NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION

FILED
JUL 0 2 2009
Clerk's Office
N.C. Utilities Commission

OFFICIAL COPY

July 2, 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:

In connection with the above-captioned docket, I transmit herewith for filing on behalf of the Public Staff, twenty-one (21) copies of the testimony and exhibits of Michael C. Maness, Assistant Director, Accounting Division.

By copy of this letter, I am forwarding a copy of the above to all parties of record.

Sincerely yours,

Kendrick C. Fentress

Kendrick C. Fentress
Staff Attorney

KCF/bll

Enclosures

cc: Parties of Record

mH
AG
7 Comm.
Kyberg
VBennink
Watson
Hoover
Sessoms
Kite
Ericson
Jones

FILED

JUL 02 2009

Clerk's Office
N.C. Utilities Commission

DUKE ENERGY CAROLINAS, LLC
DOCKET NO. E-7, SUB 831

SUPPLEMENTAL TESTIMONY OF MICHAEL C. MANESS
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION

July 2, 2009

Q. MR. MANESS, HAVE YOU PREVIOUSLY PRESENTED TESTIMONY IN THIS PROCEEDING?

A. Yes. On June 26, 2008, the Public Staff filed my initial direct testimony in this proceeding, which I presented at the hearing that began on July 28, 2008. Additionally, on August 25, 2008, the Public Staff filed my affidavit addressing a portion of the supplemental testimony and exhibits of Duke Energy Carolinas, LLC (Duke or the Company) witness Theodore E. Schultz.

Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL TESTIMONY?

A. The purpose of my supplemental testimony is to satisfy the requirements of the Commission's *Order Scheduling Hearing to Consider "Agreement and Joint Stipulation of Settlement"* (Settlement Hearing Order), issued on June 18, 2009. In the Settlement Hearing Order, the Commission required both Duke and the Public Staff to file (a) Modified Internal Rate of Return (MIRR) analyses consistent with the terms of the *Agreement and Joint* Stipulation *of Settlement* (Agreement) filed on

June 12, 2009,[1] given their respective positions on the appropriate inputs to the MIRR calculations, and (b) testimony regarding the outstanding issue between Duke, the Public Staff, and the Environmental Intervenors (the Stipulating Parties) of the appropriate jurisdictional allocation method to use in determining the North Carolina retail Demand-Side Management / Energy Efficiency Rider (DSM/EE Rider). My supplemental testimony addresses both of these requirements, and also sets forth the Public Staff's recommended DSM/EE rider.

ALLOCATION OF SYSTEM AMOUNTS TO NORTH CAROLINA RETAIL OPERATIONS

Q. HOW DOES THE AGREEMENT PROVIDE FOR THE ISSUE OF JURISDICTIONAL ALLOCATIONS TO BE RESOLVED?

A. Paragraph H.8 of Exhibit B (the Settlement Terms) of the Agreement reads as follows:

> The North Carolina retail revenue requirement applicable to demand-side management, energy efficiency programs, and net lost revenues will be determined by allocating the various inputs to the revenue calculation (avoided costs, program costs, net lost revenues, etc.) to the North Carolina retail jurisdiction and then applying the percentages and other revenue requirement determinants set forth in this agreement.
>
> The Stipulating Parties will present the issue of the appropriate jurisdictional allocation method to the Commission through testimony in this matter. For purposes of determining the North Carolina retail revenue requirement, Duke Energy Carolinas and the Environmental Intervenors agree that (1) for demand-side management programs, inputs will be allocated between the North Carolina and South Carolina retail jurisdictions based on contributions to system retail peak demand by all system retail customers based on the cost of service study, and (2) for energy efficiency programs and net lost

[1] The Agreement was filed by the Public Staff and Duke, along with the Southern Alliance for Clean Energy, the Environmental Defense Fund, the Natural Resources Defense Council, and the Southern Environmental Law Center (collectively, the Environmental Intervenors).

revenues, inputs will be assigned to the North Carolina and South Carolina retail jurisdictions based on kWh sales to system retail customers from the cost of service study. The program costs allocated under this methodology will be used to calculate the earnings cap.

The Public Staff does not agree with the allocation methodology proposed by Duke and the Environmental Intervenors and instead proposes that (1) for demand-side management programs, inputs will be allocated to the North Carolina retail jurisdiction based on contributions to total system peak demand by all system customers, retail and wholesale, and (2) for energy efficiency programs, inputs should be allocated to the North Carolina retail jurisdiction based on kWh sales to all system customers, retail and wholesale.

Q. HAS THE COMPANY PRESENTED TESTIMONY ON THIS MATTER?

A. Yes. On June 19, 2009, the Company filed the *Settlement Testimony of Stephen M. Farmer* (Settlement Testimony), setting forth its discussion of this issue. Mr. Farmer indicates that the Company believes that because its proposed DSM and EE programs are directed specifically at its retail customers, it is appropriate to recover the costs of those programs only from those customers. Mr. Farmer testifies that this approach is more consistent than that of the Public Staff with G.S. 62-133.9(e), which reads as follows:

The Commission shall determine the appropriate assignment of costs of new demand-side management and energy efficiency measures for electric public utilities and shall assign the costs of the programs only to the class or classes of customers that directly benefit from the programs.

However, Mr. Farmer does not dispute the fact that all customers likely will receive benefits (which he describes as "indirect") from the Company's programs.

Q. WHY DOES THE PUBLIC STAFF DISAGREE WITH THE COMPANY'S POSITION?

A. The Company relies on the language of G.S. 62-133.9(e) to guide its position. In other words, the Company seems to indicate that because that subsection requires the assignment of new DSM and EE program costs only to customer *classes* that directly benefit from the programs (i.e., under the Company's position, participate in the programs), the statute would also logically require the allocation or assignment of those costs only to the *jurisdictions* that benefit (participate) in the same manner. However, there is no language anywhere in the statute that refers to the methods to be used to allocate costs between jurisdictions for North Carolina retail ratemaking purposes. Furthermore, it is a long-standing regulatory practice in this State that jurisdictional allocations and customer class allocations are separate (albeit related) ratemaking procedures for electric public utilities. In this process, jurisdictional allocation methods, formulas, and factors are first applied to system revenues and costs to determine the appropriate change to total North Carolina retail revenues necessary to attain the total North Carolina retail revenue requirement. Only then is the North Carolina retail revenue requirement assigned or allocated to specific customer classes. Therefore, it is not clear that G.S. 62-133.9(e) was intended to address jurisdictional cost allocations at all.

When adopting the rules required to implement Senate Bill 3, the Commission appeared to interpret G.S. 62-133.9(e) consistently with this long-standing regulatory practice. Commission Rule R8-69 - Cost Recovery for Demand-Side Management and Energy Efficiency Measures of Electric Public Utilities - reads as follows, in pertinent part:

> Those expenses approved for recovery shall be allocated to the North Carolina retail jurisdiction consistent with the system benefits provided by the new demand-side management and energy efficiency measures and shall be assigned to customer classes in accordance with G.S. 62-133.9(e) and (f).

In its *Order Adopting Final Rules*, (Rules Order) issued in Docket No. E-100, Sub 113, on February 29, 2008, the Commission stated as follows regarding the issue of cost allocation and paragraph R8-69(b)(1) when addressing a Progress Energy Carolinas, Inc., proposal to in part allocate DSM and EE costs only to retail customers:

> As explained elsewhere herein, issues involving cost allocation are complex. Additionally, the manner in which such issues are ultimately resolved has important consequences. The appropriate resolution of cost allocation issues almost always requires evidentiary proceedings. The present issue is no exception to that general rule. Indeed, the Commission is of the opinion that the record in this rulemaking proceeding is plainly inadequate to allow the Commission to make an informed decision.
>
> Therefore, based upon the foregoing logic and the entire record of this proceeding, the Commission finds and concludes that it should not include a requirement in the provisions of this Rule that would mandate the use of a particular cost allocation methodology and/or require that the costs at issue here be recovered solely from retail customers.
>
> (Rules Order, pp. 114-15).

> If the Commission had believed that the language of G.S. 62-133.9(e) required DSM and EE costs to be allocated to only the retail jurisdictions, it could have simply said so and written its rule accordingly; however, it chose not to do so. Furthermore, the portion of Rule R8-69(b)(1) that both refers to jurisdictional allocation separately from class allocation and states that jurisdictional allocation shall be consistent with "system benefits" remained intact.

Based on all of the factors cited above, therefore, the Public Staff believes that G.S. 62-133.9(e) does not control the jurisdictional allocation of system DSM and EE costs and revenues to North Carolina retail operations. In reaching this conclusion, I note that if the General Assembly's purpose in creating this statutory provision within Senate Bill 3 was to protect certain customer classes from having DSM and EE costs unreasonably allocated to them, it is also evident that the allocation of costs to the wholesale jurisdiction does not advantage or disadvantage any North Carolina retail customer class relative to any other.

Since the Public Staff does not believe that G.S. 62-133.9(e) controls jurisdictional cost allocation, the question is then what system benefits in particular are appropriate for determining jurisdictional cost allocation pursuant to Rule R8-69(b)(1). The Public Staff believes that allocating costs only to the retail jurisdictions, as the Company proposes, does not reflect the system benefits that will arise from implementation of DSM and EE programs. The benefit of a DSM or EE program to the utility system is the long-term reduction in cost of service achieved by the utility as a result of it acquiring DSM and EE resources to serve load growth at a lower cost than would have been incurred had the utility instead been required to serve that load growth through acquisition of supply-side resources. This reduction in cost can typically be expected to accrue to the benefit of all system customers (although perhaps in varying amounts). This benefit should be the basis for determining the jurisdictional allocation of program costs and incentives.

Q. PLEASE ELABORATE.

A. The primary benefits sought by a utility implementing DSM and EE programs are the utility cost reductions that will accrue in some amount to the entire system, including wholesale operations, through the freeing up of existing system capacity and energy resources to serve growth in system demand and energy requirements. The utility is thereby relieved of the burden of serving that growth through the construction or purchase of additional supply-side resources at marginal cost. These are the benefits measured in the Utility Cost Test (UCT) and the Total Resource Cost (TRC) Test – the marginal supply-side resource acquisition and operation costs avoided as a result of implementing a DSM or EE program. Since achieving those system benefits is the essential purpose of the DSM and EE programs, those benefits should be the basis for determining which DSM and EE program costs and incentives are assigned or allocated to the North Carolina retail jurisdiction. Those benefits include benefits accruing to the wholesale jurisdiction.

Q. WHY DO YOU SAY THAT THE COST REDUCTIONS RESULTING FROM UTILITY IMPLEMENTATION OF DSM AND EE PROGRAMS WILL ACCRUE IN SOME AMOUNT TO ALL SYSTEM CUSTOMERS?

A. The costs that are avoided through the operation of cost-effective DSM and EE programs are for the most part demand- and energy-driven generation and transmission costs (both capitalized and expensed). The Company operates its generation and transmission system on a total system basis. Accordingly, for ratemaking purposes, the Commission has traditionally not directly assigned system-level generation and transmission costs to particular jurisdictions, but instead has allocated those costs to jurisdictions on the basis of demand at the system peak and annual energy usage as percentages of total system peak demand and annual energy usage, respectively. Thus, the costs avoided by utilization of DSM and EE, if incurred instead, would likely have been handled for ratemaking purposes by aggregating them with other generation and production costs on a total system basis and then allocating the total to all jurisdictions. This treatment would allocate the costs incurred at the margin to all jurisdictions, not just the jurisdictions in which demand and energy growth had occurred. Therefore, if demand and energy growth at the North Carolina retail level is avoided through the use of DSM and EE programs, the benefits of thereby avoiding supply-side costs at the margin are also spread among all of the jurisdictions.

Q. BASED ON ALL OF THESE FACTORS, WHAT IS THE PUBLIC STAFF'S CONCLUSION REGARDING JURISDICTIONAL COST ALLOCATION?

A. The Public Staff believes that the appropriate and reasonable manner of allocating the costs and incentives reflected in the DSM/EE Rider is to treat those costs and incentives as total system costs, and allocate them across the total system, including the wholesale jurisdiction.

Q. HAS THE PUBLIC STAFF MAINTAINED THIS POSITION THROUGHOUT THIS PROCEEDING?

A. Yes. In my direct testimony filed on June 26, 2008, I stated that in the Public Staff's opinion, the DSM and EE programs proposed by the Company directly benefit both the retail and system wholesale customers and should be allocated accordingly for purposes of a DSM/EE Rider.[2]

Q. HOW DID THE COMPANY RESPOND TO YOUR TESTIMONY?

A. In his rebuttal testimony filed on July 21, 2008, Company witness Farmer stated that the Company did not "oppose or object to" the Public Staff's recommendation regarding jurisdictional cost allocation, and that it was based on "standard cost of service principles ... rooted in sound economic theory." However, Mr. Farmer also noted the language of G.S. 62-133.9(e), and stated that it made the Public Staff's recommendation "problematic."[3]

---

[2] Tr. Vol. 9, pp. 19-20.
[3] Tr. Vol. 5, p. 88.

Q. DO YOU HAVE ANY OTHER COMMENTS REGARDING COST ALLOCATION?

A. Yes. With regard to the allocation of North Carolina retail revenue requirements to customer groups, Paragraph H.9 of the Settlement Terms of the Agreement reads as follows:

> Within the North Carolina retail jurisdiction, customer group revenue requirements applicable to demand-side management and energy efficiency programs will be determined by assigning or allocating the North Carolina retail revenue requirement to the various customer groups. The appropriate allocation or assignment method to be used for these purposes will be determined by the Commission in this proceeding.

On page 11 of his Settlement Testimony, Company witness Farmer states that "[t]he only remaining item of contention [excepting jurisdictional allocation] is that the Public Staff believes it would be more appropriate to allocate revenue requirement on a class-by-class basis rather than on a 'residential' and 'non-residential' basis ...." With this language, Mr. Farmer appears to refer to the topic of whether Duke should be allowed to implement just one non-residential rate, rather than separate rates for each of the individual non-residential customer classes. As shown by Paragraph H.9, the Public Staff is not contesting that Company proposal; instead, the method of allocation to customer groups is the disputed issue. Pursuant to discussions with Duke personnel, the Public Staff understands that Duke plans to clarify this matter prior to the reconvened hearing.

Q. WHAT IS THE PUBLIC STAFF'S POSITION ON THE ISSUE OF ALLOCATION OF NORTH CAROLINA RETAIL REVENUE REQUIREMENTS TO CUSTOMER CLASSES?

A. The Public Staff believes that allocation of North Carolina retail DSM and EE revenue requirements to customer classes is, unlike jurisdictional allocation discussed above, controlled by G.S. 62-133.9(e). Based on the Public Staff's interpretation of that statute, allocation of North Carolina retail DSM and EE revenue requirements to customer classes should be based on the same contribution to system peak load and system energy requirements methodology that it believes is appropriate for jurisdictional cost allocations.

The Public Staff acknowledges that the Commission has recently disagreed with it on this issue, in Docket No. E-2, Sub 931; however, the Public Staff still believes in the correctness of its position, and respectfully requests the Commission to reach a different conclusion in this proceeding.

Q. HAVE YOU PREPARED ANY SCHEDULES SETTING FORTH THE NORTH CAROLINA RETAIL REVENUE REQUIREMENTS CALCULATED IN ACCORDANCE WITH THE PUBLIC STAFF'S POSITION ON COST ALLOCATION?

A. Yes. Maness Exhibit 2, attached to my supplemental testimony, sets forth the estimated North Carolina retail residential and non-residential revenue requirements and DSM/EE riders for each of the four years of the settlement term.

MIRR CALCULATIONS

Q. PLEASE PROVIDE A BRIEF SUMMARY OF THE MIRR CALCULATIONS THAT HAVE PREVIOUSLY BEEN FILED IN THIS PROCEEDING.

A. During the initial hearing held in this proceeding, the Commission asked the Company to provide the internal rate of return it expected to achieve with respect to each DSM and EE program proposed in its application in this subdocket. In response, Company witness Schultz filed, as Confidential Schultz Supplemental Exhibit No. 1, MIRR calculations for each program, as well as for aggregate groupings of residential, non-residential, and total programs.

On February 26, 2009, the Commission issued its *Order Resolving Certain Issues, Requesting Information on Unsettled Matters, and Allowing Proposed Rider to Become Effective Subject to Refund* (Initial Order). As part of the Initial Order, the Commission required Duke to file MIRR calculations for several scenarios. Accordingly, on March 31, 2009, Duke filed its *Response to Order Requesting Information on Unsettled Matters* (Response to Initial Order), in which it presented a modified MIRR calculation for the case set forth in Confidential Schultz Supplemental Exhibit No. 1, as well as MIRR calculations for nine separate scenarios. These MIRR calculations reflected three significant departures from those presented on Confidential Schultz Supplemental Exhibit No. 1: first, existing Interruptible Service (IS) and Standby Generation (SG) customers were excluded from the analysis, consistent with the provisions of the Initial Order; second, a single time period of 18 years was used as the investment period for each program and grouping of programs presented for each scenario; and third, the benefit and cost impacts of the Company's two DSM programs, Power Manager and Power Share, were truncated to four years.

Finally, as noted previously, in the Settlement Hearing Order the Commission has required both Duke and the Public Staff to file MIRR calculations to reflect the terms of the Agreement and their respective positions on how the MIRR calculations should be performed. On June 26, 2009, the Company filed the *MIRR Supporting Testimony of Raiford L. Smith*, along with Smith Exhibit No. 1, which sets forth the Company's calculation of MIRRs consistent with the terms of the Agreement. These calculations continued to reflect the above-described modifications to the calculations introduced in the Company's Response to Initial Order.

Q. HAVE YOU REVIEWED COMPANY WITNESS SMITH'S TESTIMONY AND EXHIBIT?

A. Yes.

Q. DO YOU HAVE ANY COMMENTS REGARDING YOUR REVIEW OF HIS TESTIMONY AND EXHIBIT?

A. Yes. Before I specifically discuss his testimony and exhibit, I would reiterate the comments I made in my affidavit, filed on August 25, 2008. During the Public Staff's investigation of this case, I made a significant effort to generate a rate-of-return-type measurement by which the cost recovery and incentive mechanisms proposed by the Company and the Public Staff could be evaluated from a financial basis. For various reasons, this did not prove possible. A portion of this effort included consideration of the MIRR approach. However, I found that the MIRR calculations for the programs proposed by Duke were too heavily influenced by the overall rate of return used in the formula (7.46%) to provide accurate and reasonably differentiating results. Therefore, because of the difficulty of isolating and quantifying specific internal rates of return for each program, and because of heavy bias toward the overall cost of capital implicit in the MIRR calculation, the Public Staff concluded, and still believes, that a net present value (NPV) margin approach is the most appropriate method by which to estimate the potential profitability of Duke's proposal. I note that Company witness Smith expresses similar concerns regarding the MIRR in his testimony.

Q. WHAT OTHER CONCLUSIONS HAVE YOU DRAWN FROM YOUR REVIEW OF MR. SMITH'S TESTIMONY AND CALCULATIONS?

A. First, Mr. Smith has filed MIRR calculations for the Company's DSM and EE programs at both a system level and a North Carolina retail level of operations. Because of the consistency of the North Carolina retail allocation factors applied to each program's MIRR calculation inputs, the MIRRs calculated on a North Carolina retail basis are virtually equal to those calculated on a system basis.

Second, the system level revenues, program costs, and net lost revenues used by Mr. Smith in his calculations are consistent with the system amounts the Public Staff believes are appropriate under the terms of the Agreement, subject to certain adjustments that I will discuss later in this testimony and some immaterial mathematical differences. However, the North Carolina retail amounts that Mr. Smith has used differ from those the Public Staff believes are appropriate, due to our disagreement regarding the appropriate North Carolina retail allocation factors.

Third, the Public Staff disagrees with some of the inputs and methods that Mr. Smith has used in the calculations of the MIRRs. The inputs and methods were also used by the Company in its scenario MIRR calculations filed in the Response to Initial Order, and have been previously addressed by the Public Staff in its Comments filed on June 12, 2009. Because of the disagreement with the Company on these inputs and methods, the Public Staff's MIRR calculations differ from those of the Company.

Q. WOULD YOU ELABORATE ON THIS THIRD POINT?

A. Yes. I specifically disagree with the following two characteristics of the Company's June 26 MIRR calculations:

(1) The inclusion of net lost revenues as a reduction in cash flows after the end of the 36-month limitation set forth in the Agreement on recovery of such net lost revenues.

(2) The use of an 18-year investment period for every individual program and grouping of programs for purposes of calculating the MIRR.

I am also concerned about the Company's classification of net lost revenues as a cash outflow, rather than a reduction in cash inflows. I will discuss each of these disagreements and concerns below.

First, with regard to the Company's inclusion of net lost revenues in the MIRR calculations, although per the Agreement net lost revenue recovery for measures installed in each vintage year is limited to the first 36 months of net lost revenues experienced, Duke has assumed that net lost revenues are incurred throughout the life of each program. For the reasons set forth in my direct testimony[4] and further explained its June 12, 2009 comments, the Public Staff believes that this assumption is inconsistent with the premise underlying the limitation of net lost revenue recovery to 36 months, namely that net revenues lost as a result of EE or DSM programs or, to be more specific, the impacts on the Company's earnings due to such net lost revenues, do not continue in perpetuity. Thus, the Public Staff believes that for the purpose of the MIRR calculations, net lost revenues reflected

[4] Tr. Vol. 9, pp. 14-17.

as a reduction in cash flows should be limited to the 36-month limitation on net lost revenue recovery agreed to by the Stipulating Parties.

Second, with regard to the Company's use of an 18-year investment period for each program for purposes of the MIRR calculations, the Public Staff agrees that an 18-year period is appropriate for calculating the MIRR for the aggregate of all of the programs set forth by the Company, because such a period reasonably represents the overall length of the life of the first bundle of the Company's aggregate portfolio. In measuring the MIRR for any individual program or group of programs with a shorter life, however, the Public Staff believes that the life of the first bundle for that particular program or group of programs should be used as the investment period, to more accurately set forth the MIRR for that particular program or grouping of programs. By life, I mean the period over which that first bundle is estimated to produce avoided cost benefits, subject to the four-year limitation placed on DSM avoided cost benefits under the terms of the Agreement.

Finally, with regard to whether net lost revenues should be treated as a cash outflow, as the Company has done, or as a reduction in cash inflows, I believe that credible arguments can be made for either perspective, depending on specific circumstances. However, one particular factor, in this proceeding at least, favors the reduction-in-cash-inflow treatment: the Agreement provides for dollar-for-dollar recovery of net lost revenues. This dollar-for-dollar recovery is consistent with using the UCT and the TRC Test as the primary tests to determine whether DSM or EE programs should be implemented. Neither of those tests recognizes net lost revenues as a cost; they are, instead, essentially a "side effect" of implementing certain programs that must be addressed to ensure that the utility is not unduly harmed by the implementation of a particular program. Since the "cure" for the "side effect", the dollar-for-dollar recovery of reasonable net lost revenues, essentially eliminates net lost revenues from the measurement of cash flows, the Public Staff believes that treating net lost revenues as a reduction in cash inflows is more reasonable, thus essentially eliminating them from the MIRR calculation.

Q. THE COMMENTS FILED BY THE PUBLIC STAFF ON JUNE 12 ALSO STATE THAT TRUNCATING THE MIRR CALCULATION FOR DSM PROGRAMS TO FOUR YEARS, AS DONE BY THE COMPANY, ARTIFICIALLY LOWERS THE MIRR PERCENTAGES FOR THOSE PROGRAMS. WHY HAVE YOU NOT RAISED THIS ISSUE WITH REGARD TO THE CALCULATIONS PERFORMED BY MR. SMITH?

A. The Public Staff's June 12, 2009 Comments specifically address the MIRR calculations presented by the Company in its March 31, 2009 Response to Initial Order. As of March 31, the Public Staff considered the Company's position to be the same as it had initially filed in this proceeding: a Save-a-Watt cost revenue calculation mechanism that would be put into place for an indefinite period. However, the Agreement subsequently reached by the Stipulating Parties is for a pilot program with a definite term of only four years; at the end of that term, the parties will essentially be back to square one with regard to the appropriate cost recovery and incentive mechanism. Therefore, the Public Staff does not consider limiting the MIRR calculation for the Company's proposed DSM programs to the term of the Agreement to be unreasonable.[5]

Q. HAVE YOU PERFORMED MIRR CALCULATIONS THAT REFLECT THE PUBLIC STAFF'S POSITIONS?

A. Yes. Maness Exhibit 3 sets forth the MIRRs calculated in accordance with the Public Staff position regarding the amount of net lost revenues to be included and the appropriate investment periods for each program, but with net lost revenues still treated as a cash outflow. Maness Exhibit 4 sets forth MIRRs calculated in the same manner, but with net lost revenues treated as a reduction in cash inflows, as preferred by the Public Staff.

Q. WHAT ARE THE RESULTS OF YOUR CALCULATIONS, AS COMPARED TO THOSE OF THE COMPANY?

A. The table below sets forth the MIRRs calculated by both the Company and the Public Staff:

[5] If the term of the Agreement were longer, the Public Staff would likely recommend that the investment period for DSM programs be longer as well.

PROGRAM/GROUP	SMITH EXHIBIT 1	MANESS EXHIBIT 3	MANESS EXHIBIT 4
Residential Energy Assessments	5.6%	7.8%	8.3%
Residential Smart Saver – AC	2.5%	5.4%	4.7%
Residential Smart Saver – Energy Star	6.6%	10.6%	17.7%
LIEE / Weatherization Assistance	4.8%	6.6%	5.7%
EE Education Program for Schools	5.8%	8.6%	10.2%
Power Manager	12.1%	29.8%	29.8%
Total Residential	6.2%	8.2%	9.0%
Non-Residential Smart Saver - Lighting	6.0%	9.5%	11.1%
Non-Residential Smart Saver - Motors	6.0%	11.5%	14.3%
Non-Residential Smart Saver – Other Prescriptive	6.2%	9.6%	10.6%
Non-Residential Smart Saver – Food Service	5.7%	9.8%	11.3%
Non-Residential Smart Saver – HVAC	3.1%	5.7%	5.2%
Non-Residential Smart Saver – Custom Rebate	3.3%	5.3%	4.6%
Power Share	8.5%	12.2%	12.2%
Total Non-Residential	6.0%	8.3%	8.5%
Total Residential and Non-Residential	6.1%	8.2%	8.7%
Total EE	5.4%	7.9%	8.3%
Total DSM	10.0%	19.5%	19.5%

Q. DOES THIS COMPLETE YOUR SUPPLEMENTAL TESTIMONY?

A. Yes.

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF ESTIMATED ANNUAL DSM/EE RIDERS
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
UTILIZING PUBLIC STAFF RECOMMENDED JURISDICTIONAL AND CUSTOMER GROUP ALLOCATION METHODOLOGIES
(000s Omitted)

Line No.	Item	Year 1 (a)		Year 2 (b)		Year 3 (c)		Year 4 (d)	
1.	RESIDENTIAL CUSTOMERS								
2.	System level energy-related avoided cost revenue requirement - 100% level	$ 31,262	[1]	$ 35,515	[1]	$ 63,088	[1]	$ 101,009	[1]
3.	System level net lost revenue requirement - 100% level	12,150	[1]	26,043	[1]	47,189	[1]	66,706	[1]
4.	Total system-level energy-related revenue requirement - 100% level (L2+L3)	43,412		61,558		110,277		167,715	
5.	N.C. retail kWh sales as a %age of total system kWh sales	0.6838736	[1]	0.6838736	[1]	0.6838736	[1]	0.6838736	[1]
6.	N.C. retail energy-related revenue requirement - 100% level (L4xL5)	29,688		42,098		75,416		114,696	
7.	Residential kWh sales as a %age of N.C. retail kWh sales	0.3872194	[1]	0.3868957	[1]	0.3869225	[1]	0.3872872	[1]
8.	N.C. retail residential energy-related revenue requirement - 100% level (L6xL7)	11,496		16,288		29,180		44,420	
9.	N.C. retail residential energy-related revenue requirement - 85% level (L8x85%)	9,772		13,845		24,803		37,757	
10.	System level demand-related avoided cost revenue requirement - 100% level	17,720	[1]	25,671	[1]	32,954	[1]	33,778	[1]
11.	N.C. retail contribution to peak as a %age of total system peak	0.6992775	[1]	0.6992775	[1]	0.6992775	[1]	0.6992775	[1]
12.	N.C. retail demand-related revenue requirement - 100% level (L10xL11)	12,391		17,951		23,044		23,620	
13.	Residential contribution to peak as a %age of N.C. retail contribution to peak	0.4237293	[1]	0.4237293	[1]	0.4237293	[1]	0.4237293	[1]
14.	N.C. retail residential demand-related revenue requirement - 100% level (L12xL13)	5,250		7,606		9,764		10,008	
15.	N.C. retail residential energy-related revenue requirement - 85% level (L14x85%)	4,463		6,465		8,299		8,507	
16.	Total N.C. retail residential revenue requirement at 85% level (L9+L15)	14,235		20,310		33,102		46,264	
17.	Forecasted N.C. retail residential energy MWH sales	20,745,461	[1]	20,920,652	[1]	21,157,792	[1]	20,902,972	[1]
18.	Estimated residential DSM/EE rider, excluding GRT and regulatory fee - $/kWh (L16/L17)	$ 0.000686		$ 0.000971		$ 0.001565		$ 0.002213	
19.	Estimated residential DSM/EE rider, including GRT and regulatory fee - $/kWh (L18/.9666)	$ 0.000710		$ 0.001005		$ 0.001619		$ 0.002289	

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF ESTIMATED ANNUAL DSM/EE RIDERS
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS - UTILIZING PUBLIC STAFF RECOMMENDED JURISDICTIONAL AND CUSTOMER GROUP ALLOCATION METHODOLOGIES
(000s Omitted)

Line No.	Item	Year 1 (a)		Year 2 (b)		Year 3 (c)		Year 4 (d)	
20.	NON-RESIDENTIAL CUSTOMERS								
21.	System level energy-related avoided cost revenue requirement - 100% level	$ 31,262	[1]	$ 35,515	[1]	$ 63,088	[1]	$ 101,009	[1]
22.	System level net lost revenue requirement - 100% level	12,150	[1]	26,043	[1]	47,189	[1]	66,706	[1]
23.	Total system-level energy-related revenue requirement - 100% level (L21+L22)	43,412		61,558		110,277		167,715	
24.	N.C. retail kWh sales as a %age of total system kWh sales	0.6838736	[1]	0.6838736	[1]	0.6838736	[1]	0.6838736	[1]
25.	N.C. retail energy-related revenue requirement - 100% level (L23xL24)	29,688		42,098		75,416		114,696	
26.	Non-Residential kWh sales as a %age of N.C. retail kWh sales	0.6127807	[1]	0.6131043	[1]	0.6130775	[1]	0.6127128	[1]
27.	N.C. retail non-residential energy-related revenue requirement - 100% level (L25xL26)	18,192		25,810		46,236		70,276	
28.	N.C. retail non-residential energy-related revenue requirement - 85% level (L27x85%)	15,463		21,939		39,301		59,735	
29.	System level demand-related avoided cost revenue requirement - 100% level	17,720	[1]	25,671	[1]	32,954	[1]	33,778	[1]
30.	N.C. retail contribution to peak as a %age of total system peak	0.6992775	[1]	0.6992775	[1]	0.6992775	[1]	0.6992775	[1]
31.	N.C. retail demand-related revenue requirement - 100% level (L29xL30)	12,391		17,951		23,044		23,620	
32.	Non-Residential contribution to peak as a %age of N.C. retail contribution to peak	0.5762707	[1]	0.5762707	[1]	0.5762707	[1]	0.5762707	[1]
33.	N.C. retail non-residential demand-related revenue requirement - 100% level (L31xL32)	7,141		10,345		13,280		13,612	
34.	N.C. retail non-residential energy-related revenue requirement - 85% level (L33x85%)	6,070		8,793		11,288		11,570	
35.	Total N.C. retail non-residential revenue requirement at 85% level (L28+L34)	21,533		30,732		50,589		71,305	
36.	Forecasted N.C. retail non-residential energy MWH sales	32,830,016	[1]	33,152,448	[1]	33,524,460	[1]	33,069,815	[1]
37.	Estimated non-residential DSM/EE rider, excluding GRT and regulatory fee - $/kWh (L35/L36)	$ 0.000656		$ 0.000927		$ 0.001509		$ 0.002156	
38.	Estimated non-residential DSM/EE rider, including GRT and regulatory fee - $/kWh (L37/.9666)	$ 0.000679		$ 0.000959		$ 0.001561		$ 0.002230	

[1] Provided by the Company at the Public Staff's request or calculated from information provided by the Company at the Public Staff's request.

Maness Exhibit 3
Schedule 1

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS INCREASE IN CASH OUTFLOWS
SYSTEM LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR	Present Value of Cash Outflows	Cash Flows per Settlement Year 1	2	3	4	5	6
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1.	RESIDENTIAL PROGRAMS									
2.	Residential Energy Assessments:									
3.	Revenues	[1]			$ 4,213	$ 6,073	$ 12,855	$ 20,329	$ 8,270	$ 5,075
4.	Program costs	[1]			2,810	3,083	6,231	9,315	-	-
5.	Net lost revenues	[2]			1,359	2,920	6,150	9,683	8,270	5,075
6.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				43	69	474	1,332	-	-
7.	Split cash inflows and PV of cash outflows, with MIRR	[3]	7.6%	$ (42,371)	$ 4,213	$ 6,073	$ 12,855	$ 20,329	$ 8,270	$ 5,075
8.	Smart Saver for Residential Customers - AC:									
9.	Revenues	[1]			$ 1,222	$ 1,680	$ 3,820	$ 6,499	$ 1,373	$ 872
10.	Program costs	[1]			1,866	2,179	4,690	7,519	-	-
11.	Net lost revenues	[2]			180	405	912	1,573	1,373	872
12.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(824)	(904)	(1,781)	(2,593)	-	-
13.	Split cash inflows and PV of cash outflows, with MIRR	[3]	5.4%	$ (16,997)	$ 1,222	$ 1,680	$ 3,820	$ 6,499	$ 1,373	$ 872
14.	Smart Saver for Residential Customers - Energy Star:									
15.	Revenues	[1]			$ 12,003	$ 17,276	$ 17,402	$ 19,903	$ 7,250	$ 4,316
16.	Program costs	[1]			3,900	4,200	2,573	3,577	-	-
17.	Net lost revenues	[2]			4,192	8,910	12,014	11,923	7,250	4,316
18.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				3,911	4,166	2,815	4,402	-	-
19.	Split cash inflows and PV of cash outflows, with MIRR	[3]	10.6%	$ (50,125)	$ 12,003	$ 17,276	$ 17,402	$ 19,903	$ 7,250	$ 4,316
20.	Low Income Energy Efficiency and Weatherization Assistance:									
21.	Revenues	[1]			$ 5,667	$ 7,892	$ 13,771	$ 20,140	$ 7,889	$ 4,723
22.	Program costs	[1]			2,706	3,900	9,292	18,076	-	-
23.	Net lost revenues	[2]			1,939	4,000	7,220	9,820	7,889	4,723
24.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,023	(7)	(2,741)	(7,757)	-	-
25.	*Split cash inflows and PV of cash outflows, with MIRR*	[3]	6.6%	$ (53,961)	$ 5,667	$ 7,892	$ 13,771	$ 20,140	$ 7,889	$ 4,723
26.	Energy Efficiency Education Program for Schools:									
27.	Revenues	[1]			$ 8,620	$ 13,575	$ 30,731	$ 51,062	$ 18,743	$ 11,600
28.	Program costs	[1]			3,950	5,660	13,711	23,333	-	-
29.	Net lost revenues	[2]			2,775	6,142	13,359	21,774	18,743	11,600
30.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,896	1,773	3,662	5,955	-	-
31.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.6%	$ (92,732)	$ 8,620	$ 13,575	$ 30,731	$ 51,062	$ 18,743	$ 11,600
32.	Power Manager:									
33.	Revenues	[1]			$ 13,105	$ 13,432	$ 13,768	$ 14,112	$ -	$ -
34.	Program costs	[1]			6,367	6,367	6,367	6,367	-	-
35.	Net lost revenues	[2]			-	-	-	-	-	-
36.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				6,737	7,065	7,401	7,745	-	-
37.	Split cash inflows and PV of cash outflows, with MIRR	[3]	29.8%	$ (21,345)	$ 13,105	$ 13,432	$ 13,768	$ 14,112	$ -	$ -
38.	Total residential programs:									
39.	Revenues	[1]			$ 44,830	$ 59,928	$ 92,348	$ 132,044	$ 43,526	$ 26,585
40.	Program costs	[1]			21,600	25,389	42,864	66,187	-	-
41.	Net lost revenues	[2]			10,444	22,377	39,655	54,773	43,526	26,585
42.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				12,786	12,162	9,829	9,084	-	-
43..	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.2%	$ (277,531)	$ 44,830	$ 59,928	$ 92,348	$ 132,044	$ 43,526	$ 26,585

Maness Exhibit 3
Schedule 1

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS INCREASE IN CASH OUTFLOWS
SYSTEM LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR	Present Value of Cash Outflows	Cash Flows per Settlement Year 1	2	3	4	5	6
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
44.	NON-RESIDENTIAL PROGRAMS									
45.	Smart Saver for Non-Residential Customers - Lighting:									
46.	Revenues	[1]			$ 4,891	$ 6,332	$ 13,035	$ 20,413	$ 4,772	$ 2,827
47.	Program costs	[1]			2,401	2,596	5,190	7,749	-	-
48.	Net lost revenues	[2]			848	1,821	3,581	5,748	4,772	2,827
49.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,642	1,914	4,264	6,917	-	-
50.	Split cash inflows and PV of cash outflows, with MIRR	[3]	9.5%	$ (29,204)	$ 4,891	$ 6,332	$ 13,035	$ 20,413	$ 4,772	$ 2,827
51.	Smart Saver for Non-Residential Customers - Motors:									
52.	Revenues	[1]			$ 217	$ 284	$ 566	$ 878	$ 155	$ 87
53.	Program costs	[1]			67	77	148	219	-	-
54.	Net lost revenues	[2]			26	57	120	187	155	87
55.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				124	150	298	471	-	-
56.	Split cash inflows and PV of cash outflows, with MIRR	[3]	11.5%	$ (887)	$ 217	$ 284	$ 566	$ 878	$ 155	$ 87
57.	Smart Saver for Non-Residential Customers - Other Prescriptive:									
58.	Revenues	[1]			$ 2,974	$ 3,851	$ 8,320	$ 13,170	$ 2,061	$ 1,144
59.	Program costs	[1]			1,535	1,864	4,048	6,422	-	-
60.	Net lost revenues	[2]			359	762	1,611	2,475	2,061	1,144
61.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,080	1,226	2,661	4,272	-	-
62.	Split cash inflows and PV of cash outflows, with MIRR	[3]	9.6%	$ (17,450)	$ 2,974	$ 3,851	$ 8,320	$ 13,170	$ 2,061	$ 1,144
63.	Smart Saver for Non-Residential Customers - Energy Star Food Service Products:									
64.	Revenues	[1]			$ 100	$ 179	$ 470	$ 837	$ 175	$ 104
65.	Program costs	[1]			56	87	216	363	-	-
66.	Net lost revenues	[2]			15	39	105	201	175	104
67.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				29	52	149	273	-	-
68.	Split cash inflows and PV of cash outflows, with MIRR	[3]	9.8%	$ (1,047)	$ 100	$ 179	$ 470	$ 837	$ 175	$ 104
69.	Smart Saver for Non-Residential Customers - HVAC:									
70.	Revenues	[1]			$ 231	$ 287	$ 609	$ 946	$ 165	$ 93
71.	Program costs	[1]			325	351	709	1,058	-	-
72.	Net lost revenues	[2]			27	58	125	197	165	93
73.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(121)	(122)	(226)	(310)	-	-
74.	Split cash inflows and PV of cash outflows, with MIRR	[3]	5.7%	$ (2,471)	$ 231	$ 287	$ 609	$ 946	$ 165	$ 93
75.	Smart Saver for Non-Residential Customers - Custome Rebate:									
76.	Revenues	[1]			$ 3,275	$ 4,129	$ 8,698	$ 13,540	$ 2,615	$ 1,463
77.	Program costs	[1]			4,667	5,032	10,021	14,887	-	-
78.	Net lost revenues	[2]			432	928	1,993	3,125	2,615	1,463
79.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(1,825)	(1,832)	(3,315)	(4,472)	-	-
80.	Split cash inflows and PV of cash outflows, with MIRR	[3]	5.3%	$ (35,871)	$ 3,275	$ 4,129	$ 8,698	$ 13,540	$ 2,615	$ 1,463
81.	Power Share:									
82.	Revenues	[1]			$ 4,616	$ 12,239	$ 19,186	$ 19,666	$ -	$ -
83.	Program costs	[1]			4,729	10,422	15,783	15,766	-	-
84.	Net lost revenues	[2]			-	-	-	-	-	-
85.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(114)	1,817	3,403	3,899	-	-
86.	Split cash inflows and PV of cash outflows, with MIRR	[3]	12.2%	$ (37,969)	$ 4,616	$ 12,239	$ 19,186	$ 19,666	$ -	$ -

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS INCREASE IN CASH OUTFLOWS
SYSTEM LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR (a)	Present Value of Cash Outflows (b)	Cash Flows per Settlement Year 1 (c)	2 (d)	3 (e)	4 (f)	5 (g)	6 (h)
87.	Total Non-Residential Programs:									
88.	Revenues	[1]			$ 16,303	$ 27,301	$ 50,884	$ 69,449	$ 9,944	$ 5,718
89.	Program costs	[1]		-	13,780	20,431	36,115	46,465	-	-
90.	Net lost revenues	[2]			1,706	3,666	7,535	11,933	9,944	5,718
91.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				817	3,204	7,235	11,051	-	-
92.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.3%	$ (124,899)	$ 16,303	$ 27,301	$ 50,884	$ 69,449	$ 9,944	$ 5,718
93.	Total Residential and Non-Residential Programs:									
94.	Revenues	[1]			$ 61,133	$ 87,229	$ 143,232	$ 201,493	$ 53,469	$ 32,303
95.	Revenue credit in year 5 due to cap								(1,956)	
96.	Program costs	[1]			35,380	45,819	78,978	114,652	-	-
97.	Net lost revenues	[2]			12,150	26,043	47,189	66,706	53,469	32,303
98.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				13,602	15,366	17,064	20,135	(1,956)	-
99.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.2%	$ (402,430)	$ 61,133	$ 87,229	$ 143,232	$ 201,493	$ 51,513	$ 32,303
100.	Total EE Programs:									
101.	Revenues	[1]			$ 43,412	$ 61,558	$ 110,277	$ 167,715	$ 53,469	$ 32,303
102.	Program costs	[1]			24,284	29,030	56,828	92,518	-	-
103.	Net lost revenues	[2]			12,150	26,043	47,189	66,706	53,469	32,303
104.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				6,979	6,485	6,260	8,491	-	-
105.	Split cash inflows and PV of cash outflows, with MIRR	[3]	7.9%	$ (343,117)	$ 43,412	$ 61,558	$ 110,277	$ 167,715	$ 53,469	$ 32,303
106.	Total DSM Programs									
107.	Revenues	[1]			$ 17,720	$ 25,671	$ 32,954	$ 33,778	$ -	$ -
108.	Program costs	[1]			11,096	16,789	22,150	22,134	-	-
109.	Net lost revenues	[2]			-	-	-	-	-	-
110.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				6,624	8,882	10,804	11,644	-	-
111.	Split cash inflows and PV of cash outflows, with MIRR	[3]	19.5%	$ (59,314)	$ 17,720	$ 25,671	$ 32,954	$ 33,778	$ -	$ -

[1] Revenues and program costs determined per terms of Settlement.
[2] Net lost revenues estimated to impact Company for 36 months, consistent with treatment adopted per Settlement.
[3] (a) Net lost revenues treated as increase in cash outflow.
(b) MIRRs for individual programs calculated using applicable program lives (ranging from 4 to 18 years);
MIRRs for aggregated programs calculated using aggregate program life of 4 years (DSM) and 18 years (EE, Residential, Non-Residential, and Total).

Maness Exhibit 3
Schedule 2

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS INCREASE IN CASH OUTFLOWS
N.C. RETAIL LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR (a)	Present Value of Cash Outflows (b)	Cash Flows per Settlement Year 1 (c)	2 (d)	3 (e)	4 (f)	5 (g)	6 (h)
1.	RESIDENTIAL PROGRAMS									
2.	Residential Energy Assessments:									
3.	Revenues	[1]			$ 2,881	$ 4,153	$ 8,792	$ 13,903	$ 5,656	$ 3,471
4.	Program costs	[1]			1,922	2,106	4,261	6,370	-	-
5.	Net lost revenues	[2]			930	1,997	4,206	6,622	5,656	3,471
6.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				30	48	324	911	-	-
7.	Split cash inflows and PV of cash outflows, with MIRR	[3]	7.8%	$ (28,978)	$ 2,881	$ 4,153	$ 8,792	$ 13,903	$ 5,656	$ 3,471
8.	Smart Saver for Residential Customers - AC:									
9.	Revenues	[1]			$ 836	$ 1,149	$ 2,613	$ 4,444	$ 939	$ 596
10.	Program costs	[1]			1,276	1,490	3,207	5,142	-	-
11.	Net lost revenues	[2]			123	277	623	1,075	939	596
12.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(564)	(618)	(1,218)	(1,773)	-	-
13.	Split cash inflows and PV of cash outflows, with MIRR	[3]	5.4%	$ (11,624)	$ 836	$ 1,149	$ 2,613	$ 4,444	$ 939	$ 596
14.	Smart Saver for Residential Customers - Energy Star:									
15.	Revenues	[1]			$ 8,208	$ 11,815	$ 11,901	$ 13,611	$ 4,958	$ 2,952
16.	Program costs	[1]			2,667	2,872	1,759	2,446	-	-
17.	Net lost revenues	[2]			2,867	6,094	8,216	8,154	4,958	2,952
18.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				2,674	2,849	1,925	3,010	-	-
19.	Split cash inflows and PV of cash outflows, with MIRR	[3]	10.6%	$ (34,279)	$ 8,208	$ 11,815	$ 11,901	$ 13,611	$ 4,958	$ 2,952
20.	Low Income Energy Efficiency and Weatherization Assistance:									
21.	Revenues	[1]			$ 3,876	$ 5,397	$ 9,417	$ 13,773	$ 5,395	$ 3,230
22.	Program costs	[1]			$ 1,851	$ 2,667	$ 6,354	$ 12,362	$ -	$ -
23.	Net lost revenues	[2]			$ 1,326	$ 2,735	$ 4,937	$ 6,716	$ 5,395	$ 3,230
24.	*Net annual cash flows (Revenues - Program costs - Net Lost Revenues)*				*699*	*(5)*	*(1,875)*	*(5,305)*	-	-
25.	Split cash inflows and PV of cash outflows, with MIRR	[3]	6.6%	$ (36,903)	$ 3,876	$ 5,397	$ 9,417	$ 13,773	$ 5,395	$ 3,230
26.	Energy Efficiency Education Program for Schools:									
27.	Revenues	[1]			$ 5,895	$ 9,283	$ 21,016	$ 34,920	$ 12,818	$ 7,933
28.	Program costs	[1]			$ 2,701	$ 3,871	$ 9,376	$ 15,957	$ -	$ -
29.	Net lost revenues	[2]			$ 1,897	$ 4,200	$ 9,136	$ 14,891	$ 12,818	$ 7,933
30.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,297	1,212	2,504	4,072	-	-
31.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.6%	$ (63,417)	$ 5,895	$ 9,283	$ 21,016	$ 34,920	$ 12,818	$ 7,933
32.	Power Manager:									
33.	Revenues	[1]			$ 9,164	$ 9,393	$ 9,628	$ 9,868	$ -	$ -
34.	Program costs	[1]			$ 4,452	$ 4,452	$ 4,452	$ 4,452	$ -	$ -
35.	Net lost revenues	[2]			$ -	$ -	$ -	$ -	$ -	$ -
36.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				4,711	4,940	5,175	5,416	-	-
37.	Split cash inflows and PV of cash outflows, with MIRR	[3]	29.8%	$ (14,926)	$ 9,164	$ 9,393	$ 9,628	$ 9,868	$ -	$ -
38.	Total residential programs:									
39.	Revenues	[1]			$ 30,860	$ 41,190	$ 63,366	$ 90,519	$ 29,766	$ 18,181
40.	Program costs	[1]			14,870	17,461	29,411	46,729	-	-
41.	Net lost revenues	[2]			7,143	15,303	27,119	37,458	29,766	18,181
42.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				8,848	8,426	6,836	6,332	-	-
43.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.2%	$ (190,125)	$ 30,860	$ 41,190	$ 63,366	$ 90,519	$ 29,766	$ 18,181

Manese Exhibit 3
Schedule 2

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS INCREASE IN CASH OUTFLOWS
N.C. RETAIL LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR (a)	Present Value of Cash Outflows (b)	Cash Flows per Settlement Year 1 (c)	2 (d)	3 (e)	4 (f)	5 (g)	6 (h)
44.	NON-RESIDENTIAL PROGRAMS									
45.	Smart Saver for Non-Residential Customers - Lighting:									
46.	Revenues	[1]			$ 3,345	$ 4,330	$ 8,914	$ 13,960	$ 3,264	$ 1,933
47.	Program costs	[1]			$ 1,642	$ 1,776	$ 3,549	$ 5,299	$ -	$ -
48.	Net lost revenues	[2]			$ 580	$ 1,246	$ 2,449	$ 3,931	$ 3,264	$ 1,933
49.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,123	1,309	2,916	4,730	-	-
50.	Split cash inflows and PV of cash outflows, with MIRR	[3]	9.5%	$ (19,972)	$ 3,345	$ 4,330	$ 8,914	$ 13,960	$ 3,264	$ 1,933
51.	Smart Saver for Non-Residential Customers - Motors:									
52.	Revenues	[1]			$ 148	$ 194	$ 387	$ 600	$ 106	$ 59
53.	Program costs	[1]			$ 46	$ 53	$ 101	$ 150	$ -	$ -
54.	Net lost revenues	[2]			$ 18	$ 39	$ 82	$ 128	$ 106	$ 59
55.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				85	103	204	322	-	-
56.	Split cash inflows and PV of cash outflows, with MIRR	[3]	11.5%	$ (607)	$ 148	$ 194	$ 387	$ 600	$ 106	$ 59
57.	Smart Saver for Non-Residential Customers - Other Prescriptive:									
58.	Revenues	[1]			$ 2,034	$ 2,634	$ 5,690	$ 9,006	$ 1,410	$ 782
59.	Program costs	[1]			$ 1,050	$ 1,275	$ 2,768	$ 4,392	$ -	$ -
60.	Net lost revenues	[2]			$ 245	$ 521	$ 1,102	$ 1,693	$ 1,410	$ 782
61.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				739	838	1,820	2,922	-	-
62.	Split cash inflows and PV of cash outflows, with MIRR	[3]	9.8%	$ (11,934)	$ 2,034	$ 2,634	$ 5,690	$ 9,006	$ 1,410	$ 782
63.	Smart Saver for Non-Residential Customers - Energy Star Food Service Products:									
64.	Revenues	[1]			$ 68	$ 122	$ 322	$ 572	$ 120	$ 71
65.	Program costs	[1]			$ 38	$ 60	$ 148	$ 248	$ -	$ -
66.	Net lost revenues	[2]			$ 10	$ 27	$ 72	$ 137	$ 120	$ 71
67.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				20	36	102	187	-	-
68.	Split cash inflows and PV of cash outflows, with MIRR	[3]	9.8%	$ (716)	$ 68	$ 122	$ 322	$ 572	$ 120	$ 71
69.	Smart Saver for Non-Residential Customers - HVAC:									
70.	Revenues	[1]			$ 158	$ 196	$ 417	$ 647	$ 113	$ 63
71.	Program costs	[1]			$ 222	$ 240	$ 485	$ 724	$ -	$ -
72.	Net lost revenues	[2]			$ 18	$ 40	$ 86	$ 135	$ 113	$ 63
73.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(83)	(84)	(154)	(212)	-	-
74.	Split cash inflows and PV of cash outflows, with MIRR	[3]	5.7%	$ (1,690)	$ 158	$ 196	$ 417	$ 647	$ 113	$ 63
75.	Smart Saver for Non-Residential Customers - Custome Rebate:									
76.	Revenues	[1]			$ 2,239	$ 2,824	$ 5,949	$ 9,259	$ 1,788	$ 1,001
77.	Program costs	[1]			$ 3,192	$ 3,442	$ 6,853	$ 10,181	$ -	$ -
78.	Net lost revenues	[2]			$ 295	$ 635	$ 1,363	$ 2,137	$ 1,788	$ 1,001
79.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(1,248)	(1,253)	(2,267)	(3,058)	-	-
80.	Split cash inflows and PV of cash outflows, with MIRR	[3]	5.3%	$ (24,531)	$ 2,239	$ 2,824	$ 5,949	$ 9,259	$ 1,788	$ 1,001
81.	Power Share:									
82.	Revenues	[1]			$ 3,228	$ 8,558	$ 13,416	$ 13,752	$ -	$ -
83.	Program costs	[1]			$ 3,307	$ 7,288	$ 11,037	$ 11,025	$ -	$ -
84.	Net lost revenues	[2]			$ -	$ -	$ -	$ -	$ -	$ -
85.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(79)	1,270	2,380	2,727	-	-
86.	Split cash inflows and PV of cash outflows, with MIRR	[3]	12.2%	$ (26,551)	$ 3,228	$ 8,558	$ 13,416	$ 13,752	$ -	$ -

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS INCREASE IN CASH OUTFLOWS
N.C. RETAIL LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR	Present Value of Cash Outflows	Cash Flows per Settlement Year 1	2	3	4	5	6
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
87.	Total Non-Residential Programs:									
88.	Revenues	[1]			$ 11,220	$ 18,859	$ 35,094	$ 47,797	$ 6,800	$ 3,910
89.	Program costs	[1]			9,497	14,132	24,941	32,019	-	-
90.	Net lost revenues	[2]			1,166	2,507	5,153	8,161	6,800	3,910
91.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				557	2,219	5,000	7,617	-	-
92.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.3%	$ (86,000)	$ 11,220	$ 18,859	$ 35,094	$ 47,797	$ 6,800	$ 3,910
93.	Total Residential and Non-Residential Programs:									
94.	Revenues	[1]			$ 42,080	$ 60,049	$ 98,460	$ 138,316	$ 36,566	$ 22,091
95.	Revenue credit in year 5 due to cap								(1,956)	
96.	Program costs	[1]			24,366	31,593	54,352	78,748	-	-
97.	Net lost revenues	[2]			8,309	17,810	32,272	45,619	36,566	22,091
98.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				9,404	10,645	11,836	13,949	(1,956)	-
99.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.2%	$ (276,125)	$ 42,080	$ 60,049	$ 98,460	$ 138,316	$ 34,610	$ 22,091
100.	Total EE Programs:									
101.	Revenues	[1]			$ 29,689	$ 42,098	$ 75,416	$ 114,696	$ 36,566	$ 22,091
102.	Program costs	[1]			16,607	19,853	38,863	63,271	-	-
103.	Net lost revenues	[2]			8,309	17,810	32,272	45,619	36,566	22,091
104.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				4,773	4,435	4,281	5,806	-	-
105.	Split cash inflows and PV of cash outflows, with MIRR	[3]	7.9%	$ (234,848)	$ 29,689	$ 42,098	$ 75,416	$ 114,696	$ 36,566	$ 22,091
106.	Total DSM Programs									
107.	Revenues	[1]			$ 12,391	$ 17,951	$ 23,044	$ 23,620	$ -	$ -
108.	Program costs	[1]			7,759	11,740	15,489	15,477	-	-
109.	Net lost revenues	[2]			-	-	-	-	-	-
110.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				4,632	6,211	7,555	8,143	-	-
111.	Split cash inflows and PV of cash outflows, with MIRR	[3]	19.5%	$ (41,477)	$ 12,391	$ 17,951	$ 23,044	$ 23,620	$ -	$ -

[1] Revenues and program costs determined per terms of Settlement.
[2] Net lost revenues estimated to impact Company for 36 months, consistent with treatment adopted per Settlement.
[3] (a) Net lost revenues treated as increase in cash outflow.
(b) MIRRs for individual programs calculated using applicable program lives (ranging from 4 to 18 years);
MIRRs for aggregated programs calculated using aggregate program life of 4 years (DSM) and 18 years (EE, Residential, Non-Residential, and Total).

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS REDUCTION IN CASH INFLOWS
SYSTEM LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR	Present Value of Cash Outflows	Cash Flows per Settlement Year 1	2	3	4	5	6
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1.	*RESIDENTIAL PROGRAMS*									
2.	Residential Energy Assessments:									
3.	Revenues	[1]			$ 4,213	$ 6,073	$ 12,855	$ 20,329	$ 8,270	$ 5,075
4.	Program costs	[1]			2,810	3,083	6,231	9,315	-	-
5.	Net lost revenues	[2]			1,359	2,920	6,150	9,663	8,270	5,075
6.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				43	69	474	1,332	-	-
7.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.3%	$ (17,291)	$ 2,854	$ 3,152	$ 6,705	$ 10,846	$ -	$ -
8.	Smart Saver for Residential Customers - AC:									
9.	Revenues	[1]			$ 1,222	$ 1,680	$ 3,820	$ 6,499	$ 1,373	$ 872
10.	Program costs	[1]			1,866	2,179	4,690	7,519	-	-
11.	Net lost revenues	[2]			180	405	912	1,573	1,373	872
12.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(824)	(904)	(1,781)	(2,593)	-	-
13.	Split cash inflows and PV of cash outflows, with MIRR	[3]	4.7%	$ (13,042)	$ 1,042	$ 1,276	$ 2,909	$ 4,926	$ -	$ -
14.	Smart Saver for Residential Customers - Energy Star:									
15.	Revenues	[1]			$ 12,003	$ 17,276	$ 17,402	$ 19,903	$ 7,250	$ 4,316
16.	Program costs	[1]			3,900	4,200	2,573	3,577	-	-
17.	Net lost revenues	[2]			4,192	8,910	12,014	11,923	7,250	4,316
18.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				3,911	4,166	2,815	4,402	-	-
19.	Split cash inflows and PV of cash outflows, with MIRR	[3]	17.7%	$ (12,022)	$ 7,811	$ 8,366	$ 5,388	$ 7,979	$ -	$ -
20.	Low Income Energy Efficiency and Weatherization Assistance:									
21.	Revenues	[1]			$ 5,667	$ 7,892	$ 13,771	$ 20,140	$ 7,889	$ 4,723
22.	Program costs	[1]			2,706	3,900	9,292	18,076	-	-
23.	Net lost revenues	[2]			1,939	4,000	7,220	9,820	7,889	4,723
24.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,023	(7)	(2,741)	(7,757)	-	-
25.	Split cash inflows and PV of cash outflows, with MIRR	[3]	5.7%	$ (26,939)	$ 3,729	$ 3,892	$ 6,551	$ 10,319	$ -	$ -
26.	*Energy Efficiency Education Program for Schools:*									
27.	Revenues	[1]			$ 8,620	$ 13,575	$ 30,731	$ 51,062	$ 18,743	$ 11,600
28.	Program costs	[1]			3,950	5,660	13,711	23,333	-	-
29.	Net lost revenues	[2]			2,775	6,142	13,359	21,774	18,743	11,600
30.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,896	1,773	3,662	5,955	-	-
31.	*Split cash inflows and PV of cash outflows, with MIRR*	[3]	10.2%	$ (37,124)	$ 5,846	$ 7,433	$ 17,372	$ 29,288	$ -	$ -
32.	Power Manager:									
33.	Revenues	[1]			$ 13,105	$ 13,432	$ 13,768	$ 14,112	$ -	$ -
34.	Program costs	[1]			6,367	6,367	6,367	6,367	-	-
35.	*Net lost revenues*	[2]			-	-	-	-	-	-
36.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				6,737	7,065	7,401	7,745	-	-
37.	Split cash inflows and PV of cash outflows, with MIRR	[3]	29.8%	$ (21,345)	$ 13,105	$ 13,432	$ 13,768	$ 14,112	$ -	$ -
38.	Total residential programs:									
39.	*Revenues*	[1]			$ 44,830	$ 59,928	$ 92,348	$ 132,044	$ 43,526	$ 26,585
40.	Program costs	[1]			21,600	25,389	42,864	68,187	-	-
41.	Net lost revenues	[2]			10,444	22,377	39,655	54,773	43,526	26,585
42.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				12,786	12,162	9,829	9,084	-	-
43.	Split cash inflows and PV of cash outflows, with MIRR	[3]	9.0%	$ (127,763)	$ 34,386	$ 37,551	$ 52,693	$ 77,271	$ -	$ -

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS REDUCTION IN CASH INFLOWS
SYSTEM LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR	Present Value of Cash Outflows	Cash Flows per Settlement Year 1	2	3	4	5	6
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
44.	NON-RESIDENTIAL PROGRAMS									
45.	Smart Saver for Non-Residential Customers - Lighting:									
46.	Revenues	[1]			$ 4,891	$ 6,332	$ 13,035	$ 20,413	$ 4,772	$ 2,827
47.	Program costs	[1]			2,401	2,596	5,190	7,749	-	-
48.	Net lost revenues	[2]			848	1,821	3,581	5,748	4,772	2,827
49.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,642	1,914	4,264	6,917	-	-
50.	Split cash inflows and PV of cash outflows, with MIRR	[3]	11.1%	$ (14,475)	$ 4,043	$ 4,510	$ 9,454	$ 14,666	$ -	$ -
51.	*Smart Saver for Non-Residential Customers - Motors:*									
52.	Revenues	[1]			$ 217	$ 284	$ 566	$ 878	$ 155	$ 87
53.	Program costs	[1]			67	77	148	219	-	-
54.	Net lost revenues	[2]			26	57	120	187	155	87
55.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				124	150	298	471	-	-
56.	Split cash inflows and PV of cash outflows, with MIRR	[3]	14.3%	$ (412)	$ 191	$ 227	$ 446	$ 691	$ -	$ -
57.	Smart Saver for Non-Residential Customers - Other Prescriptive:									
58.	Revenues	[1]			$ 2,974	$ 3,851	$ 8,320	$ 13,170	$ 2,061	$ 1,144
59.	Program costs	[1]			1,535	1,864	4,048	6,422	-	-
60.	Net lost revenues	[2]			359	762	1,611	2,475	2,061	1,144
61.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,080	1,226	2,661	4,272	-	-
62.	Split cash inflows and PV of cash outflows, with MIRR	[3]	10.6%	$ (11,121)	$ 2,616	$ 3,090	$ 6,709	$ 10,694	$ -	$ -
63.	Smart Saver for Non-Residential Customers - Energy Star Food Service Products:									
64.	Revenues	[1]			$ 100	$ 179	$ 470	$ 837	$ 175	$ 104
65.	Program costs	[1]			56	87	216	363	-	-
66.	*Net lost revenues*	[2]			15	39	*105*	*201*	*175*	*104*
67.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				29	52	149	273	-	-
68.	Split cash inflows and PV of cash outflows, with MIRR	[3]	11.3%	$ (574)	$ 85	$ 139	$ 366	$ 636	$ -	$ -
69.	Smart Saver for Non-Residential Customers - HVAC:									
70.	Revenues	[1]			$ 231	$ 287	$ 609	$ 946	$ 165	$ 93
71.	*Program costs*	[1]			325	351	709	1,058	-	-
72.	Net lost revenues	[2]			27	58	125	197	165	93
73.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(121)	(122)	(226)	(310)	-	-
74.	Split cash inflows and PV of cash outflows, with MIRR	[3]	5.2%	$ (1,971)	$ 204	$ 229	$ 484	$ 748	$ -	$ -
75.	Smart Saver for Non-Residential Customers - *Custome Rebate:*									
76.	Revenues	[1]			$ 3,275	$ 4,129	$ 8,698	$ 13,540	$ 2,615	$ 1,463
77.	Program costs	[1]			4,667	5,032	10,021	14,887	-	-
78.	Net lost revenues	[2]			432	928	1,993	3,125	2,615	1,463
79.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(1,825)	(1,832)	(3,315)	(4,472)	-	-
80.	Split cash inflows and PV of cash outflows, with MIRR	[3]	4.6%	$ (27,941)	$ 2,843	$ 3,201	$ 6,705	$ 10,415	$ -	$ -
81.	Power Share:									
82.	Revenues	[1]			$ 4,616	$ 12,239	$ 19,186	$ 19,666	$ -	$ -
83.	Program costs	[1]			4,729	10,422	15,783	15,766	-	-
84.	Net lost revenues	[2]			-	-	-	-	-	-
85.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(114)	1,817	3,403	3,899	-	-
86.	*Split cash inflows and PV of cash outflows, with MIRR*	[3]	*12.2%*	*$ (37,969)*	*$ 4,616*	*$ 12,239*	*$ 19,186*	*$ 19,666*	*$ -*	*$ -*

Maness Exhibit 4
Schedule 1

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS REDUCTION IN CASH INFLOWS
SYSTEM LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR (a)	Present Value of Cash Outflows (b)	Cash Flows per Settlement Year 1 (c)	2 (d)	3 (e)	4 (f)	5 (g)	6 (h)
87.	Total Non-Residential Programs:									
88.	Revenues	[1]			$ 16,303	$ 27,301	$ 50,884	$ 69,449	$ 9,944	$ 5,718
89.	Program costs	[1]			13,780	20,431	36,115	46,465	-	-
90.	Net lost revenues	[2]			1,706	3,666	7,535	11,933	9,944	5,718
91.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				817	3,204	7,235	11,051	-	-
92.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.5%	$ (94,484)	$ 14,597	$ 23,635	$ 43,349	$ 57,516	$ -	$ -
93.	Total Residential and Non-Residential Programs:									
94.	Revenues	[1]			$ 61,133	$ 87,229	$ 143,232	$ 201,493	$ 53,469	$ 32,303
95.	Revenue credit in year 5 due to cap								(1,956)	
96.	Program costs	[1]			35,380	45,819	78,978	114,652	-	-
97.	Net lost revenues	[2]			12,150	26,043	47,189	66,706	53,469	32,303
98.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				13,602	15,366	17,064	20,135	(1,956)	-
99.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.7%	$ (222,227)	$ 46,983	$ 61,186	$ 96,042	$ 134,787	$ (1,956)	$ -
100.	Total EE Programs:									
101.	Revenues	[1]			$ 43,412	$ 61,558	$ 110,277	$ 167,715	$ 53,469	$ 32,303
102.	Program costs	[1]			24,284	29,030	56,828	92,518	-	-
103.	Net lost revenues	[2]			12,150	26,043	47,189	66,706	53,469	32,303
104.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				6,979	6,485	6,260	8,491	-	-
105.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.3%	$ (162,914)	$ 31,262	$ 35,515	$ 63,088	$ 101,009	$ -	$ -
106.	Total DSM Programs									
107.	Revenues	[1]			$ 17,720	$ 25,671	$ 32,954	$ 33,778	$ -	$ -
108.	Program costs	[1]			11,096	16,789	22,150	22,134	-	-
109.	Net lost revenues	[2]			-	-	-	-	-	-
110.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				6,624	8,882	10,804	11,644	-	-
111.	Split cash inflows and PV of cash outflows, with MIRR	[3]	19.5%	$ (59,314)	$ 17,720	$ 25,671	$ 32,954	$ 33,778	$ -	$ -

[1] Revenues and program costs determined per terms of Settlement.
[2] Net lost revenues estimated to impact Company for 36 months, consistent with treatment adopted per Settlement.
[3] (a) Net lost revenues treated as reductions in cash inflow.
(b) MIRRs for individual programs calculated using applicable program lives (ranging from 4 to 18 years);
MIRRs for aggregated programs calculated using aggregate program life of 4 years (DSM) and 18 years (EE, Residential, Non-Residential, and Total).

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS REDUCTION IN CASH INFLOWS
N.C RETAIL LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR	Present Value of Cash Outflows	Cash Flows per Settlement Year 1	2	3	4	5	6
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
1.	RESIDENTIAL PROGRAMS									
2.	Residential Energy Assessments:									
3.	Revenues	[1]			$ 2,881	$ 4,153	$ 8,792	$ 13,903	$ 5,656	$ 3,471
4.	Program costs	[1]			$ 1,922	$ 2,108	$ 4,261	$ 6,370	$ -	$ -
5.	Net lost revenues	[2]			$ 930	$ 1,997	$ 4,206	$ 6,622	$ 5,656	$ 3,471
6.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				30	48	324	911	-	-
7.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.3%	$ (11,825)	$ 1,952	$ 2,158	$ 4,586	$ 7,281	$ -	$ -
8.	Smart Saver for Residential Customers - AC:									
9.	Revenues	[1]			$ 838	$ 1,149	$ 2,613	$ 4,444	$ 939	$ 596
10.	Program costs	[1]			$ 1,276	$ 1,490	$ 3,207	$ 5,142	$ -	$ -
11.	Net lost revenues	[2]			$ 123	$ 277	$ 623	$ 1,075	$ 939	$ 596
12.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(564)	(618)	(1,218)	(1,773)	-	-
13.	Split cash inflows and PV of cash outflows, with MIRR	[3]	4.7%	$ (8,919)	$ 713	$ 872	$ 1,989	$ 3,369	$ -	$ -
14.	Smart Saver for Residential Customers - Energy Star:									
15.	Revenues	[1]			$ 8,208	$ 11,815	$ 11,901	$ 13,611	$ 4,958	$ 2,952
16.	Program costs	[1]			$ 2,667	$ 2,872	$ 1,759	$ 2,448	$ -	$ -
17.	Net lost revenues	[2]			$ 2,867	$ 6,094	$ 8,216	$ 8,154	$ 4,958	$ 2,952
18.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				2,674	2,849	1,925	3,010	-	-
19.	Split cash inflows and PV of cash outflows, with MIRR	[3]	17.7%	$ (8,222)	$ 5,341	$ 5,721	$ 3,685	$ 5,457	$ -	$ -
20.	Low Income Energy Efficiency and Weatherization Assistance:									
21.	Revenues	[1]			$ 3,876	$ 5,397	$ 9,417	$ 13,773	$ 5,395	$ 3,230
22.	Program costs	[1]			$ 1,851	$ 2,667	$ 6,354	$ 12,362	$ -	$ -
23.	Net lost revenues	[2]			$ 1,326	$ 2,735	$ 4,937	$ 6,716	$ 5,395	$ 3,230
24.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				699	(5)	(1,875)	(5,305)	-	-
25.	Split cash inflows and PV of cash outflows, with MIRR	[3]	5.7%	$ (18,423)	$ 2,550	$ 2,662	$ 4,480	$ 7,057	$ -	$ -
26.	Energy Efficiency Education Program for Schools:									
27.	Revenues	[1]			$ 5,895	$ 9,283	$ 21,016	$ 34,920	$ 12,818	$ 7,933
28.	Program costs	[1]			$ 2,701	$ 3,871	$ 9,378	$ 15,957	$ -	$ -
29.	Net lost revenues	[2]			$ 1,897	$ 4,200	$ 9,138	$ 14,891	$ 12,818	$ 7,933
30.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,297	1,212	2,504	4,072	-	-
31.	Split cash inflows and PV of cash outflows, with MIRR	[3]	10.2%	$ (25,388)	$ 3,998	$ 5,083	$ 11,880	$ 20,029	$ -	$ -
32.	Power Manager:									
33.	Revenues	[1]			$ 9,164	$ 9,393	$ 9,628	$ 9,868	$ -	$ -
34.	Program costs	[1]			$ 4,452	$ 4,452	$ 4,452	$ 4,452	$ -	$ -
35.	Net lost revenues	[2]			$ -	$ -	$ -	$ -	$ -	$ -
36.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				4,711	4,940	5,175	5,416	-	-
37.	Split cash inflows and PV of cash outflows, with MIRR	[3]	29.8%	$ (14,926)	$ 9,164	$ 9,393	$ 9,628	$ 9,868	$ -	$ -
38.	Total residential programs:									
39.	Revenues	[1]			$ 30,860	$ 41,190	$ 63,366	$ 90,519	$ 29,766	$ 18,181
40.	Program costs	[1]			14,870	17,461	28,411	46,729	-	-
41.	Net lost revenues	[2]			7,143	15,303	27,119	37,458	29,766	18,181
42.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				8,848	8,426	6,836	6,332	-	-
43.	Split cash inflows and PV of cash outflows, with MIRR	[3]	9.0%	$ (87,702)	$ 23,717	$ 25,887	$ 36,247	$ 53,061	$ -	$ -

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS REDUCTION IN CASH INFLOWS
N.C RETAIL LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR (a)	Present Value of Cash Outflows (b)	Cash Flows per Settlement Year 1 (c)	2 (d)	3 (e)	4 (f)	5 (g)	6 (h)
44.	NON-RESIDENTIAL PROGRAMS									
45.	Smart Saver for Non-Residential Customers - Lighting:									
46.	Revenues	[1]			$ 3,345	$ 4,330	$ 8,914	$ 13,960	$ 3,264	$ 1,933
47.	Program costs	[1]			$ 1,642	$ 1,776	$ 3,549	$ 5,299	$ -	$ -
48.	Net lost revenues	[2]			$ 580	$ 1,246	$ 2,449	$ 3,931	$ 3,264	$ 1,933
49.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				1,123	1,309	2,916	4,730	-	-
50.	Split cash inflows and PV of cash outflows, with MIRR	[3]	11.1%	$ (9,899)	$ 2,765	$ 3,084	$ 6,465	$ 10,029	$ -	$ -
51.	Smart Saver for Non-Residential Customers - Motors:									
52.	Revenues	[1]			$ 148	$ 194	$ 387	$ 600	$ 106	$ 59
53.	Program costs	[1]			$ 46	$ 53	$ 101	$ 150	$ -	$ -
54.	Net lost revenues	[2]			$ 18	$ 39	$ 82	$ 128	$ 106	$ 59
55.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				85	103	204	322	-	-
56.	Split cash inflows and PV of cash outflows, with MIRR	[3]	14.3%	$ (282)	$ 131	$ 155	$ 305	$ 472	$ -	$ -
57.	Smart Saver for Non-Residential Customers - Other Prescriptive:									
58.	Revenues	[1]			$ 2,034	$ 2,634	$ 5,690	$ 9,006	$ 1,410	$ 782
59.	Program costs	[1]			$ 1,050	$ 1,275	$ 2,768	$ 4,392	$ -	$ -
60.	Net lost revenues	[2]			$ 245	$ 521	$ 1,102	$ 1,693	$ 1,410	$ 782
61.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				739	838	1,820	2,922	-	-
62.	Split cash inflows and PV of cash outflows, with MIRR	[3]	10.6%	$ (7,606)	$ 1,789	$ 2,113	$ 4,588	$ 7,314	$ -	$ -
63.	Smart Saver for Non-Residential Customers - Energy Star Food Service Products:									
64.	Revenues	[1]			$ 68	$ 122	$ 322	$ 572	$ 120	$ 71
65.	Program costs	[1]			$ 28	$ 60	$ 148	$ 248	$ -	$ -
66.	Net lost revenues	[2]			$ 10	$ 27	$ 72	$ 137	$ 120	$ 71
67.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				20	36	102	187	-	-
68.	Split cash inflows and PV of cash outflows, with MIRR	[3]	11.3%	$ (393)	$ 58	$ 95	$ 250	$ 435	$ -	$ -
69.	Smart Saver for Non-Residential Customers - HVAC:									
70.	Revenues	[1]			$ 158	$ 196	$ 417	$ 647	$ 113	$ 63
71.	Program costs	[1]			$ 222	$ 240	$ 485	$ 724	$ -	$ -
72.	Net lost revenues	[2]			$ 18	$ 40	$ 86	$ 135	$ 113	$ 63
73.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(83)	(84)	(154)	(212)	-	-
74.	Split cash inflows and PV of cash outflows, with MIRR	[3]	5.2%	$ (1,348)	$ 139	$ 156	$ 331	$ 512	$ -	$ -
75.	Smart Saver for Non-Residential Customers - Custome Rebate:									
76.	Revenues	[1]			$ 2,239	$ 2,824	$ 5,949	$ 9,259	$ 1,788	$ 1,001
77.	Program costs	[1]			$ 3,192	$ 3,442	$ 6,853	$ 10,181	$ -	$ -
78.	Net lost revenues	[2]			$ 295	$ 635	$ 1,363	$ 2,137	$ 1,788	$ 1,001
79.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(1,248)	(1,253)	(2,267)	(3,058)	-	-
80.	Split cash inflows and PV of cash outflows, with MIRR	[3]	4.6%	$ (19,108)	$ 1,944	$ 2,189	$ 4,586	$ 7,123	$ -	$ -
81.	Power Share:									
82.	Revenues	[1]			$ 3,228	$ 8,558	$ 13,416	$ 13,752	$ -	$ -
83.	Program costs	[1]			$ 3,307	$ 7,288	$ 11,037	$ 11,025	$ -	$ -
84.	Net lost revenues	[2]			$ -	$ -	$ -	$ -	$ -	$ -
85.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				(79)	1,270	2,380	2,727	-	-
86.	Split cash inflows and PV of cash outflows, with MIRR	[3]	12.2%	$ (26,551)	$ 3,228	$ 8,558	$ 13,416	$ 13,752	$ -	$ -

DUKE ENERGY CAROLINAS, LLC
Docket No. E-7, Sub 831
PUBLIC STAFF CALCULATION OF MODIFIED INTERNAL RATES OF RETURN
APPLICABLE TO SETTLEMENT BETWEEN THE COMPANY, THE PUBLIC STAFF, AND THE ENVIRONMENTAL INTERVENORS -
NET LOST REVENUES TREATED AS REDUCTION IN CASH INFLOWS
N.C RETAIL LEVEL
(000s Omitted from Dollar Amounts)

Line No.	Program / Cash Item		MIRR	Present Value of Cash Outflows	Cash Flows per Settlement Year 1	2	3	4	5	6
			(a)	(b)	(c)	(d)	(e)	(f)	(g)	(h)
87.	Total Non-Residential Programs:									
88.	Revenues	[1]			$ 11,220	$ 18,859	$ 35,094	$ 47,797	$ 6,800	$ 3,910
89.	Program costs	[1]			9,497	14,132	24,941	32,019	-	-
90.	Net lost revenues	[2]			1,166	2,507	5,153	8,161	6,800	3,910
91.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				557	2,219	5,000	7,617	-	-
92.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.5%	$ (65,187)	$ 10,054	$ 16,352	$ 29,941	$ 39,636	$ -	$ -
93.	Total Residential and Non-Residential Programs:									
94.	Revenues	[1]			$ 42,080	$ 60,049	$ 98,460	$ 138,316	$ 36,566	$ 22,091
95.	Revenue credit in year 5 due to cap								(1,956)	
96.	Program costs	[1]			24,366	31,593	54,352	78,748	-	-
97.	Net lost revenues	[2]			8,309	17,810	32,272	45,619	36,566	22,091
98.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				9,404	10,645	11,836	13,949	(1,956)	-
99.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.7%	$ (152,889)	$ 33,771	$ 42,239	$ 66,188	$ 92,698	$ (1,956)	$ -
100.	Total EE Programs:									
101.	Revenues	[1]			$ 29,689	$ 42,098	$ 75,416	$ 114,698	$ 36,566	$ 22,091
102.	Program costs	[1]			16,607	19,853	38,863	63,271	-	-
103.	Net lost revenues	[2]			8,309	17,810	32,272	45,619	36,566	22,091
104.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				4,773	4,435	4,281	5,806	-	-
105.	Split cash inflows and PV of cash outflows, with MIRR	[3]	8.3%	$ (111,412)	$ 21,380	$ 24,288	$ 43,144	$ 69,077	$ -	$ -
106.	Total DSM Programs									
107.	Revenues	[1]			$ 12,391	$ 17,951	$ 23,044	$ 23,620	$ -	$ -
108.	Program costs	[1]			7,759	11,740	15,489	15,477	-	-
109.	Net lost revenues	[2]			-	-	-	-	-	-
110.	Net annual cash flows (Revenues - Program costs - Net Lost Revenues)				4,632	6,211	7,555	8,143	-	-
111.	Split cash inflows and PV of cash outflows, with MIRR	[3]	19.5%	$ (41,477)	$ 12,391	$ 17,951	$ 23,044	$ 23,620	$ -	$ -

[1] Revenues and program costs determined per terms of Settlement.
[2] Net lost revenues estimated to impact Company for 36 months, consistent with treatment adopted per Settlement.
[3] (a) Net lost revenues treated as reductions in cash inflow.
(b) MIRRs for individual programs calculated using applicable program lives (ranging from 4 to 18 years);
MIRRs for aggregated programs calculated using aggregate program life of 4 years (DSM) and 16 years (EE, Residential, Non-Residential, and Total).