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June 26, 2009

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

RE: Docket No. E-7, Sub 831

Dear Ms. Vance:

Enclosed for filing are the original and thirty (30) copies of Duke Energy Carolinas, LLC's MIRR Supporting Testimony of Raiford L. Smith in the above referenced docket.

Sincerely,

Robert W. Kaylor

Robert W. Kaylor

Enclosures

cc: Parties of Record

FILED
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N.C. Utilities Commission

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 831

In re:	)	
Application of Duke Energy Carolinas, LLC	)	MIRR SUPPORTING TESTIMONY
For Approval of Save-a-Watt Approach,	)	OF RAIFORD L. SMITH
Energy Efficiency Rider and Portfolio of	)	FOR DUKE ENERGY
Energy Efficiency Programs	)	CAROLINAS
	)	

I. INTRODUCTION AND PURPOSE

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

A. My name is Raiford L. Smith, and my business address is 526 South Church Street, Charlotte, North Carolina. I am Director, Strategy and Collaboration for Duke Energy Business Services, LLC, a service company affiliate of Duke Energy Carolinas, LLC ("Duke Energy Carolinas" or the "Company") and am responsible for leading collaborative efforts on new product development and energy efficiency across all retail markets served by Duke Energy Corporation ("Duke Energy"), including Duke Energy Carolinas' service territory.

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

A. I earned a Bachelor of Science degree in Computer Science from the University of Georgia in Athens, Georgia in 1995. I also have earned a Masters of Business Administration from the University of Virginia's Darden Graduate School of Business Administration in Charlottesville, Virginia in 2002. I am currently pursuing a Juris Doctor degree from the Charlotte School of Law in Charlotte, North Carolina.

In addition to my current role with Duke Energy, I am also currently the vice chairman of the Southeastern Energy Efficiency Alliance and a member of the board for the Midwestern Energy Efficiency Alliance. I am a recipient of the 2006 Southeastern Electric Exchange Industry Excellence Award in the category of rates and regulation and earned my Six Sigma Green Belt certification in 2006.

I also have seventeen years of experience in the energy industry. During that time, I have served in various roles in both the regulated retail and unregulated wholesale electric and natural gas businesses with The Southern Company, Mirant, and Duke Energy. My experience includes energy efficiency, pricing and rates, product development, customer management, wholesale deal structuring, mergers and acquisitions, and technology. Prior to my current position, I held several other positions at Duke Energy, including Director of Marketing Operations, Director of Product Development, and Manager of Energy Efficiency Products for the Marketing and Energy Efficiency organization.

Q. WHAT IS THE PURPOSE OF YOUR SETTLEMENT TESTIMONY?

A. The purpose of my testimony is to sponsor the modified internal rate of return ("MIRR") analysis on the Joint Agreement and Stipulation filed by the Public Staff, the Environmental Intervenors, and Duke Energy Carolinas on June 12, 2009 (the "Settlement Agreement"). This analysis was requested by the Commission in its Order Scheduling Hearing to Consider "Agreement and Joint Stipulation of Settlement," dated June 18, 2009.

II. MODIFIED INTERNAL RATE OF RETURN

Q. HAVE YOU PREPARED ANY EXHIBITS?

A. Yes, I have. Attached to my testimony as Smith Exhibit No. 1 is an MIRR analysis of the Company's energy efficiency and demand-side management portfolio at 100% achievement. This exhibit (1) details revenues and costs to the program level, and (2) shows nominal revenues and expenses on both a system level and North Carolina-only basis. The revenues allocated to North Carolina use the same allocation methodology the Company proposed in the Settlement Agreement.

Q. PLEASE SUMMARIZE THE MIRR ANALYSIS SET FORTH IN SMITH EXHIBIT NO. 1.

A. The MIRR analysis compares cash inflows to the Company versus costs the Company would incur. Revenues (cash inflows) are comprised of both avoided cost-based revenues and net lost revenue recovery. Expenses include both program costs and net lost revenues. Based on this analysis, the Company's overall MIRR is calculated to be 6.1%.

All revenues and expenses included in the MIRR analysis assume the Company will achieve 100% of its avoided cost targets. However, if the Company fails to attain 100% of its avoided cost targets, the Company's revenues would be reduced in accordance with the Settlement Agreement. This revenue reduction would limit the Company's earnings opportunity, reduce the portfolio's after-tax return on investment below 15%, and lower the MIRR of the portfolio.

Q. HOW DOES THE MIRR ANALYSIS OF THE SETTLEMENT COMPARE TO THE MIRR ANALYSIS FILED BY THE COMPANY ON MARCH 31, 2009?

A. The Company has used the same format and methodology for calculating expenses in this analysis as it did in the March 31st filing. In that filing, the Company included several MIRR calculations using a variety of revenue requirement calculations, including save-a-watt as originally filed, a modified version of save-a-watt, and the Progress Energy Carolinas methodology. Those methods yielded overall MIRR's of 7.1%, 6.4%, and 6.0%, respectively, compared to the 6.1% return produced by the settlement methodology at 100% achievement. The settlement proposes the same compensation mechanism as the modified save-a-watt proposal shown in Scenario I of the March 31st filing, with two major changes: (1) energy efficiency revenues were lowered from 55% to 50% of avoided costs, and (2) the energy efficiency portfolio was scaled up to achieve higher impacts. These changes led to an MIRR reduction of roughly 30 basis points.

Q. IS THE MIRR A USEFUL METRIC IN DETERMINING THE PROFITABILITY OF THE COMPANY'S PROPOSED ENERGY EFFICIENCY PLAN?

A. The MIRR is a well-recognized financial metric for capital budgeting that is used to compare a company's cost of capital to the return from an investment in an asset. However, for determining the profitability of the Company's modified save-a-watt incentive mechanism proposed in the Settlement Agreement, MIRR has a notable limitation based on how cash flows are recognized. In order for the MIRR calculation to provide a meaningful result, it requires that the project begin with an investment (recognized as a cash outflow) followed by positive cash inflows for the remaining life of the project. Traditional capital-based investments follow this structure because they incur costs while the asset is under construction. Once the asset has been constructed, the Company then receives positive cash inflows for the remainder of the life of the asset to recover the asset's capital costs.

However, revenues and expenses for energy efficiency and demand-side management investments do not fit the paradigm of a traditional capital investment. Instead, revenues and certain program expenses for energy efficiency and demand-side management occur within the same year. Additionally, energy efficiency creates ongoing expenses in the form of net lost revenues. Thus, in order to calculate an MIRR with the appropriate cash inflows and outflows, net lost revenues and program expenses from energy efficiency were recognized on a net present value basis in the first year even though they actually occur over the life of the programs. As a result, the MIRR calculation is less meaningful for financial comparisons because the cash flows from the energy efficiency investment have been re-structured to fit the MIRR calculation. Instead, the Company believes a return on investment calculation is more appropriate because it does not require cash flows to be restructured. Accordingly, the Settlement Agreement proposes to set the Company's earnings cap on a return on investment basis.

III. CONCLUSION

Q. DOES THIS CONCLUDE YOUR TESTIMONY?

A. Yes, it does.

Duke Energy Carolinas, LLC

Modified Internal Rate of Return on Energy Efficiency Programs
System Revenues
$ in Thousands

	Modified IRR	PV of Outflows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Residential Programs																				
Residential Energy Assessments																				
Revenues			$4,213	$6,073	$12,855	$20,329	$8,270	$5,075	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$2,810	$3,083	$6,231	$9,315	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$1,359	$2,920	$6,150	$11,140	$11,400	$10,450	$9,326	$6,391	$1,838	$1,127	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow			$43	$69	$474	($125)	($3,130)	($5,375)	($9,326)	($6,391)	($1,838)	($1,127)	$0	$0	$0	$0	$0	$0	$0	$0
Modified IRR	5.6%	($59,878)	$4,213	$6,073	$12,855	$20,329	$8,270	$5,075	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Residential Customers AC																				
Revenues			$1,222	$1,680	$3,820	$8,499	$1,373	$872	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$1,866	$2,179	$4,690	$7,519	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$180	$405	$912	$1,765	$1,806	$1,849	$1,892	$1,936	$1,981	$2,028	$2,075	$2,123	$2,173	$2,224	$2,276	$2,075	$1,811	$1,150
Cash Flow			($824)	($904)	($1,781)	($2,785)	($434)	($977)	($1,892)	($1,936)	($1,981)	($2,028)	($2,075)	($2,123)	($2,173)	($2,224)	($2,276)	($2,075)	($1,811)	($1,150)
Modified IRR	2.5%	($28,113)	$1,222	$1,680	$3,820	$8,499	$1,373	$872	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Residential Customers Energy Star																				
Revenues			$12,003	$17,276	$17,402	$19,903	$7,250	$4,316	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$3,900	$4,200	$2,573	$3,577	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$4,192	$8,910	$12,014	$16,416	$16,800	$12,487	$7,593	$4,520	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow			$3,911	$4,166	$2,815	($91)	($9,549)	($8,171)	($7,593)	($4,520)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Modified IRR	6.6%	($72,596)	$12,003	$17,276	$17,402	$19,903	$7,250	$4,316	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Low Income Energy Efficiency and Weatherization Assistance																				
Revenues			$5,667	$7,892	$13,771	$20,140	$7,889	$4,723	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$2,706	$3,900	$9,292	$18,076	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$1,939	$4,000	$7,220	$11,898	$12,176	$10,320	$8,370	$5,274	$807	$826	$845	$865	$885	$906	$927	$904	$835	$580
Cash Flow			$1,023	($7)	($2,741)	($9,834)	($4,287)	($5,597)	($8,370)	($5,274)	($807)	($826)	($845)	($865)	($885)	($906)	($927)	($904)	($835)	($580)
Modified IRR	4.8%	($73,426)	$5,667	$7,892	$13,771	$20,140	$7,889	$4,723	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Energy Efficiency Education Program for Schools																				
Revenues			$8,620	$13,575	$30,731	$51,062	$18,743	$11,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$3,950	$5,660	$13,711	$23,333	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$2,775	$6,142	$13,359	$24,747	$25,325	$23,311	$21,189	$16,142	$8,445	$5,574	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow			$1,896	$1,773	$3,662	$2,981	($6,582)	($11,711)	($21,189)	($16,142)	($8,445)	($5,574)	$0	$0	$0	$0	$0	$0	$0	$0
Modified IRR	5.8%	($136,176)	$8,620	$13,575	$30,731	$51,062	$18,743	$11,600	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Power Manager																				
Revenues			$13,105	$13,432	$13,768	$14,112	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$6,367	$6,367	$6,367	$6,367	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow			$6,737	$7,065	$7,401	$7,745	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Modified IRR	12.1%	($21,345)	$13,105	$13,432	$13,768	$14,112	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Residential																				
Revenues			$44,830	$59,928	$92,348	$132,044	$43,526	$26,585	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$21,600	$25,389	$42,864	$68,187	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$10,444	$22,377	$39,655	$65,967	$67,508	$58,416	$48,369	$34,263	$13,071	$9,554	$2,920	$2,988	$3,058	$3,129	$3,202	$2,979	$2,646	$1,730
Cash Flow			$12,786	$12,162	$9,829	($2,109)	($23,982)	($31,831)	($48,369)	($34,263)	($13,071)	($9,554)	($2,920)	($2,988)	($3,058)	($3,129)	($3,202)	($2,979)	($2,646)	($1,730)
Modified IRR	6.2%	($391,535)	$44,830	$59,928	$92,348	$132,044	$43,526	$26,585	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Non-Residential Programs																				
Smart Saver® for Non-Residential Customers - Lighting																				
Revenues			$4,891	$6,332	$13,110	$20,504	$4,742	$2,527	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Program Costs			$2,401	$2,596	$5,190	$7,749	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$848	$1,821	$3,656	$6,564	$6,300	$5,805	$5,922	$6,033	$6,119	$6,189	$5,539	$4,784	$3,069	$353	$280	$140	$119	$72
Cash Flow			$1,642	$1,914	$4,264	$6,192	($1,558)	($3,278)	($5,922)	($6,033)	($6,119)	($6,189)	($5,539)	($4,784)	($3,069)	($353)	($280)	($140)	($119)	($72)
Modified IRR	6.0%	($52,120)	$4,891	$6,332	$13,110	$20,504	$4,742	$2,527	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Non-Residential Customers - Motors																				
Revenues			$217	$284	$564	$875	$156	$95	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$67	$77	$146	$219	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$26	$57	$118	$212	$217	$222	$227	$232	$238	$243	$249	$255	$261	$267	$273	$243	$205	$126
Cash Flow			$124	$150	$298	$444	($61)	($126)	($227)	($232)	($238)	($243)	($249)	($255)	($261)	($267)	($273)	($243)	($205)	($126)
Modified IRR	6.0%	($2,229)	$217	$284	$564	$875	$156	$95	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Non-Residential Customers - Other Prescriptive																				
Revenues			$2,974	$3,851	$8,288	$13,133	$2,073	$1,264	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$1,535	$1,864	$4,048	$6,422	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$359	$762	$1,579	$2,823	$2,836	$2,831	$2,768	$2,634	$2,590	$2,564	$2,463	$2,242	$2,167	$2,156	$2,143	$1,892	$1,607	$979
Cash Flow			$1,080	$1,226	$2,661	$3,888	($763)	($1,567)	($2,768)	($2,634)	($2,590)	($2,564)	($2,463)	($2,242)	($2,167)	($2,156)	($2,143)	($1,892)	($1,607)	($979)
Modified IRR	6.2%	($30,647)	$2,974	$3,851	$8,288	$13,133	$2,073	$1,264	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Non-Residential Customers - Energy Star Food Service Products																				
Revenues			$100	$179	$469	$834	$177	$113	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$56	$87	$216	$363	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$15	$39	$103	$214	$219	$224	$229	$235	$240	$246	$236	$216	$151	$35	$22	$0	$0	$0
Cash Flow			$29	$52	$149	$257	($42)	($111)	($229)	($235)	($240)	($246)	($236)	($216)	($151)	($35)	($22)	$0	$0	$0
Modified IRR	5.7%	($1,957)	$100	$179	$469	$834	$177	$113	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Non-Residential Customers - HVAC																				
Revenues			$231	$287	$607	$943	$166	$102	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$325	$351	$709	$1,058	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$27	$58	$123	$223	$229	$234	$239	$245	$251	$257	$263	$267	$272	$274	$275	$245	$210	$129
Cash Flow			($121)	($122)	($226)	($339)	($62)	($132)	($239)	($245)	($251)	($257)	($263)	($267)	($272)	($274)	($275)	($245)	($210)	($129)
Modified IRR	3.1%	($3,870)	$231	$287	$607	$943	$166	$102	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Non-Residential Customers - Custom Rebate																				
Revenues			$3,275	$4,129	$8,660	$13,494	$2,630	$1,614	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$4,667	$5,032	$10,021	$14,887	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$432	$928	$1,955	$3,542	$3,625	$3,710	$3,796	$3,885	$3,976	$4,069	$4,164	$4,262	$3,791	$3,238	$1,988	$0	$0	$0
Cash Flow			($1,825)	($1,832)	($3,315)	($4,935)	($995)	($2,095)	($3,796)	($3,885)	($3,976)	($4,069)	($4,164)	($4,262)	($3,791)	($3,238)	($1,988)	$0	$0	$0
Modified IRR	3.3%	($53,889)	$3,275	$4,129	$8,660	$13,494	$2,630	$1,614	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Power Share®																				
Revenues			$4,616	$12,239	$19,186	$19,666	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$4,729	$10,422	$15,783	$15,766	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow			($114)	$1,817	$3,403	$3,899	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Modified IRR	8.5%	($37,909)	$4,616	$12,239	$19,186	$19,666	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Non-Residential																				
Revenues			$16,303	$27,301	$50,884	$69,449	$9,943	$5,716	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$13,780	$20,431	$36,115	$46,465	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$1,706	$3,666	$7,535	$13,577	$13,425	$13,025	$13,182	$13,264	$13,413	$13,567	$12,913	$12,026	$9,711	$6,323	$4,980	$2,521	$2,141	$1,306
Cash Flow			$817	$3,204	$7,235	$9,406	($3,482)	($7,309)	($13,182)	($13,264)	($13,413)	($13,567)	($12,913)	($12,026)	($9,711)	($6,323)	($4,980)	($2,521)	($2,141)	($1,306)
Modified IRR	6.0%	($182,881)	$16,303	$27,301	$50,884	$69,449	$9,943	$5,716	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Residential and Non-Residential																				
Total																				
Revenues			$61,133	$87,229	$143,232	$201,493	$53,469	$32,301	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Revenue Credit in Year 5 for Cap			$0	$0	$0	$0	$2,609	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$35,380	$45,819	$78,976	$114,652	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$12,150	$26,043	$47,189	$79,544	$80,932	$71,442	$61,551	$47,526	$26,484	$23,122	$15,833	$15,014	$12,769	$9,452	$8,183	$5,500	$4,787	$3,036
Cash Flow			$13,602	$15,366	$17,064	$7,297	($27,464)	($39,140)	($61,551)	($47,526)	($26,484)	($23,122)	($15,833)	($15,014).	($12,769)	($9,452)	($8,183)	($5,500)	($4,787)	($3,036)
Modified IRR	6.1%	($576,237)	$61,133	$87,229	$143,232	$201,493	$53,469	$32,301	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

EE Programs
Total

Revenues			$43,412	$61,558	$110,277	$167,715	$53,469	$32,301	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs		$162,914	$24,284	$29,030	$56,828	$92,518	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues		$352,189	$12,150	$26,043	$47,189	$79,544	$80,932	$71,442	$61,551	$47,526	$26,484	$23,122	$15,833	$15,014	$12,769	$9,452	$8,183	$5,500	$4,787	$3,036
Cash Flow		($148,466)	$6,979	$6,485	$6,260	($4,348)	($27,464)	($39,140)	($61,551)	($47,526)	($26,484)	($23,122)	($15,833)	($15,014)	($12,769)	($9,452)	($8,183)	($5,500)	($4,787)	($3,036)
Modified IRR	5.4%	($515,103)	$43,412	$61,558	$110,277	$167,715	$53,469	$32,301	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
DSM Programs																				
Total																				
Revenues			$17,720	$25,671	$32,954	$33,778	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs		$59,314	$11,096	$16,789	$22,150	$22,134	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow		$31,294	$6,624	$8,882	$10,804	$11,644	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Modified IRR	10.0%	($59,314)	$17,720	$25,671	$32,954	$33,778	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Notes:
(1) All revenues and expenses at 100% achievement
(2) Regulatory Fee and Gross Receipts Tax not included

Duke Energy Carolinas, LLC

Modified Internal Rate of Return on Energy Efficiency Programs
North Carolina Only Revenues
$ in Thousands

	Modified IRR	PV of Outflows	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
Residential Programs																				
Residential Energy Assessments																				
Revenues			$3,041	$4,383	$9,278	$14,672	$5,969	$3,663	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$2,028	$2,225	$4,497	$6,723	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$981	$2,108	$4,439	$8,040	$8,228	$7,542	$6,731	$4,612	$1,326	$813	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow			$31	$50	$342	($90)	($2,259)	($3,879)	($6,731)	($4,612)	($1,326)	($813)	$0	$0	$0	$0	$0	$0	$0	$0
Modified IRR	5 6%	($43,216)	$3,041	$4,383	$9,278	$14,672	$5,969	$3,663	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Residential Customers AC																				
Revenues			$882	$1,213	$2,757	$4,690	$991	$629	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$1,347	$1,573	$3,385	$5,426	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$130	$292	$658	$1,274	$1,304	$1,334	$1,365	$1,397	$1,430	$1,463	$1,498	$1,532	$1,568	$1,605	$1,642	$1,497	$1,307	$830
Cash Flow			($595)	($652)	($1,286)	($2,010)	($313)	($705)	($1,365)	($1,397)	($1,430)	($1,463)	($1,498)	($1,532)	($1,568)	($1,605)	($1,642)	($1,497)	($1,307)	($830)
Modified IRR	2.5%	($20,290)	$882	$1,213	$2,757	$4,690	$991	$629	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Residential Customers Energy Star																				
Revenues			$8,663	$12,469	$12,560	$14,364	$5,233	$3,115	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$2,815	$3,031	$1,857	$2,582	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$3,026	$6,431	$8,671	$11,848	$12,125	$9,012	$5,480	$3,262	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow			$2,822	$3,007	$2,032	($66)	($6,892)	($5,897)	($5,480)	($3,262)	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Modified IRR	6.6%	($52,395)	$8,663	$12,469	$12,560	$14,364	$5,233	$3,115	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Low Income Energy Efficiency and Weatherization Assistance																				
Revenues			$4,090	$5,696	$9,939	$14,535	$5,694	$3,408	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$1,953	$2,814	$6,708	$13,046	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$1,399	$2,887	$5,211	$8,587	$8,788	$7,448	$6,041	$3,806	$582	$596	$610	$624	$639	$654	$669	$653	$602	$419
Cash Flow			$738	($5)	($1,978)	($7,098)	($3,094)	($4,040)	($6,041)	($3,806)	($582)	($596)	($610)	($624)	($639)	($654)	($669)	($653)	($602)	($419)
Modified IRR	4.8%	($52,994)	$4,090	$5,696	$9,939	$14,535	$5,694	$3,408	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Energy Efficiency Education Program for Schools																				
Revenues			$6,222	$9,797	$22,180	$36,853	$13,527	$8,372	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$2,851	$4,085	$9,896	$16,840	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$2,002	$4,433	$9,642	$17,861	$18,278	$16,824	$15,293	$11,650	$6,095	$4,023	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow			$1,368	$1,279	$2,643	$2,152	($4,751)	($8,452)	($15,293)	($11,650)	($6,095)	($4,023)	$0	$0	$0	$0	$0	$0	$0	$0
Modified IRR	5.8%	($98,264)	$6,222	$9,797	$22,180	$36,853	$13,527	$8,372	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Power Manager																				
Revenues			$9,702	$9,945	$10,193	$10,446	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$4,714	$4,714	$4,714	$4,714	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow			$4,988	$5,231	$5,479	$5,734	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Modified IRR	12.1%	($15,802)	$9,702	$9,945	$10,193	$10,446	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Residential																				
Revenues			$32,599	$43,502	$66,907	$95,564	$31,414	$19,188	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$15,708	$18,442	$31,055	$49,331	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$7,538	$16,150	$28,620	$47,611	$48,723	$42,161	$34,910	$24,728	$9,434	$6,896	$2,107	$2,157	$2,207	$2,259	$2,311	$2,150	$1,910	$1,249
Cash Flow			$9,353	$8,909	$7,232	($1,378)	($17,309)	($22,974)	($34,910)	($24,728)	($9,434)	($6,896)	($2,107)	($2,157)	($2,207)	($2,259)	($2,311)	($2,150)	($1,910)	($1,249)
Modified IRR	6.2%	($282,982)	$32,599	$43,502	$66,907	$95,564	$31,414	$19,188	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Non-Residential Programs																				
Smart Saver® for Non-Residential Customers - Lighting																				
Revenues			$3,630	$4,570	$9,462	$14,799	$3,423	$1,824	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Program Costs			$1,733	$1,874	$3,746	$5,592	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$612	$1,315	$2,639	$4,737	$4,547	$4,190	$4,274	$4,354	$4,416	$4,467	$3,998	$3,453	$2,215	$255	$202	$101	$86	$52
Cash Flow			$1,185	$1,381	$3,077	$4,469	($1,124)	($2,366)	($4,274)	($4,354)	($4,416)	($4,467)	($3,998)	($3,453)	($2,215)	($255)	($202)	($101)	($86)	($52)
Modified IRR	6.0%	($37,617)	$3,530	$4,570	$9,462	$14,799	$3,423	$1,824	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Non-Residential Customers - Motors																				
Revenues			$156	$205	$407	$631	$112	$69	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$48	$56	$106	$158	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$19	$41	$85	$153	$156	$160	$164	$168	$171	$175	$180	$184	$188	$192	$197	$175	$148	$91
Cash Flow			$90	$108	$215	$320	($44)	($91)	($164)	($168)	($171)	($175)	($180)	($184)	($188)	($192)	($197)	($175)	($148)	($91)
Modified IRR	6.0%	($1,608)	$156	$205	$407	$631	$112	$69	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Non-Residential Customers - Other Prescriptive																				
Revenues			$2,147	$2,780	$5,982	$9,479	$1,496	$912	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$1,108	$1,345	$2,921	$4,635	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$259	$550	$1,140	$2,038	$2,047	$2,043	$1,998	$1,901	$1,869	$1,850	$1,777	$1,618	$1,564	$1,556	$1,547	$1,366	$1,160	$707
Cash Flow			$780	$885	$1,920	$2,806	($551)	($1,131)	($1,998)	($1,901)	($1,869)	($1,850)	($1,777)	($1,618)	($1,564)	($1,556)	($1,547)	($1,366)	($1,160)	($707)
Modified IRR	6.2%	($22,264)	$2,147	$2,780	$5,982	$9,479	$1,496	$912	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Non-Residential Customers - Energy Star Food Service Products																				
Revenues			$72	$129	$338	$602	$127	$82	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$41	$63	$156	$262	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$11	$28	$75	$154	$158	$162	$165	$169	$173	$177	$170	$156	$109	$25	$16	$0	$0	$0
Cash Flow			$21	$38	$108	$186	($31)	($80)	($165)	($169)	($173)	($177)	($170)	($156)	($109)	($25)	($16)	$0	$0	$0
Modified IRR	5.7%	($1,412)	$72	$129	$338	$602	$127	$82	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Non-Residential Customers - HVAC																				
Revenues			$166	$207	$438	$680	$120	$74	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$234	$253	$512	$764	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$19	$42	$89	$161	$165	$169	$173	$177	$181	$185	$190	$193	$196	$198	$199	$177	$151	$93
Cash Flow			($87)	($88)	($163)	($245)	($45)	($95)	($173)	($177)	($181)	($185)	($190)	($193)	($196)	($198)	($199)	($177)	($151)	($93)
Modified IRR	3.1%	($2,793)	$166	$207	$438	$680	$120	$74	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Smart Saver® for Non-Residential Customers - Custom Rebate																				
Revenues			$2,363	$2,980	$6,251	$9,739	$1,898	$1,165	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$3,369	$3,632	$7,232	$10,745	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$312	$670	$1,411	$2,556	$2,616	$2,677	$2,740	$2,804	$2,870	$2,937	$3,006	$3,076	$2,736	$2,337	$1,435	$0	$0	$0
Cash Flow			($1,317)	($1,322)	($2,393)	($3,562)	($718)	($1,512)	($2,740)	($2,804)	($2,870)	($2,937)	($3,006)	($3,076)	($2,736)	($2,337)	($1,435)	$0	$0	$0
Modified IRR	3.3%	($38,894)	$2,363	$2,980	$6,251	$9,739	$1,898	$1,165	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Power Share®																				
Revenues			$3,417	$9,061	$14,204	$14,560	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$3,501	$7,716	$11,685	$11,673	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow			($84)	$1,345	$2,519	$2,887	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Modified IRR	8.5%	($28,110)	$3,417	$9,061	$14,204	$14,560	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Non-Residential																				
Revenues			$11,852	$19,932	$37,082	$50,490	$7,176	$4,125	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs			$10,034	$14,939	$26,359	$33,829	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$1,231	$2,646	$5,438	$9,799	$9,689	$9,401	$9,514	$9,573	$9,681	$9,792	$9,320	$8,680	$7,008	$4,564	$3,595	$1,819	$1,546	$943
Cash Flow			$587	$2,346	$5,285	$6,861	($2,513)	($5,275)	($9,514)	($9,573)	($9,681)	($9,792)	($9,320)	($8,680)	($7,008)	($4,564)	($3,595)	($1,819)	($1,546)	($943)
Modified IRR	6.0%	($132,699)	$11,852	$19,932	$37,082	$50,490	$7,176	$4,125	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Total Residential and Non-Residential																				
Total																				
Revenues			$44,451	$63,434	$103,989	$146,053	$38,590	$23,313	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Revenue Credit in Year 5 for Cap			$0	$0	$0	$0	$2,340													
Program Costs			$25,742	$33,382	$57,414	$83,160	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues			$8,769	$18,796	$34,058	$57,410	$58,412	$51,562	$44,423	$34,301	$19,115	$16,688	$11,427	$10,836	$9,216	$6,822	$5,906	$3,969	$3,455	$2,191
Cash Flow			$9,941	$11,256	$12,517	$5,483	($19,822)	($28,249)	($44,423)	($34,301)	($19,115)	($16,688)	($11,427)	($10,836)	($9,216)	($6,822)	($5,906)	($3,969)	($3,455)	($2,191)
Modified IRR	6.1%	($417,314)	$44,451	$63,434	$103,989	$146,053	$38,590	$23,313	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

EE Programs
Total

Revenues			$31,332	$44,428	$79,591	$121,046	$38,590	$23,313	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs		$117,581	$17,526	$20,952	$41,015	$66,774	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues		$254,187	$8,769	$18,796	$34,058	$57,410	$58,412	$51,562	$44,423	$34,301	$19,115	$16,688	$11,427	$10,836	$9,216	$6,822	$5,906	$3,969	$3,456	$2,191
Cash Flow		($107,153)	$5,037	$4,680	$4,518	($3,136)	($19,822)	($28,249)	($44,423)	($34,301)	($19,115)	($16,688)	($11,427)	($10,836)	($9,216)	($6,822)	($5,906)	($3,969)	($3,456)	($2,191)
Modified IRR	5.4%	($371,768)	$31,332	$44,428	$79,591	$121,046	$38,590	$23,313	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
DSM Programs																				
Total																				
Revenues			$13,119	$19,005	$24,398	$25,007	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Program Costs		$43,913	$8,215	$12,430	$16,399	$16,387	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Net Lost Revenues		$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
Cash Flow		*$23,168*	*$4,904*	*$6,575*	*$7,999*	*$8,621*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*	*$0*
Modified IRR	10.0%	($43,913)	$13,119	$19,005	$24,398	$25,007	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Notes:

(1) All revenues and expenses at 100% achievement

(2) Regulatory Fee and Gross Receipts Tax not included

(3) Revenues and expenses are allocated to North Carolina using the Company's proposed methodology in the settlement

CERTIFICATE OF SERVICE

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

This the 26th day of June, 2009.

Robert W. Kaylor
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