

**DUKE ENERGY CAROLINAS, LLC
DOCKET NO. E-7, SUB 856**

**JOINT TESTIMONY OF ELISE COX AND JAMES MCLAWHORN
ON BEHALF OF THE PUBLIC STAFF
NORTH CAROLINA UTILITIES COMMISSION**

OCTOBER 10, 2008

FILED

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Clerk's Office
N.C. Utilities Commission

1 Q. MS. COX, PLEASE STATE YOUR NAME, BUSINESS ADDRESS, AND
2 PRESENT POSITION.

3 A. My name is Elise Cox and my business address is 430 North Salisbury Street,
4 Raleigh, North Carolina. I am an Assistant Director of the Accounting Division of
5 the Public Staff.
6

7 Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND, PROFESSIONAL
8 EXPERIENCE, AND OTHER QUALIFICATIONS.

9 A. My qualifications and experience are provided in Appendix A.
10

11 Q. MR. MCLAWHORN, PLEASE STATE YOUR NAME, BUSINESS ADDRESS,
12 AND PRESENT POSITION.

13 A. My name is James McLawhorn and my business address is 430 North Salisbury
14 Street, Raleigh, North Carolina. I am the Director of the Electric Division of the
15 Public Staff.

16 Q. PLEASE STATE YOUR EDUCATIONAL BACKGROUND, PROFESSIONAL
17 EXPERIENCE, AND OTHER QUALIFICATIONS.

18 A. My qualifications and experience are provided in Appendix B.



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**NORTH CAROLINA
PUBLIC STAFF
UTILITIES COMMISSION**

October 10, 2008

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Clerk's Office
N.C. Utilities Commission

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 856

Dear Ms. Vance:

In connection with the above-captioned docket, I transmit herewith for filing on behalf of the Public Staff, two (2) copies of the public Joint Testimony of James S. McLawhorn, Director, Electric Division, and Elise Cox, Assistant Director, Accounting Division. Twenty-one (21) copies of the confidential version are being filed contemporaneously herewith. The public, redacted version of the Joint Testimony is being served on all parties of records.

Please do not hesitate to contact me if you have any questions concerning this filing.

Sincerely,

Gisele L. Rankin

Gisele L. Rankin
Staff Attorney

*Clerk-as
AG w/o conf
w/ conf.
7 comm
Bennink
Kirby
Watson
Hoover
Kite
Hilburn
Sessions
Ericson
Jones*

GLR/bll

cc: Parties of Record

Attachments

Executive Director
733-2435

Communications
733-2810

Economic Research
733-2902

Legal
733-6110

Transportation
733-7766

Accounting
733-4279

Consumer Services
733-9277

Electric
733-2267

Natural Gas
733-4326

Water
733-5610

PUBLIC VERSION

1 Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

2 A. The purpose of our testimony is to present the Public Staff's findings and
3 recommendations regarding the application filed in this docket on June 6, 2008,
4 and supporting testimony filed on July 25, 2008, by Duke Energy Carolinas, LLC,
5 (Duke or the Company), pursuant to G.S. 62.110-1 and 62-133.8 and
6 Commission Rule R1-5, R8-61(b), and R8-67. In its application, Duke seeks the
7 following: (1) approval of a blanket certificate of public convenience and
8 necessity (CPCN) for 20 megawatts (MW) of solar photovoltaic (PV) distributed
9 generation, (2) approval of its proposed tariff for a solar PV distributed generation
10 program, (3) affirmation that the Company may recover its costs associated with
11 the proposed solar distributed generation program through the proposed
12 Renewable Energy and Energy Efficiency Portfolio Standard (REPS) cost
13 recovery mechanism provided for in G.S. 62-133.8(h) and Commission Rule R8-
14 67(e), and (4) a finding that Duke's implementation of the proposed solar
15 distributed generation program is prudent and consistent with the promotion of
16 adequate and reliable utility service to the citizens of North Carolina and the
17 policies expressed in G.S. 62-2.

18
19 Q. DID THE PUBLIC STAFF REVIEW THE PROCESS USED TO SOLICIT BIDS
20 FOR RENEWABLE ENERGY?

21 A. Yes. On April 20, 2007, Duke issued a request for proposals (RFP) for
22 renewable energy with a notice of intent to bid due by May 21, 2007. To
23 publicize the RFP, Duke posted it on its website and placed a public

PUBLIC VERSION

1 announcement in an industry publication. The original deadline for submitting
2 proposals was July 2, 2007. This deadline was ultimately extended until July 27,
3 2007, and the initial selection of the short list was set for August 31, 2007.

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5 **[BEGIN CONFIDENTIAL:**

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8 **REDACTED**

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16 **END CONFIDENTIAL]**

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18 As discussed by Duke in its testimony, a major reason it pursued its own project,
19 rather than pursuing any of the other bids, is its desire to own multiple types of
20 solar distributed generation facilities for such purposes as gaining experience
21 with their installation and operation and an understanding of their impact on its
22 system.

PUBLIC VERSION

1 Q. HOW MUCH SOLAR ENERGY DOES DUKE NEED TO COMPLY WITH ITS
2 REPS REQUIREMENTS?

3 A. Exhibit I shows the estimates for the solar energy set-aside requirements of S.L.
4 2007-397 (Senate Bill 3). Solar requirements begin in 2010 and 2011, while all
5 other renewable requirements begin in 2012. In both 2010 and 2011, Duke is

PUBLIC VERSION

1 Q. HOW MUCH SOLAR ENERGY DOES DUKE NEED TO COMPLY WITH ITS
2 REPS REQUIREMENTS?

3 A. Exhibit I shows the estimates for the solar energy set-aside requirements of S.L.
4 2007-397 (Senate Bill 3). Solar requirements begin in 2010 and 2011, while all
5 other renewable requirements begin in 2012. In both 2010 and 2011, Duke is
6 estimated to need 11,350 MWh of solar energy. The Public Staff estimates the
7 amount needed increases to an annual level of 40,461 MWh for 2012, 2013, and
8 2014.¹

9
10 If its certificate application were approved as filed, Duke expects ultimately to
11 generate approximately 30,000 MWh per year from its project, once full output
12 begins during the 2011 calendar year. **[BEGIN CONFIDENTIAL:**

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16 REDACTED
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20 **END CONFIDENTIAL]**

¹ These estimates are based on Duke's proposed interpretation of the provisions of G.S. 62-133.8 specifying the amount of the solar requirements for each year. The Commission is considering the interpretation of these statutory provisions in Docket No. E-100, Sub 113, and, if the interpretations proposed by parties other than Duke are adopted, the number of MWh required for some of these years will increase slightly.

PUBLIC VERSION

1 Q. PLEASE DISCUSS THE COSTS OF THE PROPOSED PROJECT AND THE
2 COSTS OF DUKE'S PROPOSED SOLAR PV DISTRIBUTED GENERATION
3 PROGRAM.

4 A. Although the Company is not requesting a rate change in this docket, it is
5 seeking affirmation that it may recover the costs associated with its proposed
6 tariff for a solar PV distributed generation program through the REPS rider
7 authorized by G.S. 62-133.8(h) and provided for in Commission Rule R8-67(e).
8 Duke's first REPS rider application is expected to be filed in early 2009.

9
10 Duke estimates that the capital costs of the proposed 20 MW project will be \$100
11 million. For purposes of REPS rider recovery, Duke used this \$100 million
12 capital cost to develop an annual cost for the total project, which would be
13 recovered annually through the REPS rider for 25 years. Based on information
14 provided to the Public Staff, Duke intends to request annual recovery of
15 \$8,930,000. The \$8,930,000 annual charge was calculated as follows: Duke (a)
16 determined the program's annual capital costs on a levelized basis using a fixed
17 charge rate applied to the total capital costs, (b) added estimated annual
18 operating and maintenance (O&M) costs, and then (c) deducted levelized
19 avoided capacity costs. The fixed charge rate for the capital costs and the O&M
20 costs equal a total annual cost of \$9,230,000. After the deduction of levelized
21 avoided capacity costs, the total annual amount for REPS rider recovery is
22 \$8,930,000. It should be noted, however, that because of developments
23 subsequent to the filing of the application, such as the enactment of federal

PUBLIC VERSION

1 legislation authorizing a solar tax credit for utilities such as Duke, the annual
2 REPS rider recovery for which Duke seeks affirmation would likely be somewhat
3 less than \$8,930,000. In addition, as discussed later in this testimony, we
4 believe Duke has now agreed to deduct avoided energy costs to determine the
5 incremental costs to be recovered through the REPS rider. This also would
6 reduce the \$8,930,000 annual REPS rider recovery for which Duke is seeking
7 affirmation.

8
9 Q. WHAT IS THE PUBLIC STAFF'S POSITION ON THE PROJECT AS
10 PROPOSED?

11 A. The Public Staff believes the proposed solar project is both larger than it needs
12 to be for Duke to comply with its solar set-aside requirements under G.S. 62-
13 133.8(d) and too costly given the cost of alternative resources. Another issue is
14 Duke's initial proposal to recover the avoided energy costs of its solar project
15 inappropriately through the REPS rider, on which we believe Duke has since
16 changed its position.

17
18 Q. WHY DO YOU BELIEVE DUKE'S PROPOSED SOLAR PROJECT IS LARGER
19 THAN NECESSARY?

20 A. Duke's proposed project has a total capacity of 20 MW, which is composed of
21 numerous solar facilities in a variety of sizes at a variety of locations. Duke plans
22 to begin installing solar PV facilities in 2009. The project, as proposed, would
23 produce 30,000 MWh annually starting in 2011 after the completion of all

PUBLIC VERSION

1 installations. As previously noted, Duke has also entered into a contract with
2 SunEdison. **[BEGIN CONFIDENTIAL:**

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9 **END CONFIDENTIAL]**
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11 In addition to the foregoing, it also is important to keep in mind that all of Duke's
12 solar MWh do not have to come from either the SunEdison project or Duke's own
13 project. Because Duke's 2007 RFP was restricted to bidders offering at least 2
14 MW in capacity, solar PV facilities with a lower capacity were ineligible to submit
15 bids. Duke also excluded all solar facilities that were seeking to sell RECs
16 separately from the underlying electricity. In addition, solar thermal projects,
17 which do not produce any electricity, were ineligible to submit bids. We are
18 particularly concerned about the exclusion of solar thermal projects, because in
19 some cases solar thermal RECs may be available at a cost substantially lower
20 than the cost of solar PV RECs.

21
22 *In our opinion, Duke does not need all of the proposed 20 MW project to meet its*
23 *set-aside requirements from 2010 through 2014. While the Public Staff would*

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1 prefer that future RFPs be less restrictive, at this point in time, a self-built project
2 appears to be needed to meet the 2010 starting date for the solar set-aside
3 requirements, albeit a much smaller self-built project than the one proposed by
4 Duke. The Public Staff believes that 10 MW of self-built solar PV distributed
5 generation would be sufficient for Duke to meet all of its needs through 2014,
6 including a built-in cushion.

7
8 Q. BUT IS IT NOT CONSISTENT WITH STATE POLICY TO HAVE AS MUCH
9 SOLAR ENERGY AS POSSIBLE?

10 A. While the encouragement of solar is desirable, it should not be pursued at the
11 expense of other renewable energy resources. Duke is likely to reach
12 prematurely the "utility-wide ceiling" established by G.S. 62-133.8(h)(3) and (4), if
13 it relies too much on expensive solar energy for REPS compliance, rather than
14 making use of other, less costly, types of renewable power. As the Commission
15 is aware, subdivision (h)(4) of this section establishes a cap on the amount of the
16 REPS rider that can be collected from any customer account. The combined
17 total of the per-account caps for a utility's North Carolina retail customers
18 constitutes the utility-wide ceiling, and under subdivision (h)(3), a utility cannot be
19 required to spend more than its utility-wide ceiling for REPS compliance in any
20 year. Duke's utility-wide ceiling for 2010 is estimated to be approximately
21 \$22,500,000. The Public Staff estimates that the ceiling will increase to
22 approximately \$34,000,000 in 2012. If Duke purchases or generates an
23 excessive amount of costly solar energy, the total number of renewable MWh it

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1 can purchase or generate, within the limits of its utility-wide ceiling, will be
2 reduced. As a result, it may have to operate its fossil-fired plants more often, and
3 emissions of pollutants and greenhouse gases could increase.

4
5 Q. GIVEN THAT DUKE CAN BANK EXCESS RECS, WHY IS IT NOT DESIRABLE
6 FOR DUKE TO ACQUIRE MORE SOLAR RECS THAN ARE REQUIRED BY
7 THE SOLAR SET-ASIDE REQUIREMENTS IN THE PERIOD 2010-2014, BANK
8 THEM, AND THEN USE THEM FOR COMPLIANCE FROM 2015 THROUGH
9 2018?

10 A. Banking excess solar RECS in this way is not desirable for a number of reasons.
11 Such a large number of solar RECs being banked prematurely raises issues of
12 intergenerational equity. Under such an approach, customers in one period will
13 be paying for RECs from which they may not benefit, while customers in another
14 period will receive the benefits of RECs for which they may not pay. More
15 significantly, solar PV is a developing technology, and there is a real possibility
16 that, in future years, the costs of solar power will be well below the current level.
17 This likely reduction in future costs means larger amounts of solar generation
18 could be pursued later with less detrimental effect on rates than pursuing
19 excessive amounts in the early years of REPS compliance. In that event, Duke
20 would be spending money unwisely by accumulating solar RECs today for future
21 use. Therefore, while it is entirely appropriate for utilities to be allowed to bank a
22 *limited number of RECs so they have some flexibility in REPS compliance, it may*

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1 not be in the public interest for Duke to pursue its 20 MW proposal and
2 accumulate large numbers of solar RECs well before they are needed.

3
4 Should attractive options for meeting the solar set-aside requirements prove to
5 be unavailable in the future, Duke will have the option of applying for a CPCN for
6 additional self-built solar generation at that time.

7
8 Q. YOU EARLIER STATED THAT, IN YOUR JUDGMENT, DUKE'S PROPOSED
9 SOLAR PROJECT ALSO IS TOO COSTLY. IS IT APPROPRIATE FOR THE
10 COMMISSION TO CONSIDER ISSUES RELATING TO PROJECT COSTS IN A
11 CPCN PROCEEDING SUCH AS THIS?

12 A. Yes, it is. As noted earlier, Duke has estimated the construction costs of the
13 project to be \$100 million. This is shown on page 1 of the Application filed by
14 Duke on June 6, 2008, and on page 13 of the prefiled testimony of its witness
15 Owen A. Smith. General Statute 62-110.1(a) provides that no public utility or
16 *other person can begin the construction of any facility included within the terms*
17 *of that section without first obtaining from the Commission a certificate that public*
18 *convenience and necessity requires, or will require, such construction.* In prior
19 certificate proceedings, the Commission has stated that the purpose of G.S. 62-
20 110.1 is to provide for the orderly expansion of electric generating capacity in
21 order to create a reliable and economical power supply and to avoid the costly
22 overbuilding of generation resources. The Commission also has concluded that
23 it must consider many factors, including the construction and fuel costs of both

PUBLIC VERSION

1 the proposed project and alternatives. In addition, G.S. 62-110.1(e) provides that,
2 as a condition of receiving a certificate, an applicant is required to file an estimate
3 of construction costs in such detail as the Commission may require and that no
4 certificate can be granted unless the Commission has approved the estimated
5 construction costs.

6
7 Q. WHAT IS THE BASIS FOR YOUR OPINION THAT DUKE'S PROPOSED
8 SOLAR PROJECT IS TOO COSTLY?

9 A. **[BEGIN CONFIDENTIAL:**

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22 **END CONFIDENTIAL]**
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PUBLIC VERSION

1 Q. CAN YOU OFFER ANY SUGGESTION AS TO WHY THE COSTS OF DUKE'S
2 PROJECT ARE SO HIGH?

3 A. Yes. Duke is not proposing to build a single large solar generating facility, or a
4 group of facilities sharing a common design or location, so as to gain the benefit
5 of economies of scale. Instead, Duke proposes to construct a wide variety of
6 facilities, of different sizes, in different locations, using different technologies. As
7 Duke witness Owen A. Smith states at pages 4-5 of his prefiled testimony:

8 The Program will . . . facilitate the Company's evaluation of the
9 impact of significant distributed generation on the Company's
10 electric system. In addition, the Program will enable the Company
11 to explore the nature of solar distributed generation offerings
12 desired by customers [and] fill knowledge gaps to enable
13 successful, wide-scale deployment of solar PV distributed
14 generation technologies

15
16 Duke witness Ellen T. Ruff similarly states at page 8 of her testimony:

17 The distributed nature of the generation of electricity under the
18 Program will enable the Company to develop competency as an
19 owner of solar renewable assets, leverage volume purchases, build
20 relationships with PV developers, manufacturers and installers, and
21 gain invaluable experience with the installation and operation of
22 multiple types of solar distributed generation facilities.

23
24 From the testimony of these witnesses, it appears that, while one purpose of the
25 project is to obtain solar energy for compliance with the REPS, other important
26 purposes are such things as gaining expertise in a wide range of solar
27 technologies, learning about what Duke's customers desire in this regard, and
28 becoming familiar with distributed generation.

PUBLIC VERSION

1 In addition, in response to a question about the breakdown of its project's capital
2 costs *between actual solar generation costs and the costs associated with its*
3 other purposes, Duke stated that it could not break down the costs in this
4 manner. It also stated that it did not dispute that the project includes both a solar
5 generation element and a distributed generation information element.

6
7 Q. HAS DUKE EVER ACKNOWLEDGED IN A MORE EXPLICIT MANNER THAT
8 ITS PROJECT INCLUDES COSTS IN ADDITION TO ACTUAL SOLAR
9 GENERATION COSTS?

10 A. Yes. On May 22, 2008, approximately two weeks before the filing of its
11 Application, Duke made a presentation about the solar project to the Public Staff.
12 During the course of this presentation, Duke stated that it planned to seek
13 recovery of 40% of the capital costs through the REPS rider, with the remaining
14 60% being recovered through base rates as a research expense. Between May
15 22 and the filing of the Application on June 6, Duke determined that, rather than
16 allocating the capital costs of the project between the REPS rider and a deferral
17 of the portion of the investment attributable to research, development, and
18 demonstration costs to be recovered in base rates, it would seek to recover all of
19 the costs (except avoided costs) through the REPS rider.

20
21 Q. WHAT IS THE PUBLIC STAFF'S POSITION WITH RESPECT TO WHETHER
22 DUKE SHOULD BE GRANTED A CPCN IN THIS PROCEEDING?

PUBLIC VERSION

1 A. Based upon our analysis, it appears that Duke currently needs a portion of its
2 proposed self-built project because of the 2010 starting date for the solar set-
3 aside requirements. As stated before, we believe that Duke's solar set-asides
4 can be met through 2014, including a built-in cushion, with 10 MW of the
5 proposed 20 MW of solar PV distributed generation. Because the costs of
6 Duke's project are higher than the costs of other reasonably available
7 alternatives, however, the Public Staff believes that any CPCN granted in this
8 docket should include a condition that (1) limits the amount that Duke can
9 recover through the REPS rider and (2) leaves the recovery of the remainder to
10 be determined in subsequent proceedings. The Public Staff's concerns about
11 Duke's proposed recovery of its [REDACTED] cost (minus avoided costs)
12 through the REPS rider and the details of our proposed condition are discussed
13 in detail below.

14
15 Q. MOVING NOW TO DUKE'S REQUEST THAT THE COMMISSION AFFIRM
16 THAT THE COMPANY MAY RECOVER THE COSTS ASSOCIATED WITH ITS
17 PROPOSED SOLAR PROGRAM THROUGH A REPS RIDER, WHAT IS THE
18 PUBLIC STAFF'S POSITION ON THAT REQUEST?

19 A. The Public Staff believes that only the actual cost of solar energy, as
20 distinguished from costs attributable to Duke's other purposes in proposing the
21 project, should be recoverable through a REPS rider. Duke had other options it
22 could have pursued to meet its solar set-asides, including a number of
23 acceptable bidders with lower costs than the cost of Duke's project.

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Q. WHAT PORTION OF DUKE'S [REDACTED] COST DO YOU RECOMMEND
BE EXCLUDED FROM THE REPS RIDER?

A. [BEGIN CONFIDENTIAL:

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END CONFIDENTIAL]

Q. UNDER YOUR PROPOSAL, HOW WOULD THE COSTS [BEGIN
CONFIDENTIAL:

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A.

END CONFIDENTIAL] could not be recovered through the REPS rider, with one
exception. This exception relates to G.S. 62-133.8(h)(1)(b), which provides that

PUBLIC VERSION

1 any electric power supplier may include in its incremental costs of REPS
2 compliance, and recover through the REPS rider, up to \$1,000,000 per year in
3 research costs relating to "renewable energy, energy efficiency, or improved air
4 quality." Duke, therefore, could request in its REPS rider proceedings that up to
5 \$1,000,000 per year be found to be research costs related to renewable energy
6 and recoverable through the rider. To support any such request, Duke would
7 need to tender evidence to establish that the costs are research costs within the
8 meaning of the statute and that they were reasonable and prudently incurred.
9 The remainder of the costs would be considered for inclusion in base rates, along
10 with other cost of service components and subject to the same standards, in a
11 subsequent general rate case.

12
13 Q. TURNING NOW TO THE APPROPRIATENESS OF RECOVERING THE
14 AVOIDED ENERGY COSTS OF THE PROJECT THROUGH THE REPS RIDER,
15 WHAT IS THE PUBLIC STAFF'S UNDERSTANDING OF DUKE'S CURRENT
16 POSITION?

17 A. In the Application, Duke stated that under G.S. 62-133.8(h) and Commission
18 Rule R8-67(e), an amount equivalent to the avoided cost of conventional
19 generation displaced by its proposed solar program is to be recovered through
20 base rates, and the incremental costs of compliance with the REPS are to be
21 recovered through an annual rider. It is our understanding that Duke has now
22 agreed to deduct avoided energy costs from its calculation of the incremental
23 costs to be recovered through the REPS rider. This is consistent with our

PUBLIC VERSION

1 position that, for renewable energy, the avoided capacity and energy costs
2 associated with a purchase must be recovered through the fuel clause, rather
3 than the REPS rider. The Public Staff also believes that, for a utility-owned
4 project, the avoided capacity and energy costs associated with it must be
5 recovered through base rates, rather than through the REPS rider or through a
6 *fuel clause proceeding*.

7
8 At the Public Staff's request, Duke provided a calculation of \$7,040,000 for the
9 annual costs to be recovered after deducting both the avoided energy and
10 capacity costs (before taking into account the federal investment tax credit).

11
12 Q. WHAT ARE THE PUBLIC STAFF'S RECOMMENDATIONS CONCERNING THE
13 COMPANY'S APPLICATION IN THIS PROCEEDING.

14 A. The Public Staff recommends that the Commission do the following:

15 (a) grant Duke a blanket CPCN for up to 10 MW of solar PV distributed
16 generation, subject to the condition **[BEGIN CONFIDENTIAL: REDACTED**
17 **END CONFIDENTIAL]** (minus avoided energy and capacity costs) be allowed to
18 be recovered through the REPS rider;

19 (b) require Duke to revise its proposed tariff to state that the maximum
20 number of customers served will be no more than the number required to
21 achieve the 10,000 kW (DC) of installed PV capacity;

PUBLIC VERSION

1 (c) adopt the Public Staff's position (to which we believe Duke has now
2 agreed) that both avoided capacity and avoided energy costs are ineligible for
3 recovery through the Company's REPS rider;

4 (d) adopt the Public Staff's position that the avoided costs for utility-
5 owned renewable generation are ineligible for recovery through the Company's
6 fuel clause rider;

7 (e) require Duke to file an updated construction cost estimate; and

8 (f) conclude that the reasonableness and prudence of both the
9 construction costs of the project and Duke's implementation of the solar PV
10 distributed generation program will be considered in appropriate future
11 proceedings.

12
13 Q. ARE THERE ANY OTHER ISSUES YOU WISH TO ADDRESS?

14 A. Yes. Because Duke has requested a blanket certificate with the size and the
15 locations of the facilities to be determined later, the notice Duke was required to
16 publish of its certificate request could not provide specific information in this
17 regard. For projects larger than two MW to be located on property that is not
18 currently-owned utility property or on a customer's premises with the customer's
19 consent, some provision needs to be made to deal with this notice issue. The
20 Public Staff intends to discuss this with Duke and provide a recommendation in
21 this regard at a later time.

22
23 Q. DO YOU HAVE ANY OTHER COMMENTS?

PUBLIC VERSION

1 A. Yes. The Public Staff is still reviewing certain information related to Duke's
2 proposed project and its costs. If this review results in any additional
3 adjustments, the Public Staff will file additional information with the Commission.
4

5 Q. DOES THAT COMPLETE YOUR TESTIMONY?

6 A. Yes.

PUBLIC VERSION

APPENDIX A

ELISE COX

I have a Masters in Business Administration from the University of South Carolina and a Bachelor of Science from Virginia Commonwealth University. I am a Certified Public Accountant and a member of the North Carolina Association of Certified Public Accountants and the American Institute of Certified Public Accountants.

I was employed by the Public Staff on October 1, 1980. In 1983, I was named Supervisor of the Natural Gas Section of the Public Staff Accounting Division. In 1986, I assumed my present position as Assistant Director of the Public Staff Accounting Division, which includes supervision of all electric matters. It is my responsibility to supervise and participate in the analysis of testimony and exhibits presented by parties in rate case proceedings. Additionally, I have participated in the examination of the books and records of utilities involved in rate case proceedings and have offered testimony and exhibits for presentation before this Commission.

I have also been involved in other matters and proceedings that have come before the Commission such as the investigation into utility rate reductions related to the Tax Reform Act of 1986, reviews of affiliated transactions, the investigation of emerging issues in electric industry restructuring, the investigations of the Duke and PanEnergy and the Carolina Power & Light Company and North Carolina Natural Gas merger filings, the establishment of decommissioning guidelines, and the reviews of special rate proposals and amortization proposals. I was also on the Public Staff Y2K Committee and I was involved in monitoring the Y2K compliance efforts of the regulated utilities in North Carolina.

PUBLIC VERSION

APPENDIX B

JAMES S. MCLAWHORN

I graduated with honors from North Carolina State University with the Bachelor of Science Degree in Industrial Engineering in May of 1984. I received the Master of Science Degree in Management with a finance concentration from North Carolina State University in December of 1991. While an undergraduate, I was selected for membership in both Tau Beta Pi and Alpha Pi Mu engineering honor societies.

I began my employment with the Public Staff Communications Division in June of 1984. While with the Communications Division, I testified before the Commission in general rate proceedings regarding matters of telephone quality of service.

In September of 1987, I was employed by GTE-South as an engineer in the Capital Recovery Department. I was responsible for analysis and recommendations to Company management regarding appropriate depreciation rates for recovery of the Company's capital investments

I began my employment with the Electric Division of the Public Staff in November of 1988. I assumed my present position as Director of the Electric Division in October of 2006. It is my responsibility to supervise and make policy recommendations on all electric utility matters before the Commission.

I have testified previously before the Commission in Virginia Electric and Power Company Rate Case Docket Nos. E-22, Sub 314, Sub 333, and Sub 412; in New River Light and Power Company Rate Case Docket Nos. E-34, Sub 28, and Sub 32; in Duke Power Company Rate Case Docket No. E-7, Sub 487; in Nantahala Power and Light Company Rate Case Docket No. E-13, Sub 157; in the Application of Dominion North Carolina Power to join PJM in Docket No. E-22, Sub 418; in Duke Power Company's request to merge with Cinergy Corporation in Docket No. E-7, Sub 795; and, in the Generic Investigation into Section 111 of the 1992 Energy Policy Act in Docket No. E-100, Sub 69.

FILED**OCT 10 2008**Clerk's Office
N.C. Utilities Commission**DUKE ENERGY CAROLINAS, LLC****Docket No. E-7, Sub 856****Renewables Requirements****(MWH)**

Line No.	Item	2010	2011	2012	2013	2014	2015	2016	2017	2018
1.	Solar	[1] [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
2.	<u>Solar Production</u>									
3.	Duke Project (20 MW)	[REDACTED] [2]	[REDACTED] [3]	[REDACTED] [3]	[REDACTED] [3]	[REDACTED] [3]	[REDACTED] [3]	[REDACTED] [3]	[REDACTED] [3]	[REDACTED] [3]
4.	Sun Edison	[REDACTED]	[REDACTED] [2]	[REDACTED] [3]	[REDACTED] [3]	[REDACTED] [3]	[REDACTED] [3]	[REDACTED] [3]	[REDACTED] [3]	[REDACTED] [3]
5.	Total (Line 3 + Line 4)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
6.	Banked RECs (Line 5 - Line 1 + Carryover)	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

[1] Calculated from information provided by Company.

[2] Assumes 50% of production in start-up year.

[3] Provided by Company.

DUKE ENERGY CAROLINAS, LLC**Docket No. E-7, Sub 856****Renewables Requirements
(MWH)**

Line No.	Item	2010	2011	2012	2013	2014	2015	2016	2017	2018
1.	Solar	[1]								
2.	<u>Solar Production</u>									
3.	Duke Project (10 MW)		[4]	[4]	[4]	[4]	[4]	[4]	[4]	[4]
4.	Sun Edison			[2]	[3]	[3]	[3]	[3]	[3]	[3]
5.	Total (Line 3 + Line 4)									
6.	Banked RECs (Line 5 - Line 1 + Carryover)									

[1] Calculated from information provided by Company.

[2] Assumes 50% of production in start-up year.

[3] Provided by Company.

[4] Assumes 50% of Duke's proposed MW and MWH generation of its solar project.