	1	1	2
LOWES FOODS	31	40	71
LOWE'S HOME CENTERS, INC	60	59	119
LOWES OF FRANKLIN #717	1	1	2
LYDALL THERMAL ACOUSTICAL INC	3	3	6
MACK MOLDING CO INC		1	1

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
MAGNOLIA CASTLE LLC	1	1	2
MANNINGTON WOOD FLOORS		1	1
MANUAL WOODWORKERS & WEAVERS INC	2	2	4
MARSHANE CORPORATION	2	2	4
MARTEX FIBER	4	4	8
MARTIN MARIETTA MATERIALS INC	50	48	98
MARY BLACK HEALTH SYS LLC	3	3	6
MASTIC HOME EXTERIORS, INC	1	1	2
MAUSER CORP	3		3
MCDOWELL HOSPITAL INC		1	1
MCMICHAEL MILLS INC	5	5	10
MEADOWS & OHLY 4 LLC	5	5	10
MECK CNTY JAIL CENTRAL	1	1	2
MECKLENBURG COUNTY	2	14	16
MERCK SHARP & DOHME CORP	1	1	2
MERGON CORPORATION	1	1	2
MERITOR HEAVY VEHICLE SYSTEMS	1	2	3
MERITOR HEAVY VEHICLE SYSTEMS LLC	1	1	2
METROMONT CORPORATION	5	5	10
MICHELIN AIRCRAFT TIRE CO	1	1	2
MICHELIN NORTH AMERICA	4	4	8
MILLERCOORS LLC	1	1	2
MILLIKEN & COMPANY	2	2	4
MINNESOTA MINING & MFG CO	1	1	2
MITSUBISHI POLYESTER FILM INC	2	2	4
MODERN DENSIFYING	2		2
MODERN STORAGE	3	3	6

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
MOHAWK INDUSTRIES	1	1	2
MOHICAN MILLS	1	1	2
MOM BRANDS COMPANY		1	1
MOORE WALLACE NORTH AMERICA INC	1	1	2
MOUNT VERNON MILLS INC	1	1	2
NATIONAL ELEC CARBON CORP	1	1	2
NATIONAL PIPE & PLASTICS	2	2	4
NC CENTER FOR PUBLIC TV		2	2
NC OWNER LLC		2	2
NEW EXCELSIOR, INC	1		1
NEW GENERATION YARNS	1		1
NEW SOUTH LUMBER COMPANY INC	1	1	2
NGK CERAMICS USA	1	1	2
NORBORD SOUTH CAROLINA INC	1	1	2
NORDSTROM INC	1	2	3
NORFOLK SOUTHERN	2	2	4
NORTEL NETWORKS	7	7	14
NORTH GREENVILLE UNIVERSITY	1	1	2
NORTHROP GRUMMAN GUIDANCE & ELECTRONICS COMPANY, INC	1	1	2
NOVANT HEALTH INC	6	8	14
NUTRA MANUFACTURING, INC	1	3	4
O'MARA, INC.	1	1	2
OMNISOURCE SOUTHEAST	6	3	9
OPTICAL EXPERTS MANUFACTURING	1	1	2
ORACLE FLEXIBLE PACKAGING	1	2	3
ORIAN RUGS INC	1	1	2
OWENS ILLINOIS, INC	1	1	2

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
PACESETTER INC	5	5	10
PACKAGE CONCEPTS & MATERIALS INC	2	2	4
PACTIV LLC	3		3
PAPER STOCK DEALERS	1	1	2
PARAMOUNT PARKS INC	1	1	2
PARDEE MEMORIAL HOSPITAL	4	4	8
PARK RIDGE HOSPITAL		1	1
PARKDALE AMERICA LLC	10	9	19
PARKDALE MILLS, INC	2	1	3
PARKER HANNIFIN CORPORATION	1	2	3
PARKWAY 214 N TRYON LLC		1	1
PARKWAY 550 SOUTH CALDWELL LLC		1	1
PARKWAY PRODUCTS INC	1	1	2
PARTON LUMBER CO	7	5	12
PBM GRAPHICS INC	2	2	4
PERFORMANCE FIBERS OPERATIONS INC	5	5	10
PERRIGO CO INC	2	2	4
PET DAIRY	3	3	6
PFRS SOUTH TRYON CORP		1	1
PHARR YARNS, LLC	5	5	10
PIEDMONT TECHNICAL COLLEGE	1	1	2
PINE HALL BRICK COMPANY, INC	2	2	4
PINNACLE CTNG & CVTNG INC	1	1	2
PIONEER FROZEN FOODS SOUTH CAROLINA INC	1	1	2
PITTSBURGH GLASS WORKS LLC	1	1	2
PLANTATION PIPE LINE	5	5	10
PLASTIC OMNIUM INDUSTRIES		2	2

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
PLYCEM USA, INC	1	1	2
POLK COUNTY SCHOOLS	2	2	4
POLYMER GROUP, INC	1	1	2
PPG INDUSTRIES FIBER GLASS PRODUCTS, INC	4	3	7
PPG INDUSTRIES INC	1	1	2
PRECISION VALVE CORP	3	2	5
PRECOR MANUFACTURING LLC	1	1	2
PRESBYTERIAN HOSPITAL	6	4	10
PRINTPACK INC	1	1	2
PRO LINE PRINTING	1	1	2
PROCTER & GAMBLE MANUFACTURING COMPANY	3	3	6
PRYSMIAN POWER CABLES AND SYSTEMS USA,LLC	2	2	4
PUBLIX SUPER MARKETS, INC	13	13	26
QUALICAPS INC	3	3	6
QUIKTRIP CORPORATION	1	1	2
R F MICRO DEVICES	1	1	2
RALPH LAUREN CORPORATION		2	2
REGAL CINEMAS	1	1	2
REGAL CINEMAS INC	8	8	16
REXAM HEALTHCARE PACKAGING INC	2	2	4
RICH PRODUCTS CORPORATION		4	4
RITE AID CORPORATION	3	3	6
RITZ CARLTON CHARLOTTE	1		1
RJ REYNOLDS TOBACCO CO	4	5	9
ROBERT BOSCH CORP	1	1	2
ROCKINGHAM COMM COLLEGE		1	1
ROCK-TENN CONVERTING CO.	5	7	12

Duke Energy Carolinas, LLC List of Industrial and Commercial Customers that have opted-out Docket Number E-7, Sub 1073

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
ROUNDPOINT FINANCIAL GROUP		1	1
ROWAN SALISBURY SCHOOLS	2	5	7
ROY METAL FINISHING	5	5	10
RR DONNELLEY & SONS COMPANY	1	1	2
RUTHERFORD COUNTY SCHOOLS	1	1	2
RUTHERFORD HOSPITAL INC	2	2	4
S J W D WATER DIST	1	1	2
SAATI AMERICAS INC	2	2	4
SAGE AUTOMOTIVE INTERIORS	4	4	8
SALISBURY MACHINERY	1	1	2
SAMS EAST INC	13	13	26
SAMUEL STRAPPING SYS INC	1	1	2
SANMINA SCI CORPORATION		1	1
SANS TECHNICAL FIBERS, LLC	3	3	6
SAPA BURLINGTON LLC		3	3
SAPA EXTRUSIONS NORTH AMERICA,LLC	1		1
SAUER-DANFOSS, INC	2	2	4
SC DEPT OF CORRECTIONS	3	2	5
SCHAEFER SYSTEMS		1	1
SCHNEIDER MILLS, INC	1	1	2
SCM METAL PRODUCTS INC	2	2	4
SEALED AIR CORPORATION	3	3	6
SEARS ROEBUCK & CO	2	2	4
SECURITY NATIONAL PROPERTIES HOLDINGS LLC		3	3
SELEE CORP	2	2	4
SEW EURODRIVE INC	2	2	4
SGL CARBON, LLC	1	1	2

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
SHAMROCK CORPORATION		9	9
SHAW INDUSTRIES GROUP, INC	3	3	6
SHERATON IMPERIAL	2	2	4
SHRINERS HOSPITAL	1	1	2
SHURTAPE TECHNOLOGIES		1	1
SIERRA NEVADA BREWING CO	1	1	2
SKF SEALING SOLUTIONS	1	1	2
SONOCO CORRFLEX DISPLAY & PACKAGING,LLC	3	3	6
SONOCO CRELLIN INC	2	2	4
SONOCO PRODUCTS	1	1	2
SOUTH GRANVILLE WATER AND SEWER AUTHORITY	3	3	6
SOUTHWESTERN COMMUNITY COLLEGE	1	1	2
SPARTANBURG COMMUNITY COLLEGE	2	2	4
SPARTANBURG COUNTY GOVERNMENT	3	2	5
SPARTANBURG REGIONAL MEDICAL CENTER	4	4	8
SPARTANBURG SCHOOL DIST #1	2	2	4
SPARTANBURG SCHOOL DIST #2	5	5	10
SPARTANBURG SCHOOL DIST #5		1	1
SPARTANBURG SCHOOL DIST #6	5	5	10
SPARTANBURG SCHOOL DIST #7	4	4	8
SPRINGS GLOBAL US, INC	3	3	6
SPRINGS MEMORIAL HOSPITAL	1	1	2
ST FRANCIS HEALTH CARE SYSTEMS	2	1	3
ST. FRANCIS HOSPITAL, INC	2	1	3
STAINLESS STEEL FITTING GROUP	1	1	2
STANDARD MOTOR PRODUCTS INC	1	1	2
STAR PAPER TUBE INC		2	2

Duke Energy Carolinas, LLC List of Industrial and Commercial Customers that have opted-out Docket Number E-7, Sub 1073

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
STEFANO FOODS	3	3	6
STERILITE CORP OF S C	1	1	2
SUMITOMO ELECTRIC ESC, INC	1		1
SUMITOMO ELECTRIC LIGHTWAVE CORPORATION	2	2	4
SWAIN COUNTY SCHOOLS		1	1
SYMCOR INC	1	1	2
SYNGENTA BIOTECHNOLOGY INC	1	2	3
T&S BRASS & BRONZE WORKS	2	2	4
T5@KINGS MOUNTAIN II, LLC		1	1
TARGET STORES	26	26	52
TEAM INDUSTRIES	1	1	2
TEKNOR APEX CAROLINA	1	1	2
THE C F SAUER CO	2	2	4
THE CYPRESS OF CHARLOTTE CLUB, INC	4	4	8
THE DAVID H MURDOCK CORE LABORATORY BUILDING OWNERS ASSOCIATION, INC.	1	1	2
THE GC NET LEASE (CHARLOTTE) INVESTORS LLC	1	1	2
THE LINCOLN NATIONAL LIFE INSURANCE COMPANY		1	1
THE NC AT UNIVERSITY A&T FOUNDATION LLC	1	1	2
THE REYNOLDS CO	6	6	12
THE TIMKEN COMPANY	3	3	6
TIETEX CORPORATION	2	2	4
TIME WARNER	1	1	2
TIME WARNER CABLE, INC	1	1	2
TIME WARNER SHARED SERVICES	1	1	2
TIME-WARNER	11	11	22
TIMKENSTEEL CORPORATION	1	1	2
TRANSCONTINENTAL GAS	3	2	5

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
TRANSYLVANIA COMMUNITY HOSPITAL		1	1
TRANSYLVANIA COUNTY SCHOOLS	1	1	2
TRELLEBORG COATED SYSTEMS US, INC	2	2	4
TRIBAL CASINO GAMING ENTERPRISES HARRAH'S CASINO & HOTEL	1		1
TROPICAL NUT & FRUIT CO	1	1	2
TYCO ELECTRONICS CORPORATION	5	12	17
TYCO HEALTHCARE GROUP LP	1		1
U S ENGINE VALVE CORP	1		1
UNC - CHAPEL HILL	8	8	16
UNC GREENSBORO	1	1	2
UNCC	1	2	3
UNIFI INC	1	1	2
UNIFI MANUFACTURING, INC	4	3	7
UNILIN FLOORING NC LLC	1	1	2
UNISCITE INC	1	1	2
UNITED PARCEL SERV	2	3	5
UNITED STATES COLD STORAGE	1	1	2
UNIVERSAL FOREST PRODUCTS	2	2	4
UNIVERSITY OF SC SPARTANBURG	5	5	10
UPM - RAFLATAC, INC	1	1	2
US AIRWAYS, INC.	3	4	7
US FOODS, INC	1	1	2
USC LANCASTER	1	1	2
VALASSIS COMMUNICATIONS	1	1	2
VALDESE WEAVERS	2	5	7
VELUX GREENWOOD INC	4	4	8
VERIZON WIRELESS	5	5	10

DSM YR 2014 RIDER OPT-OUT	2,059
EE YR2014 RIDER OPT-OUT	1,782

Customer Bill Name	EE YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	DSM YR 2014 (01/01/2014 - 12/31/2014) RIDER OPT-OUT	Grand Total
VICTORY INDUSTRIAL PARK, LLC	1	1	2
VULCAN CONSTRUCTION MATERIALS, L P	26	21	47
W S FORSYTH COUNTY SCHOOLS	11	11	22
WAKE FOREST UNIVERSITY	3	4	7
WALBAR INC	1	1	2
WAL-MART STORES EAST,LP	76	76	152
WATTS REGULATOR COMPANY	4	4	8
WAYNE FARMS LLC	8	8	16
WBTV LLC	1	1	2
WELLS FARGO BANK NA		9	9
WESTERN CAROLINA UNIVERSITY		1	1
WESTINGHOUSE AIR BRAKE TECHNOLOGIES, CORP	2	2	4
WEYERHAEUSER COMPANY		1	1
WF PROPERTY OWNER LP		1	1
WIELAND COPPER PRODUCTS LLC	1	1	2
WILLIAM BARNETT & SONS	2	2	4
WINDWARD PRINT STAR INC	1	1	2
WINGATE UNIVERSITY	2	2	4
WINSTON TOWER MAIN LLC	1	1	2
WINTHROP UNIVERSITY	1	1	2
WOFFORD COLLEGE	3	3	6
WOVEN ELECTRONICS CORP	1	1	2
WYFF TV	1	2	3
YORK SCHOOL DISTRICT 1	4	4	8
ZF TRANSMISSIONS GREENVILLE, LLC	1	1	2
ZINK IMAGING INC	1	1	2
Total	1782	2059	3841

EE Programs	Number of Accounts
Opted-Out Vintage 4 and not Vintage 2014	
A & T STATE UNIV	
AKG THERMAL SYSTEMS	1
AKZO NOBEL SURFACE CHEMISTRY LLC	6
ARCHER-DANIELS-MIDLAND CO	3
ARJOBEX AMERICA	2
ATRIUM WINDOWS & DOORS	2
B/E AEROSPACE, INC	4
BAKER INDUSTRIES	1
BALDOR ELECTRIC COMPANY	1
BARNHARDT MANUFACTURING COMPANY INC	1
BASF CORPORATION	1
BIC CORPORATION	1
BI-LO, LLC	1
BLUE CROSS BLUE SHIELD OF NC	2
BOSCH REXROTH CORPORATION	1
CANDLE CORPORATION OF AMERICA	3
CAROLINA BEVERAGE GROUP, LLC	3
CEMEX CONSTRUCTION MATERIALS ATLANTIC, LLC	2
CHEMTRADE PERFORMANCE CHEMICALS US LLC	1
CITY OF CHARLOTTE	8
CITY OF WINSTON SALEM	1
CLEMENT PAPPAS NC, INC	2
COLUMBIA FARMS INC	6
COMMONWEALTH BRANDS	1
CONBRACO INDUSTRIES	1
CONTEC,INC	2

COVALENCE SPECIALTY MATERIALS CORPORATION	1
CPI PACKAGING INC	1
CSHV SOUTHPARK, LLC	1
CULP INC	1
DART CONTAINER CORP	1
DRUG PLASTIC & GLASS	2
DUKE UNIVERSITY	1
EASLEY CUSTOM PLASTICS, INC	1
EATON CORPORATION "EATON HYDRAULICS"	1
EXOPACK, LLC	2
FEHRER AUTOMOTIVE NORTH AMERICA LLC	1
FISHER BARTON SOUTH CAROLINA INC	1
FOOD LION	1
GENERAL ELECTRIC	2
GLAXOSMITHKLINE LLC	1
GUILFORD COUNTY SCHOOLS	2
HEALTHCARE REALTY SERVICES	2
HIGHWOODS PROPERTIES	1
HONDA R&D N AMER INC	1
IBM CORPORATION	1
INCHEM CORPORATION	1
INTERNATIONAL TEXTILE GROUP INC	1
KEEBLER COMPANY	3
KINGS MOUNTAIN MINERALS INC	6
KUBETECH CUSTOM MOLDING INC	2
LOWES FOODS	6
MARTIN MARIETTA MATERIALS INC	3
MEADWESTVACO CONSUMER PACKAGING GROUP LLC	1
MERITOR HEAVY VEHICLE SYSTEMS	1
METROMONT CORPORATION	2
MID ATLANTIC INFRASTRUCTURE INC	2
NATIONAL GYPSUM CO	1
NC BAPTIST HOSPITAL	3
NC CENTER FOR PUBLIC TV	3

NOVANT HEALTH INC	7
NUTRA MANUFACTURING, INC	2
ORACLE FLEXIBLE PACKAGING	1
PARKER HANNIFIN CORPORATION	4
PERRIGO CO INC	1
PHARR YARNS, LLC	1
PLASTIC OMNIUM INDUSTRIES	1
PRYSMIAN CABLES	2
ROCHLING AUTOMOTIVE, INC	1
ROCHLING ENGINEERED PLAS	2
ROWAN SALISBURY SCHOOLS	3
SCHAEFER SYSTEMS	1
SONOCO PRODUCTS	1
SPARTANBURG AUTOMOTIVE, INC.	1
SPARTANBURG STAINLESS PRODUCTS	2
SQUARE D CORPORATION	1
THE TIMKEN COMPANY	1
TIETEX CORPORATION	1
TYSON FARMS INC	8
UNIFI MANUFACTURING, INC	1
UNIVERSAL FOREST PRODUCTS	6
WAKE FOREST UNIVERSITY HEALTH SCIENCES	1
WELLS FARGO BANK NA	5
WESTERN CAROLINA UNIVERSITY	1
WILKES COUNTY BOARD OF EDUCATION	5
TOTAL	178

DSM Programs	Number of Accounts
Opted-Out Vintage 4 and not Vintage 2014	
3G MERMET CORP	1
AKG THERMAL SYSTEMS	1
AKZO NOBEL SURFACE CHEMISTRY LLC	6
ALDERSGATE	1

AMERICAN EXPRESS TRAVEL RELATED SERV CO, INC	1
ARCHER-DANIELS-MIDLAND CO	3
ARJOBEX AMERICA	2
ATRIUM WINDOWS & DOORS	2
B/E AEROSPACE, INC	4
BAKER INDUSTRIES	1
BALDOR ELECTRIC COMPANY	1
BALLANTYNE RESORT, LLC	1
BASF CORPORATION	1
BERRY TRI PLASTICS	1
BIC CORPORATION	1
BILLY GRAHAM EVANGELISTIC	2
BI-LO, LLC	24
BLUE CROSS BLUE SHIELD OF NC	2
BONSET AMERICA CORP	1
BURLINGTON TECHNOLOGIES INC	1
CANDLE CORPORATION OF AMERICA	1
CAROLINA BEVERAGE GROUP, LLC	3
CEMEX CONSTRUCTION MATERIALS ATLANTIC, LLC	2
CHEMTRADE PERFORMANCE CHEMICALS US LLC	1
CIM URBAN REIT PROPERTIES VIII LP	1
CITY OF HICKORY	4
CLEMENT PAPPAS NC, INC	1
COLUMBIA FARMS INC	6
COMMONWEALTH BRANDS	1
COMMSCOPE, INC.	6
CONBRACO INDUSTRIES	1
CONSOLIDATED METCO INC	1
CONTEC,INC	2
COVALENCE SPECIALTY MATERIALS CORPORATION	1
CPI PACKAGING INC	1
CSHV SOUTHPARK, LLC	1
CULP INC	1
DART CONTAINER CORP	1

DRUG PLASTIC & GLASS	2
DUKE UNIVERSITY	1
ASLEY CUSTOM PLASTICS, INC	1
EXOPACK, LLC	2
EHRER AUTOMOTIVE NORTH AMERICA LLC	1
SISHER BARTON SOUTH CAROLINA INC	1
REIGHTLINER CORP	1
S & I V RESOURCE SQUARE 5 LP	1
GARDNER WEBB UNIV	1
GENERAL ELECTRIC	2
GLAXOSMITHKLINE LLC	1
GUILFORD COUNTY SCHOOLS	2
HANSON AGGREGATES SOUTHEAST	1
HEALTHCARE REALTY SERVICES	2
HENDERSON COUNTY SCHOOLS	1
HIGHWOODS PROPERTIES	1
HONDA R&D N AMER INC	1
(AYSER ROTH CORPORATION	1
KEEBLER COMPANY	3
KINGS MOUNTAIN MINERALS INC	6
KUBETECH CUSTOM MOLDING INC	2
. S STARRETT CO	1
MARTIN MARIETTA MATERIALS INC	2
MEADWESTVACO CONSUMER PACKAGING GROUP LLC	1
METROMONT CORPORATION	2
MID ATLANTIC INFRASTRUCTURE INC	2
N C FOAM IND INC	1
NATIONAL GYPSUM CO	1
NC BAPTIST HOSPITAL	3
NC CENTER FOR PUBLIC TV	1
NEW GENERATION YARNS	1
NOVANT HEALTH INC	1
ONE WORLD TECHNOLOGIES INC	1
DWT INDUSTRIES, INC	1

TOTAL	202
YMCA OF NORTHWEST NORTH CAROLINA	2
WILKES COUNTY BOARD OF EDUCATION	5
WELLS FARGO BANK NA	2
WAKE FOREST UNIVERSITY HEALTH SCIENCES	2
UNIVERSAL FOREST PRODUCTS	6
TYSON FARMS INC	8
TRIMITE POWDERS INC	1
TIETEX CORPORATION	1
THOMAS BUILT BUSES	1
THE TIMKEN COMPANY	1
SUMITOMO ELECTRIC ESC, INC	1
STIEFEL LABORATORIES INC	1
SQUARE D CORPORATION	1
SPARTANBURG STAINLESS PRODUCTS	2
SPARTANBURG AUTOMOTIVE, INC.	1
SONOCO PRODUCTS	1
SHURTAPE TECHNOLOGIES	2
SHUFORD YARNS,LLC	2
ROCHLING ENGINEERED PLAS	2
ROCHLING AUTOMOTIVE, INC	1
PRYSMIAN CABLES	2
PRESBYTERIAN MEDICAL CARE CORP	1
PRESBYTERIAN HOSPITAL	1
POLYDECK SCREEN CORP	3
PLASTIC PACKAGING INC.	3
PERRIGO CO INC	1
PARKER HANNIFIN CORPORATION	4

Barnes Exhibit 10

# Duke Energy Carolinas, LLC DSM/EE True Up for the Period January 1, 2010 to December 31, 2013 Docket Number E-7, Sub 1073

#### Allowed Return on Investment Calculation

Line				
1	Nominal Avoided Cost Target based on Save-A-Watt Settlement Agreement	E-7 Sub 831 Settlement Agreement	\$ 754,000,000	
2	Nominal Avoided Cost Savings Achieved during Vintage 1-Vintage 4	Line 8	\$ 924,937,654	
3	Achievement as a Percent of Target	Line 1 / Line 2	 123%	
4	Allowed Return on Investment Percentage @ >90% Achievement of Target		15%	
5	Calculation of Breakdown of Avoided Costs Savings Components:			
6	EE Nominal Avoided Cost Savings		\$ 750,651,723	81%
7	DSM Nominal Avoided Costs Savings		\$ 174,285,931	19% *
8	Total Nominal Avoided Cost Savings Achieved during Vintage 1-Vintage 4		\$ 924,937,654	

<sup>\*</sup> Per Settlement Agreement, No more than 35% of the target may be met by DSM programs

Barnes Exhibit 11

# Duke Energy Carolinas, LLC Shared Savings Incentive Calculation Docket Number E-7, Sub 1073 Estimate January 1, 2016- December 31, 2016

		System
NPV of AC - Res EE		\$ 60,481,067
NPV of AC - Non Res EE		170,463,763
NPV of AC - DSM		104,996,908
<b>Total NPV of Avoided Costs</b>	Α	\$ 335,941,738
Program Costs - Res EE		\$ 31,964,548
Program Costs - Non Res EE		50,019,993
Program Costs - DSM		31,195,486
Total Program Costs	В	\$ 113,180,027
Net Savings	C= A-B	\$ 222,761,711
Sharing Percentage	D	11.50%
Shared Savings - Res EE		\$ 3,279,400
Shared Savings - Non Res EE		13,851,034
Shared Savings - DSM		8,487,164
Total Shared Savings	E =(A-B)*D	\$ 25,617,597