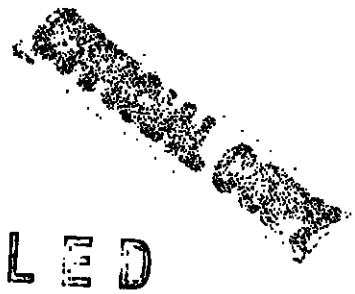
LAW OFFICE OF
ROBERT W. KAYLOR, P.A.
3700 GLENWOOD AVENUE, SUITE 330
RALEIGH, NORTH CAROLINA 27612
(919) 828-5250
FACSIMILE (919) 828-5240



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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:

Enclosed please find the original and thirteen (13) of Duke Energy Carolinas, LLC's Proposed Order in the above referenced docket.

Also being filed under seal is the original and seventeen (17) copies of the CONFIDENTIAL version of the Proposed Order.

Sincerely,

Robert W. Kaylor

Robert W. Kaylor

Enclosures

cc: Parties of Record

PUBLIC VERSION

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

DOCKET NO. E-7, SUB 856

Application of Duke Energy Carolinas, LLC For Approval of Solar Photovoltaic Distributed Generation Program And for Approval of Proposed Method of Recovery of Associated Costs	)	DUKE ENERGY CAROLINAS' PROPOSED ORDER

HEARD: Commission Hearing Room, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina, on October 23, 2008

BEFORE: Commissioner Lorinzo L. Joyner, Presiding; Chairman Edward S. Finley, Jr.; Commissioners Sam J. Ervin, IV, Robert V. Owens, Jr., William T. Culpepper, III, Howard N. Lee

APPEARANCES:

FOR DUKE ENERGY CAROLINAS, LLC:

Lara Simmons Nichols
Associate General Counsel
Brian L. Franklin
Senior Counsel
Duke Energy Corporation
526 S. Church Street
Charlotte, North Carolina 28202

Robert W. Kaylor
Law Office of Robert W. Kaylor, P.A.
3700 Glenwood Avenue, Suite 330
Raleigh, North Carolina 27612

FOR WAL-MART STORES EAST, LP AND SAM'S EAST:

Rick D. Chamberlain
Behrens, Taylor, Wheeler & Chamberlain
6 N.C. 63rd Street, Suite 400
Oklahoma City, Oklahoma 73105

FOR SOUTHERN ALLIANCE FOR CLEAN ENERGY:

George S. Cavros
Attorney at Law
120 E. Oakland Park Boulevard
Suite 105
Fort Lauderdale, Florida 33334

FOR THE NORTH CAROLINA SUSTAINABLE ENERGY ASSOCIATION:

Kurt J. Olson
North Carolina Sustainable Energy Association
Post Office Box 6465
Raleigh, North Carolina 27628

FOR THE SOLAR ALLIANCE AND THE VOTE SOLAR INITIATIVE:

R. Sarah Compton
Attorney at Law
Post Office Box 12788
Raleigh, North Carolina 27605

FOR THE USING AND CONSUMING PUBLIC:

Robert S. Gillam
Staff Attorney
Public Staff – NC Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4326

Leonard G. Green
Assistant Attorney General
North Carolina Department of Justice
Post Office Box 629
Raleigh, North Carolina 27602-0

BY THE COMMISSION: On June 6, 2008, Duke Energy Carolinas, LLC ("Duke Energy Carolinas" or "Company") filed an application for (1) approval of a solar photovoltaic distributed generation program ("Program"), (2) issuance of a blanket Certificate of Public Convenience and Necessity ("CPCN") for up to 20 megawatts ("MW") direct current and approval of the proposed Program tariff to implement the

Program, and (3) approval of its proposed method of cost recovery ("Application"). On June 23, 2008, Attorney General Roy Cooper filed a Notice of Intervention. The intervention and participation of the Attorney General is recognized pursuant to 62-20.

On July 8, 2008, the Commission issued an Order Scheduling Hearing establishing procedural deadlines and requiring public notice. That Order scheduled the evidentiary hearing to begin on October 23, 2008.

On July 25, 2008, Duke Energy Carolinas filed the direct testimony of Janice D. Hager, Jane L. McManeus, Owen A. Smith, and Ellen T. Ruff. Petitions to intervene were filed and have been granted to Carolina Utility Customers Association, Inc. on July 18, 2008; the Kroger Company on July 29, 2008; Southern Alliance for Clean Energy ("SACE") on August 13, 2008; The North Carolina Sustainable Energy Association ("NCSEA") on August 29, 2008; and Wal-Mart Stores East and Sam's East ("Wal-Mart"), The Solar Alliance ("Solar Alliance"), and The Vote Solar Initiative ("Vote Solar") on October 9, 2008.

On September 25, 2008, Duke Energy Carolinas filed an Affidavit of Publication that is required by the Commission's July 8, 2008, Procedural Order. On October 8, 2008, Rosalie R. Day filed testimony on behalf of the NCSEA.

Pursuant to orders allowing extensions of time entered by the Commission on September 30 and October 8, 2008, testimony was filed on October 10 by Carrie Cullen Hitt on behalf of Solar Alliance, by Thomas J. Starrs on behalf of Vote Solar, by Ken Baker on behalf of Wal-Mart, and Elise Cox and James McLawhorn on behalf of the Public Staff. On October 20, 2008, Duke Energy Carolinas filed revised direct

testimony of Ellen T. Ruff and rebuttal testimony of Jane L. McManeus and Owen A. Smith in which it reduced its request for a blanket CPCN to 10 MW direct current. [1]

FINDINGS OF FACT AND CONCLUSIONS OF LAW

1. Duke Energy Carolinas is a public utility with a public service obligation to provide electric utility service to customers in its franchised service in North Carolina and is subject to the jurisdiction of the Commission.

2. Duke Energy Carolinas filed its Application for a Solar Photovoltaic ("PV") Distributed Generation Program on June 6, 2008. The Company originally sought to invest, over a two-year period, approximately $100 million to install multiple solar PV electricity generation facilities with a combined total generating capacity of approximately 20 MW (DC) or approximately 16-17 MW (AC). In its revised and rebuttal testimony filed on October 20, 2008, the Company adopted the recommendation of the Public Staff to reduce the size of the Program to an investment of approximately $50 million to install a combined total capacity of approximately 10 MW (DC) or approximately 8 MW (DC). The facilities will be located within the Company's North Carolina service territory and will be installed as roof-mounted and ground-mounted facilities on the property of Duke Energy Carolinas' customers and on property owned by the Company. Duke Energy Carolinas will own all the facilities under the Program, which will be connected directly to the power grid at the distribution or transmission level. Each facility is expected to have a useful life of approximately 20-25 years.

3. The Commission has jurisdiction over this Application pursuant to the Public Utilities Act. A utility must receive a CPCN prior to constructing electric

[1] Solar PV facilities generate direct current ("DC") power, which is the current and historical industry standard. Such power must be converted to alternating current ("AC") power for use in the Company's distribution or transmission system.

generating facilities pursuant to N.C. Gen. Stat. § 62-110.1 and Commission Rule R8-61(b). Additionally, N.C. Gen. Stat. § 62-133.8 requires electric public utilities to comply with a Renewable Energy and Energy Efficiency Portfolio Standard ("REPS") and gives the Commission authority to adjudge REPS compliance.

4. Under Section 62-133.8(b)(1), each electric public utility in the State must comply with a REPS requirement in accordance with a statutorily set schedule beginning in the year 2012 based upon 3% of the utility's North Carolina retail sales. The schedule escalates to 6% in 2015, 10% in 2018 and 12.5% in 2021 and thereafter. An electric public utility may meet the REPS requirements by generating electric power at a "new renewable energy facility." N.C. Gen. Stat. § 62-133.8(b)(2). Beginning with the year 2010, Section 62-133.8(d) further requires that each electric public utility satisfy its REPS requirement in part with solar technologies that use one or more of certain specified applications (the "Solar Carve Out"). The Solar Carve Out similarly requires compliance in accordance with a statutorily set schedule beginning in the year 2010 based upon 0.02% of the utility's North Carolina retail sales. The schedule escalates to 0.07% in 2012, 0.14% in 2015 and 0.20% in 2018 and thereafter. Duke Energy Carolinas is an electric public utility under Section 62-133.8 and, accordingly, is subject to the REPS requirements.

5. Commission Rule R8-67(d) provides that renewable energy certificates ("RECs") associated with generation from renewable energy facilities may be used to comply with the REPS requirements, including the Solar Carve Out in which they are acquired or obtained by an electric power supplier or in any subsequent year, provided that they are used within seven years of cost recovery.

6. Duke Energy Carolinas' projected obligations under the Solar Carve Out are 11,350 megawatt hours in 2010 and 2011, increasing to 40,461 megawatt hours in 2012 through 2014; increasing further to 81,323 in 2015 through 2017; and increasing further to 119,987 megawatt hours in 2018 and thereafter. The Company has a need for solar generation beginning in 2010 and may bank RECs generated by the facilities installed under the Program for compliance with the Solar Carve Out obligations in 2012 through 2014.

7. Duke Energy Carolinas' 2007 Annual Plan filed with and approved by this Commission demonstrates that a combination of renewable resources, energy efficiency and demand-side management programs, and additional baseload, intermediate, and peaking generation are required over the next 20 years to reliably meet customer demand. Duke Energy Carolinas' 2007 forecast shows average annual growth in summer peak demand of 1.6 percent, winter peak demand growth of 1.4 percent, and the average territorial energy growth rate of 1.4 percent. Accordingly, the 2007 Annual Plan identifies the need for an additional 10,680 MW of new resources to meet customers' energy needs by 2027, and 990 MW by 2010.

8. The Company included the REPS requirements in the integrated resource planning ("IRP") process used to develop the 2007 Annual Plan. The 2007 Annual Plan includes 160 MW of renewable energy by 2012 and approximately 1,000 MW of renewable energy by 2020. The Company appropriately considered both quantitative and qualitative considerations in incorporating compliance with the REPS obligations into the IRP process such that the decision as to the resources selected to meet the REPS is not made purely on economics, but with consideration of factors such as portfolio diversity.

9. Duke Energy Carolinas currently has no Company-owned solar PV generation facilities among its generation resources. The solar PV facilities proposed to be installed under the Program constitute "new renewable energy facilities" under N.C. Gen. Stat. § 62-133.8(a) and therefore may be used to comply with the REPS requirements. Implementation of the Program will allow the Company to diversify its resources used to reliably meet the energy needs of its customers as well as to partially fulfill its REPS obligations.

10. The Company reduced the size of the Program from 20 MW (DC) to 10 MW (DC) in light of concerns raised by the Public Staff regarding the timing of the Company's REPS Solar Carve Out obligations and concerns raised by NCSEA, Solar Alliance and Vote Solar regarding market opportunities for customer-generators. This reduction appropriately addresses these concerns.

11. The scale of the Program provides for multiple types of installations in multiple locations thereby providing the opportunity to thoroughly assess the solar opportunities in North Carolina to determine the most cost-effective and best-performing options. Between 80-90% of the Program's installed capacity will consist of large scale installations such as ground-mounted facilities and rooftop installations on large commercial or industrial buildings, with individual facilities in this category ranging from 500 kW to 3 MW. Up to 10% of the Program's installed capacity will consist of medium scale rooftop facilities with individual facilities in this category ranging in size from 15 kW to 500 kW. Small scale facilities on residential rooftops, ranging from 1.5 to 5 kW in capacity, will comprise the remainder of the Program and up to 10% of the Program's

total capacity. Duke Energy Carolinas' proposed distribution of types and sizes of installations is reasonable.

12. The Company's plan to contract with experienced and proven solar PV equipment, installation, and maintenance services suppliers in order to implement the Program is prudent and creates market opportunities in North Carolina for such suppliers.

13. The Program design provides important benefits to Duke Energy Carolinas and its North Carolina retail customers which are consistent with the policies expressed in N.C. Gen. Stat. § 62-2 and the public convenience and necessity, including helping the Company to understand the impact of distributed generation on its system, enabling the Company to develop its competencies as an owner and operator of renewable generation facilities so that it is not reliant solely on third parties to meet the REPS compliance requirements, driving down the cost of solar PV installations in North Carolina through standardizing inspection requirements and leveraging volume purchases, and allowing customers to directly participate in the development of renewable resources in North Carolina.

14. The Program constitutes a part of a prudent portfolio approach to provide a diversity of resources to meet Duke Energy Carolinas' REPS Solar Carve Out requirements, which includes utility-owned generation, purchased power and opportunities for REC purchases, including the Solar Carve Out. Duke Energy Carolinas considered purchased power and REC purchases and has entered into a purchased power agreement with SunE DEC1, LLC ("Sun Edison"). Duke Energy Carolinas cannot rely solely on the purchase of RECs from customer-generators to meet its REPS requirements. The combination of the Program with the Sun Edison agreement is the best option to

meet Duke Energy Carolinas' REPS Solar Carve Out obligations during the period 2010 through 2014.

15. Duke Energy Carolinas is not required to provide a standard REC purchase offer for the purchase of solar RECs. The Commission will address net metering for solar customer-generators as a part of its ongoing proceeding in Docket No. E-100, Sub 83.

16. The public convenience and necessity supports the installation of the solar PV facilities under the Program and issuance of a blanket CPCN is in the public interest. The Program will allow the Company to meet the increasing electric load that it must serve and enable the Company to partially meet its obligations under the REPS, all in furtherance of North Carolina's public policy.

17. The proposed Solar Photovoltaic Distributed Generation Program (NC) tariff setting forth the terms and conditions that the Company intends to offer to customers with businesses, homes, and other property that may be suitable for the installation of a solar PV facility is approved. Commission approval of the form of agreement between the Company and participating customers for the lease of the customer's property is not required.

18. Upon consideration of the qualitative and quantitative costs and benefits of the Program and the impact of the tax normalization requirements with respect to the treatment of the federal energy investment tax credit, the Program compares favorably to the solar bids received in response to the Company's request for proposal ("RFP") for renewable energy resources. The only means to avoid the impact of the tax normalization requirements would be for the Company to rely one hundred percent on

third parties to meet its Solar Carve Out obligations. It is not reasonable to penalize the Company for compliance with federal tax laws, which would effectively exclude utility-owned solar generation as a means of complying with the REPS.

19. Duke Energy Carolinas' estimated construction costs for the Program are reasonable and approved. The Company shall submit a progress report each year during construction that includes revisions in the cost estimates as required by N.C. Gen. Stat. § 62-110.1(f).

20. The appropriate cost recovery mechanism for the incremental costs associated with the Program above the avoided cost of conventional generation displaced by the Program is through the REPS cost recovery rider provided for in N.C. Gen. Stat. § 62-133.8(h) and Commission Rule R8-67(e). Given that the Commission finds that the Program is the best option for meeting the Solar Carve Out requirements in 2010 and that all of the megawatt hours produced under the Program will contribute to compliance with the Solar Carve Out obligation, it is improper to impose a limit on the Program costs recoverable through the REPS rider.

EVIDENCE AND CONCLUSIONS FOR FINDING NOS. 1-3

The evidence in support of these findings of fact is found in the Application for the Program, the testimony of Company witness Smith, and the statutes, case law, and rules governing the authority and jurisdiction of this Commission. These findings are informational, procedural, and jurisdictional in nature.

N.C. Gen. Stat. § 62-110.1 is intended to provide for the orderly expansion of electric generating capacity in order to create a reliable and economical power supply and to avoid the costly overbuilding of generation resources. State ex rel. Utilities Comm. v. Empire

Power Co., 112 N.C. App. 265, 278 (1993), disc. rev. denied, 335 NC 564 (1994); State ex rel. Utilities Comm. v. High Rock Lake Ass'n, 37 N.C. App. 138, 141, disc. rev. denied, 295 NC 646 (1978). A public need for a proposed generating facility must be established before a certificate is issued. Empire, 112 N.C. App. at 279-80; High Rock Lake, 37 N.C. App. at 140. Beyond need, the Commission must also determine if the public convenience and necessity are best served by the generation option being proposed. The standard of public convenience and necessity is relative or elastic, rather than abstract or absolute, and the facts of each case must be considered. State ex rel. Utilities Comm. v. Casey, 245 N.C. 297, 302 (1957).

In the instant case, the public convenience and necessity standard must be considered in light of the General Assembly's adoption of a REPS under Session Law 2007-397 ("Senate Bill 3"). As the preamble to Senate Bill 3 states, the REPS requirements are to "promote the development of renewable energy and energy efficiency in the State. . . ." In enacting that law, the General Assembly amended N.C. Gen. Stat. § 62-3 to make clear that it is the declared policy of the State to (1) diversify the resources used to reliably meet the energy needs of consumers, (2) provide greater energy security through the use of indigenous energy resources available within the State, (3) encourage private investment in renewable energy, and (4) improve air quality and provide other benefits to energy consumers and citizens of the State. N.C. Gen. Stat. § 62-3(a)(10). The Commission is authorized to adjudge electric public utilities' REPS compliance under N.C. Gen. Stat. § 62-133.8. The Commission has established procedures for the review and approval of utilities' REPS compliance plans and to approve recovery of REPS compliance costs under Commission Rule R8-67.

EVIDENCE AND CONCLUSIONS FOR FINDING NO. 4-5

The evidence in support of these findings of fact is found in the North Carolina General Statutes and the Commission's Rules. These findings are informational in nature.

Each electric public utility in the State must comply with a REPS requirement according to the following schedule:

Calendar Year	REPS Requirement
2012	3% of 2011 N.C. retail sales
2015	6% of 2014 N.C. retail sales
2018	10% of 2017 N.C. retail sales
2021 and thereafter	12.5% of 2020 N.C. retail sales

N.C. Gen. Stat. § 62-133.8 (b)(1). An electric public utility may meet the REPS requirements by generating electric power at a "new renewable energy facility." N.C. Gen. Stat. § 62-133.8 (b)(2). Beginning with the year 2010, Senate Bill 3 further requires that each electric public utility satisfy its REPS requirement in part with a combination of new solar electric facilities and new metered solar thermal energy facilities that use one or more of certain specified applications, including solar hot water and solar absorption cooling. N.C. Gen. Stat. § 62-133.8(d). The Solar Carve out requires compliance according to the following schedule:

Calendar Year	Requirement for Solar Energy Resources
2010	0.02% of N.C. retail sales
2012	0.07% of N.C. retail sales
2015	0.14% of N.C. retail sales
2018	0.20% of N.C. retail sales

Id.

Commission Rule R8-67 allows electric public utilities to bank excess RECs that are generated from renewable facilities. Specifically, Rule R8-67(d)(1) provides:

(d) Renewable Energy Certificates

> (1) Renewable energy certificates (whether or not bundled with electric power) claimed by an electric power supplier to comply with G.S. 62-133.8(b), (c), (d), (e) and (f) must have been earned after January 1, 2008; must have been purchased by the electric power supplier within three years of the date they were earned; shall be retired when used for compliance; and shall not be used for any other purpose. A renewable energy certificate may be used to comply with G.S. 62-133.8(b), (c), (d), (e) and (f) in the year in which it is acquired or obtained by an electric power supplier or in any subsequent year; provided, however, that an electric public utility must use a renewable energy certificate to comply with G.S. 62-133.8(b), (d), (e) and (f) within seven years of cost recovery pursuant to subsection (e)(10) of this Rule.

Thus, RECs associated with installations under the Program may be used to comply with the Solar Carve Out requirements in the year in which they are generated or in any subsequent year, provided that they are used within seven years of cost recovery.

EVIDENCE AND CONCLUSIONS FOR FINDING NO. 6

The evidence in support of this finding of fact is found in the testimony of Duke Energy Carolinas witness Smith and the testimony and exhibits of Public Staff witnesses Cox and McLawhorn.

Witness Smith testified that N.C. Gen. Stat. § 62-133.8(d) requires that over 11,000 megawatt hours of Duke Energy Carolinas' North Carolina retail sales be supplied by solar energy by 2010, the first year of the Solar Carve Out obligation. (Tr. Vol. 1. pp. 62, 64). Witness Smith also testified that the Company estimates its solar obligation for the years 2012 through 2014 will increase dramatically to approximately 40,000 megawatt hours, and more than double again to approximately 81,000 megawatt hours for the years 2015 through 2017. (Tr. Vol. 1, p. 117). Additionally, Public Staff Confidential Exhibit No. 1 demonstrates that Duke Energy Carolinas' solar obligation for

2018 is projected to be nearly 120,000 megawatt hours. (Public Staff Confidential Exhibit No. 1).

Witnesses Ruff and Smith testified that the Company has a need for solar energy resources beginning in 2010, and that it will seek to bank RECs generated by the facilities installed under the Program for compliance with the Solar Carve Out obligations in 2012 through 2014. (Tr. Vol. 1, pp. 15, 64, 114). The Public Staff agrees that the Program at the modified size is necessary to meet the Solar Carve Out requirement in 2010 and will contribute to REPS compliance thereafter. No party presented evidence disputing Duke Energy Carolinas' need for solar energy resources beginning in 2010 that will produce in excess of 11,000 megawatt hours.

EVIDENCE AND CONCLUSIONS FOR FINDING NOS. 7-9

The evidence in support of these findings of fact is found in the testimony of Duke Energy Carolinas witness Hager and the North Carolina General Statutes.

As a regulated utility, Duke Energy Carolinas is obligated to take prudent steps to ensure that its customers' electricity needs are met both now and in the future. The Program will assist the Company in fulfilling this obligation. With respect to the need for the solar PV facilities and the Program's impact on the Company's resource plan, Duke Energy Carolinas witness Hager testified that Duke Energy Carolinas' 2007 Annual Plan incorporates a 20-year load forecast, near-term purchase power contracts, existing generation, energy efficiency resources (including both conservation and demand-response programs), new resource additions, and a target planning reserve margin of 17%. (Tr. Vol. 2, p. 10). Witness Hager also testified that the IRP process for the 2007 Annual Plan demonstrates that a combination of renewable resources, energy efficiency

and demand-side management programs, and additional baseload, intermediate, and peaking generation are required over the next 20 years to reliably meet customer demand. (Id., p. 13). Witness Hager explained that Duke Energy Carolinas' 2007 forecast shows average annual growth in summer peak demand of 1.6 percent, winter peak demand growth of 1.4 percent, and the average territorial energy growth rate of 1.4 percent. (Id.). Accordingly, witness Hager also testified that the 2007 Annual Plan identifies the need for an additional 10,680 MW of new resources to meet customers' energy needs by 2027, and 990 MW by 2010. (Id.).

Witness Hager testified that consistent with the responsibility to meet customer energy needs in a reliable and economic manner, the Company's resource planning approach includes both quantitative analysis and qualitative considerations. (Id., p. 11). Quantitative analysis provides insights on the potential impacts of future risks and uncertainties associated with fuel prices, load growth rates, capital and operating costs, and other variables, while qualitative perspectives such as the importance of fuel diversity, the Company's environmental profile, the stage of technology deployment, and regional economic development are also important factors to consider as long-term decisions are made regarding new resources. (Id.). Witness Hager testified that in the context of this proceeding, compliance with the REPS is quantitative in that there are quantitative analyses of the cost of meeting the REPS, and it is also qualitative in that the decision on the resources selected to meet the REPS is not made purely on economics, but with consideration of factors such as portfolio diversity. (Id.).

Witness Hager testified that Company management uses all of these perspectives and analyses to ensure that Duke Energy Carolinas will meet near-term and long-term

customer needs, while maintaining flexibility to adjust to evolving economic, environmental, and operating circumstances in the future. (Id.). She also testified that since the environment for planning the Company's system has never been more dynamic, the Company believes prudent planning for customer needs requires a plan that is robust under many possible future scenarios, and maintains a number of options to respond to many potential outcomes of major planning uncertainties (e.g., federal greenhouse gas emission legislation). (Id., pp. 11-12).

In addition, Witness Hager testified that North Carolina's recent enactment of the REPS caused Duke Energy Carolinas to modify its consideration of renewable energy resources. (Id., p. 12). In previous annual plans, the Company's resources were screened on economics, and as a result, renewable resources were screened out due to their higher cost than traditional supply-side resources. (Id.). Witness Hager testified that for the 2007 Annual Plan, however, renewable resources were screened separately to identify the most cost-effective resources among the renewable options, and that for the Carbon Case with CO2 regulation, the Renewable Portfolio Standard assumptions are based on the REPS requirements. (Id.). Witness Hager testified that, accordingly, the 2007 Annual Plan includes 160 MW of renewable energy by 2012 and about 1000 MW by 2020. (Id., p. 13).

Witness Hager also testified that Duke Energy Carolinas' Annual Plan demonstrates that the Company currently has no Company-owned solar PV generation facilities among its generation resources, and that implementation of the Program, therefore, would allow the Company to diversify its resources used to reliably meet the energy needs of its customers. (Id.). Witness Smith testified that if the Company relied

solely upon customer-owned generation, it would face a significant risk that it would not meet its REPS compliance Solar Carve Out obligations that begin in 2010. (Tr. Vol. 1, pp. 97-98). Witness Smith also testified that the Program is part of the Company's prudent portfolio approach, including utility-owned generation, purchased power and opportunities for REC purchases, to provide a diversity of resources to meet the Company's REPS Solar Carve Out requirements. (Id., pp. 60, 64, 70).

The definition of a "new renewable energy facility" under N.C. Gen. Stat. § 62-133.8(a)(5) includes renewable energy facilities that are "placed into service on or after January 1, 2007." Because the Company will implement the Program's solar PV facilities well after January 1, 2007, and since a solar PV facility constitutes a renewable source of generation under N.C. Gen. Stat. § 62-133.8(a)(8), the solar PV facilities that will be used by the Program constitute "new renewable energy facilities" under the statute. The Commission concludes that implementation of the Program will allow the Company to diversify its resources used to reliably meet the energy needs of its customers as well as to partially fulfill its REPS obligations.

EVIDENCE AND CONCLUSION FOR FINDING NO. 10

The evidence in support of this finding of fact is found in the testimony of Duke Energy Carolinas witness Smith, the testimony and exhibits of Public Staff witnesses Cox and McLawhorn, the testimony of NCSEA witness Day, Solar Alliance witness Hitt, and Vote Solar witness Starrs.

Public Staff witnesses Cox and McLawhorn expressed concern regarding the size of the Program as proposed compared to Duke Energy Carolinas' obligations under the Solar Carve Out requirements. (Tr. Vol. 2, pp. 215-217). Witnesses Cox and

McLawhorn calculated that in combination with the purchased power agreement between the Company and Sun Edison and based upon current estimates, the Program will result in sufficient RECs that would satisfy Duke Energy Carolinas' obligations under the Solar Carve Out requirements from 2010 through 2014, and the banking of RECs towards the Company's obligations from 2015 through 2018. (Id., pp. 218-219). Additionally, the Public Staff witnesses expressed concern that because the amounts that utilities may collect from retail customers for REPS compliance is capped on a customer account basis, the size of the Program as proposed could result in the Company prematurely reaching the utility-wide cost ceiling. (Id., pp. 217-218). Additionally, witnesses for NCSEA and The Solar Alliance expressed concerns that at the 20 MW (DC) size originally proposed the Program would impede the development of non-utility owned solar generation in the Company's service territory. (Id., pp. 138, 167).

Duke Energy Carolinas witness Smith testified that the Company addressed these concerns by agreeing to reduce the size of the proposed Program such that it would to invest, over a two-year period, approximately $50 million to install, own and operate new solar PV distributed generation facilities expected to have a total combined capacity of approximately 10 MW (DC). At the modified size the Program and the Sun Edison agreement together are projected to meet the Company's Solar Carve Out obligations from 2010 through 2014. (Tr. Vol. 1, pp. 62-64).

On cross-examination, Company witness Smith explained that the Company's Solar Carve Out requirements are projected to more than double from approximately 40,000 megawatt hours in 2014 to over 80,000 megawatt hours in 2015. Given this dramatic increase in the Company's obligation and the ability to bank RECs for seven

years, Duke Energy Carolinas plans to pursue "a steady progression of resource additions through time" with a variety of different types of solar suppliers leading up to 2015. (Tr. Vol. 1., pp. 114-15). Contrary to assertions by counsel for NCSEA, the Company reasonably cannot wait until 2014 to entertain REC purchase opportunities from customer-generators. Company witness Smith stated:

> So to sit on the sidelines until 2014 when you know your requirement doubles and you also know that you have banking provisions that allow you to take action early, that would not be wise business, I would say, and we would fully intend to continue making . . . business arrangements to procure more solar energy to comply with the 2015 requirement well in advance of 2015.

(Id., p. 117). Therefore, the Commission concludes that the reduction in the size of the Program responds to the concerns raised by NCSEA, Solar Alliance and Vote Solar, and creates the opportunities for customer-generators to sell solar RECs to the Company.

EVIDENCE AND CONCLUSIONS FOR FINDING NO. 11

The evidence in support of this finding of fact is found in the testimony of Duke Energy Carolinas witness Smith, NCSEA witness Day, Solar Alliance witness Hitt, and Vote Solar witness Starrs.

Witness Smith testified that the Program design, components, and costs will remain consistent with the Company's original Application except for the total expected investment and the total expected installed capacity. The Company still proposes that 80-90% of the total installed capacity would come in the form of "large scale" installations (herein defined as projects between 500 kw and 3 MW in size); that up to 10% of the total installed capacity would come in the form of "medium scale" installations (herein defined as projects between 15 kw and 500 kw in size); and that up to 10% would come in the form of "small scale" installations of 1.5 kw to 5 kw apiece. Witness Smith

testified that by employing multiple types of installations in multiple locations the Company will have the opportunity to thoroughly assess the solar opportunities in North Carolina to determine the most cost-effective and best-performing options. (Tr. Vol. 1, pp. 39-40). Further, Witness Smith explained that including small and medium size installations under the Program allows the Company to maximize what can be learned with respect to the impact of distributed generation on its system. (Id., pp. 65, 138-141).

SACE, NCSEA, Solar Alliance and Vote Solar all expressed support for the distributed nature of the Program as a means to promote the advancement of solar distributed generation to the benefit of the State and the Company's North Carolina customers, provided that utility-owned solar generation is not the sole model operating in the market. During cross-examination of Company Witness Smith, counsel for SACE stated, "we certainly applaud you . . . for the fact that you've taken a distributed generation route rather than just one central generating station." (Id., p. 96).

NCSEA Witness Day agreed with the Company's goal to "acquire experience operating reliably using solar DG of all sizes," and stated that "[w]e would be artificially limiting the NC solar market . . . if Duke is not allowed to pursue some of the small projects it is proposing." Ms. Day further stated that utility-scale solar generation along with third-party and customer generators "is essential to providing a vibrant solar market." (Tr. Vol. 2, pp. 166-67, 177). Vote Solar Witness Starrs stated, "Vote Solar is supportive of many elements of Duke's Proposal to expand into solar photovoltaic (PV) generation." (Id., p. 106). He also testified that Vote Solar generally applauds and commends Duke Energy Carolinas for support of the development of solar PV and its recognition of the benefits of distributed generation. (Id., pp. 106-107).

Solar Alliance Witness Hitt agreed that the Program will enable the Company to develop important competencies in the operation of solar PV generation. She supports Duke Energy Carolinas' efforts to learn more about the economic and physical impacts of solar PV facilities and to simplify and standardize local permitting and inspection requirements thereby reducing the administrative burden and lowering costs. (Id., pp. 137, 140).

The Commission does not agree with Witness Day's position that a "certain amount" of solar market share should be reserved for customer-generators (Id., p. 166) because such a requirement would essentially mandate utilities to purchase RECs from customer-generators. As discussed in support of finding Nos. 14 and 15, the Commission has already ruled that Senate Bill 3 does not impose a mandatory REC purchase obligation on electric power suppliers and the Commission is not persuaded that it is appropriate to do so now. *Order Adopting Final Rules,* Docket No. E-100, Sub 113 (February 29, 2008) at 59. Therefore, the Commission concludes that the Duke Energy Carolinas' proposed distribution of types and sizes of installations is reasonable.

EVIDENCE AND CONCLUSIONS FOR FINDING NO. 12

The evidence in support of this finding of fact is found in the testimony of Duke Energy Carolinas witness Smith and Solar Alliance witness Hitt.

Witness Smith explained that in order to implement the Program the Company plans to contract with experienced and proven solar PV equipment, installation, and maintenance services suppliers selected through a competitive solicitation process. (Tr. Vol. 1, pp. 47-48, 67). He testified that the Company issued a RFP in August 2008 to solar suppliers to fulfill the installation of the variety of types of solar PV facilities that

the Company identified in the Application. (Id., pp. 119-120). In doing so, witness Smith testified, the Program has created a market opportunity for solar suppliers. (Id., pp. 67, 119). The RFP generated a significant response among solar suppliers, with over 70 firms submitting a notice of intent to bid and over 90 people participating in a bidder's conference that was held on October 3, 2008. (Id., p. 67)

Witness Smith also testified that the Program creates a basis for numerous solar suppliers to consider initiating or expanding their business operations in North Carolina. In addition to the firms that have registered to participate in the RFP, several solar module manufacturers have contacted the Company to express their interest in constructing a manufacturing site within its service territory. Witness Smith commented upon the apparent impact of Duke Energy Carolinas' commitment to and enthusiasm for solar energy as evidenced by this Program. (Id.). Witness Smith testified that more than 470 customers have contacted Duke Energy Carolinas since the Company filed its Application on June 6, 2008, to express their interest in hosting a project on their premises. (Id., pp. 66, 94). In addition, Witness Smith testified that the Program has generated this much interest in such a short amount of time without the Company making any effort to market or promote the Program to its customers. (Id., p.66).

The Commission further notes that the Solar Alliance describes itself in its Petition to Intervene as being comprised of the world's leading solar PV manufacturers, integrators, installers and financiers dedicated to accelerating the deployment of solar electric power in the Untied States, including North Carolina. Despite her testimony that the Program might limit the interest of some potential solar suppliers, Solar Alliance witness Hitt acknowledged on cross-examination that at least five Solar Alliance

members have submitted notices of intent to bid in the Company's RFP for solar equipment, installation, and maintenance services vendors. (Tr. Vol. 2, pp. 141-42, 153).

The Commission concludes that coupling Duke Energy Carolinas' extensive experience managing construction projects of various types and sizes with leading solar PV manufacturers, integrators and installers is a prudent implementation approach. It is not lost on this Commission that the Company is one of only a few utilities nationwide that has proposed a solar Program that incorporates utility ownership and distributed generation elements. The testimony of witness Smith regarding the interest that the Program has generated with potential solar suppliers is particularly compelling, and as a result, the Commission concludes that the Company has created a market opportunity for such suppliers.

EVIDENCE AND CONCLUSIONS FOR FINDING NO. 13

The evidence in support of this finding of fact is found in the testimony of Duke Energy Carolinas witnesses Ruff and Smith, and Public Staff witness McLawhorn.

Company witness Ruff testified that the Program arises out of the immediate need for solar energy in 2010 and contributes to the increasing Solar Carve Out obligations thereafter. (Tr. Vol. 1, pp. 15-17). She stated, however, that the Program is designed to achieve not merely REPS compliance, but myriad other benefits that promote the policies of the State as expressed in Senate Bill 3 and Section 62-3(a). (Id., pp. 17-18).

Witnesses Ruff and Smith described the Program's benefits as (1) resulting in the reliable production of renewable energy that will help the Company meet its obligations under the Solar Carve Out of the REPS for the next few years; (2) enabling the Company to develop competencies as owners and operators of renewable distributed generation

facilities, and an understanding of the impact of those facilities on its system; (3) honing the ability to thoroughly assess the solar opportunities in North Carolina in order to determine the most cost effective and best performing options for future deployments; (4) promoting energy security through the distributed nature of the Program; (5) promoting the development of solar generation resources – and the solar industry as a whole – in North Carolina; (6) promoting economic development in North Carolina by attracting investment and creating jobs in the growing solar industry; (7) building relationships with PV developers, manufacturers, and installers; (8) driving down the cost of solar PV installations in North Carolina through standardizing inspection requirements and leveraging volume purchases; (9) working with local authorities to reduce costs and administrative burdens by simplifying and standardizing local permitting and inspection requirements; and (10) enabling the Company's customers to directly participate in the development of renewable resources in North Carolina without making a significant capital investment. (Id., pp. 18, 51-52, 64-65).

As discussed above, SACE, NCSEA, Solar Alliance and Vote Solar recognize and commend Duke Energy Carolinas for seeking to accomplish these goals. Upon cross-examination of Company Witness Ruff, counsel for the Public Staff attempted to show that the Program benefits associated with improving the economics of solar distributed generation were unnecessary if the Company instead entered into purchased power agreement with another bidder from its 2007 RFP for renewable resources. Ms. Ruff did not agree, stating "the purpose of this type of program is to simply diversify our approach to solar and meet it in a different way" that provides "more control of the facilities." (Id., p. 29). In fact, Public Staff Witness McLawhorn testified upon cross-examination that "it

is not our testimony that Duke should have signed a contract with the second place bidder or the third place bidder;" and "we are not saying that Duke needs to rely solely on third-party bidders. We did not oppose Duke building the facility and owning it itself. . . ." (Tr. Vol. 2, pp. 245, 248).

For the above reasons, the Commission finds that Duke Energy Carolinas' implementation of the Program at the modified size is prudent and consistent with the policies expressed in N.C. Gen. Stat. § 62-2 and the public convenience and necessity. Successful implementation of the Program positions Duke Energy Carolinas to (1) develop critical knowledge, data and competencies regarding development, operation and ownership of solar distributed generation; and (2) positively influence commercial deployment of solar distributed generation in the State in addition to meeting its REPS Solar Carve Out requirements.

EVIDENCE AND CONCLUSIONS FOR FINDING NOS. 14 & 15

The evidence in support of these findings of fact is found in the testimony of Duke Energy Carolinas witnesses Hager, Ruff, and Smith, NCSEA witness Day, Vote Solar Initiative witness Starrs, and Solar Alliance witness Hitt.

As discussed earlier, company witnesses Hager and Smith testified that the Program constitutes a part of a portfolio approach to provide a diversity of resources to meet Duke Energy Carolinas' REPS Solar Carve Out requirements. (Tr. Vol. 1, p. 60; Tr. Vol. 2, p. 11). Utility-owned generation, purchased power agreements and the purchase of RECs from customer-owed resources are all components of the portfolio. As explained by Witness Smith, the Company has demonstrated its commitment to pursue each of these types of resources. In 2007, the Company issued an RFP for renewable

energy resources and has entered into a purchased power agreement with Sun Edison to purchase electricity and RECs generated from a solar power farm to be operational in 2011. Additionally, Duke Energy Carolinas offers a variety of net metering offerings under which customers can sell their RECs to NC GreenPower for $0.15/kwh. Furthermore, witness Smith explained that the Company is developing a standard REC offer which it would make available to customer-generators for RECs for general and Carve Out compliance based upon current market prices. (Tr. Vol. 1, p. 75).

As discussed above, the Public Staff, SACE, NCSEA, Solar Alliance and Vote Solar witnesses all support some form of utility-owned solar generation as a component of REPS compliance.

Duke Energy Carolinas' determination that it cannot rely solely on the purchase of RECs from customer-generators to meet its REPS requirements demonstrates prudent compliance planning. Company Witness Smith made very clear that the magnitude and timing of customer investments in solar projects is outside the control of the utility and, as such, Duke Energy Carolinas cannot be dependent upon them to meet a certain percentage of its compliance requirements. (Id., pp. 98-99). The amount of customer-owned solar generation that exists in North Carolina today – 360.1 kw – is evidence that this model of paying for RECs cannot be counted on to drive the level of investment that would be required to meet the objectives of the State with respect to solar energy production, and could not be relied upon by Duke Energy Carolinas to assure that the Company could meet its REPS obligations. (Tr. Vol. 1, p. 124 ; Duke Energy Carolinas' Late Filed Exhibit No. 1).

Vote Solar Witness Starrs argued that the current NC GreenPower program is not a sufficient incentive for customers to invest in solar PV facilities because the contract terms are not long enough and the funding is based upon contributions. (Tr. Vol. 2, pp. 118, 122). As discussed below, however, this Commission has previously rejected a mandatory REC purchase obligation as proposed by witness Starrs. Additionally, Company witness Smith identified serious flaws in witness Starr's proposal for a mandatory standard REC purchase offer at prices up to as much as $0.32/kwh. (Tr. Vol. 1, p. 81; Tr. Vol. 2, pp. 130-131). First and foremost, the Commission has already ruled that "the electric power suppliers are not . . . obligated to purchase all RECs offered for purchase. The Commission is not persuaded that it is appropriate to impose such an obligation." *Order Adopting Final Rules,* Docket No. E-100, Sub 113 (February 29, 2008) at 59. Even if the Commission were to consider witness Starrs' proposal, however, there are additional reasons why his proposal ultimately should be rejected. As demonstrated by witness Smith, the costs of this proposal likely would exceed the costs of the Program. Additionally, the proposal offers no certainty as to how many customers would choose to accept the offer, thereby potentially leading to under-compliance or exceeding the customer cost caps. (Tr. Vol. 1, pp. 80-82).

Solar Alliance witness Hitt further acknowledged that the commercial customer solar installation programs cited in her testimony are all located in California and Hawaii, states with significantly higher retail rates than North Carolina, and, in the case of California, a regulatory structure that allows third party solar suppliers to sell energy directly to retail customers. (Tr. Vol. 2, pp. 153-54). Company witness Smith noted that the residential programs cited by Ms. Hitt are also all located in California. (Tr. Vol. 1,

pp. 71-72). Given these differences, it is unlikely that similar significant third party programs would develop in North Carolina.

Public Staff witness McLawhorn testified that the Public Staff does not recommend that Duke Energy Carolinas rely solely on purchased power to comply with the REPS Solar Carve Out obligations. (Tr. Vol. 2, p. 245). The Commission recognized the importance of qualifications and experience when the Company is evaluating suppliers and resource options:

> Q. Is it fair to say from the Company's standpoint of view that when evaluating whether or not the Company would wish to get into an agreement or an arrangement with a third party, a solar provider, that the Company considers the qualifications and experience of that third-party provider to be of fairly strong importance as to whether or not the Company would want to get into an arrangement. Is that a fair statement?
>
> [COMPANY WITNESS SMITH]: Yes, that's a fair statement.

(Tr. Vol. 1, pp. 180-81). In response to additional questions from the Commission, Witness Smith responded that only two of the solar bidders received the highest ratings for qualifications and experience. One of these bidders was Sun Edison, with which the Company has executed a purchased power agreement, and the other submitted a bid price that was substantially higher than the estimated Program costs on a megawatt hour basis. (Id., pp. 189-90). Witness McLawhorn also testified that if the Company withdrew its Application and entered into a purchased power agreement with the second or third place bidder from its RFP, and that supplier breached its contract and failed to meet its obligations, Duke Energy Carolinas would still be obligated to meet its Solar Carve Out obligations. (Tr., Vol. 2, pp. 246-47).

The Commission Previously Rejected a Mandatory REC Purchases Requirement in its Senate Bill 3 Rule-Making Proceeding

Solar Alliance witness Hitt and Vote Solar witness Starrs both advocate for a mandatory standard REC purchase offer. (Id., pp. 128, 151). Witness Starrs testified that requiring Duke Energy Carolinas to provide a long-term standard offer for solar RECs at a price equal to the cost of the Program to the Company will potentially lower costs to customers. (Id., p. 106). Witness Hitt echoed this sentiment. (Id., p. 137). NCSEA witness Day advocates that "a certain amount" of solar market share should be reserved for customer-generators (Id., p. 166), which essentially would mandate utilities to purchase RECs from such customers.

Witness Smith testified that NCSEA's, the Solar Alliance's, and Vote Solar's (collectively, the "Solar Intervenors") apparent position is that the Company should be required to purchase RECs from any solar customer-generator at a price that is the higher of the Company's cost to implement the Program, or the amount needed for the customer-generator to earn an internal rate of return of 9-12% on its investment. (Tr. Vol. 1, p. 80). Witness Smith contended that witnesses Starrs' and Hitt's supposition that a "must take" obligation at this price would result in lower costs to customers is untenable, and the overall parameters for the Solar Intervenors' REC purchase model are unacceptable. (Id., pp. 80-81). For example, witness Smith testified that if too few customers acted on the incentive provided by the Solar Intervenors' REC purchase model, and the Company had relied on it for compliance, the Company would not be able to comply with the REPS requirements. Alternatively, if a large number of customers acted on this incentive and the Company had no way to limit customer participants, the Company could exceed its REPS cost caps. (Id., 81-82).

As discussed above, witness Smith also testified that the Company already is developing a standard REC offer which it would make available to customer-generators on an as needed basis for RECs for general and Carve Out compliance based upon current market prices. (Id., p. 75). Although the Company has not finalized the interval for updating pricing of the offer, witness Smith testified that a reasonable approach that the Company is considering is one where pricing would be updated quarterly. (Id.). Witness Smith testified that a key purpose of the standard offer is to create a streamlined approach to interacting with owners of small generators that produce relatively small quantities of RECs. (Id.).

Accordingly, the Commission notes that it recently decided the issue of a mandatory REC requirement in its February 29, 2008, Order Adopting Final Rules in Docket No. E-100, Sub 113, a docket to which both the Solar Alliance and NCSEA are parties. That Order explicitly stated,

> . . . .[T]he electric power suppliers are not . . . obligated to purchase all RECs offered for purchase. The Commission is not persuaded that it is appropriate to impose such an obligation. The Commission, therefore, concludes that the rules need not spell out specific circumstances under which purchases of available RECs are or are not appropriate.

(Id., pp. 59-60). The Commission disagrees with witnesses Day, Starrs, and Hitt, and declines to require the Company to provide a standard REC offer for the purchase of solar RECs. What's more, none of the utility programs referenced by witness Hitt are in North Carolina, and it is not appropriate to conclude that similar programs in other states should be mandated for Duke Energy Carolinas or any other utility serving North Carolina customers.

Duke Energy Carolinas Is A "Private Investor" for the Purposes of Senate Bill 3

Senate Bill 3 uses the term "investment" in the preamble and the term "private investment" in Section 62-3(a)(10). That legislation, however, does not define the term "private investment." NCSEA witness Rosalie Day testified that the use of the term "private investment" excludes investor-owned utilities. When pressed by the Commission, however, witness Day was unable to articulate a rational basis for this opinion. (Tr. Vol. 2, p. 183-84). Duke Energy Carolinas witness Smith explained that because the Company is owned by its investors, its investment in the Program also constitutes private investment in renewable energy. (Tr. Vol. 1, p. 69). Witness Smith contrasted private investment with government funding. This understanding is consistent with the definition of "private" meaning "not established and maintained under public funds" *The Random House Dictionary (1980)*. Furthermore, Senate Bill 3 clearly allows for REPS compliance through the generation of energy from utility-owned new renewable energy facilities and reductions in usage through utility-sponsored energy efficiency programs. N.C. Gen. Stat. § 62-133.8(b). As a result, it would be incongruous for this Commission to interpret the policy statements contained in N.C. Gen. Stat. § 62-3(a)(10) to exclude utility investment in renewable energy and energy efficiency.

Net Metering Options for Customer-Generators

NCSEA Witness testified that improved net metering rules are needed to promote customer-owned solar generation. (Tr. Vol. 2, pp. 168-69). In response, Company witness McManeus testified that in addition to its Net Metering rider, the Company offers a second "net metering" option, Small Customer Generator Rider SCG ("Rider SCG") for residential generators not larger than 20 KW and non-residential generators not larger

than 100 KW. (Id., pp. 40-41). Witness McManeus explained that on the Company's Rider SCG, a customer is not required to be on an underlying time-of-use demand rate schedule, but rather may remain on a non-time-of-use rate schedule. (Id.). Rider SCG allows customers to offset their electricity usage using their own generation, thereby receiving a credit at the full bundled retail rate when the customer's generator is offsetting the customer's load. (Id.). When the output of the generator exceeds the customer's load and the excess generation is delivered to the grid, the Company pays the customer the Company's avoided energy costs based on its approved PP rate schedule. Customers retain all of the RECs associated with their generation. In addition, stand-by charges are waived for all generators not larger than 20KW. (Id.).

Witness Day admitted in responses to questions from the Commission that Rider SCG addresses the majority of her concerns:

> Q. All right. I think you were asked some questions about Small Customer Generator Rider SCG, right?
>
> [WITNESS DAY]: Yes
>
> Q. And you said that one of the things that you didn't like about that was that the supplemental base facility charge is not waived?
>
> [WITNESS DAY]: Right.
>
> Q. What else about that rider do you not like, if anything?
>
> [WITNESS DAY]: That rider is fine. And it's not statewide, but that's—that rider is fine.

(Id., p. 184). The Commission currently is addressing net metering issues as a part of the ongoing proceeding in Docket No. E-100, Sub 83, and will not address them here.

The Commission concludes that at the current pace at which customer-owned generation is being added to the Company's service territory, it would be imprudent for

the Company to rely solely on customer-owned generation in order to meet any of the benchmark requirements for solar generation from the years 2010 through 2018. Therefore, the evidence demonstrates that the Company is pursuing a prudent compliance approach consistent with the compliance methods set forth in N.C. Gen. Stat. § 62-133.8(b)(2), and that the Program is the best option, in addition to the Sun Edison agreement, to meet Duke Energy Carolinas' REPS Solar Carve Out obligation during the period 2010 through 2014.

EVIDENCE AND CONCLUSIONS FOR FINDING NO. 16

The evidence in support of these findings of fact is found in the testimony of Company witnesses Ruff, Smith and Hager and Public Staff witnesses Cox and McLawhorn, as well as case law.

The Company and the Public Staff agree that the Program is necessary to meeting the 2010 Solar Carve Out requirements. (Tr. Vol 1, p. 64; Tr. Vol. 2, pp. 216-17). The Commission has concluded above that the Program is prudent, consistent with the policy goals set forth in N.C. Gen. Stat. § 62-2 and is in the public convenience and necessity. To expedite installation of the proposed generation facilities pursuant to the Program, Duke Energy Carolinas requests approval of a "blanket" CPCN to install up to approximately 10 MW of solar distributed generation, collectively, pursuant to the Program. *See Order Approving Experimental Program and Issuing Certificate of Public Convenience and Necessity*, (Docket No. E-7, Sub 692) (July 25, 2001) (Order approving Duke Energy Carolinas' request for "Approval of On Site Generation Service Program, Application for a Blanket Certificate of Public Convenience and Necessity, and a Request for Waiver of Rule R8-61"); *Order Approving Experimental Rider and Issuing*

Certificate of Public Convenience and Necessity, (Docket No. E-2, Sub 720) (July 7, 1998) (Order approving Application For a Blanket Certificate of Public Convenience and Necessity and Request For Wavier of Rule R8-61 of Progress Energy). Witness Smith testified that because the precise location of the facilities cannot be specified at this time, approval of a "blanket" CPCN eliminates the necessity for the Company to seek individual certificates prior to the installation of each solar PV facility. (Tr. Vol. 1, p. 52).

The Commission concludes that the public convenience and necessity supports the installation of the solar PV facilities under the Program and issuance of a blanket CPCN is in the public interest. The Commission agrees that the Program will allow the Company to meet the increasing electric load that it must serve and enable the Company to partially meet its obligations under the REPS, all in furtherance of North Carolina's public policy. Accordingly, the Commission approves the Company's request for a blanket CPCN.

EVIDENCE AND CONCLUSIONS FOR FINDING NO. 17

The evidence in support of these findings of fact is found in the testimony of Duke Energy Carolinas witness Smith and Wal-Mart witness Baker.

Witness Smith testified that upon approval of the Program, customers who desire to offer their property as host sites for solar PV installations can contact Duke Energy Carolinas directly to request inclusion in the Program. (Id., p. 45). Smith Exhibit 1 (a copy of which is Attachment A to the Company's Application) represents a form of the tariff ("Solar Photovoltaic Distributed Generation Program (NC)") setting forth the terms and conditions that the Company intends to offer to customers with businesses, homes,

and other property that may be suitable for the installation of a solar PV facility. (Id.). As described in the Program Tariff, the Program will be available on a limited and voluntary basis, at the Company's option, to customers in owner-occupied individually metered single-family residences, or owners of other property, suitable for the installation of a solar PV system. (Id.). Witness Smith testified that the Company will work with customers to determine whether a solar PV generating facility is a viable option for their home, business, or land, and will consider such factors as the age of the roof in question, the angle and orientation of the roof or the slope and orientation of the land, the presence of trees and other solar obstructions, and whether the roof in question can support the weight of the solar PV generating facility. (Id., pp. 45-46).

Wal-Mart Witness Baker testified that the Company's Application contained no information on the "form of the lease contract to be used for the distributed generation program," and not enough information to explain how the Company proposes to "acquire solar panels at $5,000 per KW." (Tr. Vol. 2, pp. 96, 100). Additionally, witness Baker requested that the Company be required to file these form contracts with the Commission. (Id., pp. 96, 99). Company witness Smith testified, however, and this Commission agrees that the Commission does not require electric public utilities to file or seek approval of forms of contracts for real estate transactions with customers, such as utility right of way agreements. (Tr. Vol. 1, pp. 103-06). Although the Commission has authority over rates and conditions of electric service, real property transactions between a utility and its customers are beyond this scope. Thus, the terms and conditions under which customers may lease their property to Duke Energy Carolinas' is a Program implementation issue to be left to the Company. With respect to Wal-Mart's complaint that it desires more

information regarding the Company's plans for implementing the Program, the Commission notes that Wal-Mart raised these questions in its testimony in this docket without serving any discovery on the Company, without asking the Company any questions about the Program even on an informal basis, and after rebuffing Duke Energy Carolinas' offer to discuss Wal-Mart's concerns about the Program prior to the filing of Wal-Mart's testimony. (Tr. Vol. 2, pp. 102-03).

After considering the above evidence, the Commission approves the Program Tariff and concludes that approval of the form lease agreement between the Company and participating customers is not required.

EVIDENCE AND CONCLUSIONS FOR FINDING NOS. 18-20

The evidence in support of these findings of fact is found in the testimony of Duke Energy Carolinas witnesses Smith and McManeus, Public Staff witnesses Cox and McLawhorn, and NCSEA witness Day.

Relevance of Duke Energy Carolinas' Solar Bids to the Program

The Company asserts that the Program will provide greater and more varied benefits than mere third-party power purchases. As discussed in connection with finding of fact No. 13, witnesses Ruff and Smith outlined the myriad benefits that the Program is designed to produce.

The Commission disagrees with the Public Staff's comparison of bids for purchased power agreements to the Program. As stated earlier, the Program is designed to accomplish a broader set of objectives than those of the solar project bids submitted in response to the Company's 2007 RFP. (Tr. Vol. 1, p. 74). For example, Company witness Smith explained that including small and medium size installations under the

Program allows the Company to maximize what can be learned with respect to the impact of distributed generation on its system; however, the costs of these installations is not a material driver of the overall Program costs. (Id., pp. 140-41, 168). Moreover, the positive effects of this Program on the burgeoning solar market in North Carolina can be seen through the more than 470 customers who have contacted Duke Energy Carolinas to participate in the program, as well as the 70 plus firms submitting a notice of intent to bid and over 90 people participating in a bidder's conference for the Program. These are tangible, measurable effects of a Program that has not yet even been implemented, and are far different from the benefits attributable to a purchased power agreement for solar generation.

Program Size and Rate Treatment of Avoided Capacity and Energy Costs

Witness Smith testified that the Company's understanding of the collective opinion of the intervenors, including the Public Staff, was that the size of the program ($100 million, 20MW) was a concern relative to the REPS requirements. (Tr. Vol. 1, 111-12). Witness Smith also testified that in response to those concerns, the Company agreed to reduce the size of the Program and spend $50 million (rather than the $100 million originally proposed) to implement the Program over the course of two years. (Id., p. 65).

Witness McManeus testified that the Program directly responds to the North Carolina General Assembly's mandate to promote the development of renewable energy, and contributes to the Solar Carve Out requirement in Senate Bill 3. (Tr. Vol. 2, pp. 31, 48). Witness McManeus explained that the Company, therefore, proposes to recover through base rates an amount equivalent to the avoided cost of conventional generation

that would be displaced by the Program, and recover the incremental costs of generation produced by solar installation under the Program through the cost recovery mechanism provided in Senate Bill 3 and the rules the Commission has adopted under that statute (N.C. Gen. Stat. § 62-133.7(h) and Commission Rule R8-67(e)("REPS Rider")). (Id., pp. 31, 35).

Witness McLawhorn and witness Day both testified that the Company should deduct both avoided capacity and avoided energy costs from its calculation of the incremental costs that it plans to recover through the REPS rider. (Id., pp. 170, 225-226). The Company agreed and revised its cost projections in this proceeding to deduct both avoided capacity and avoided energy costs from its calculation of the incremental costs that it plans to recover through the REPS rider. (Id., p. 35). Witness McManeus explained that although the Company agrees that this treatment is warranted under the statute, the Company has concerns that as drafted, the statute provides inconsistent rate treatment for utility-owned renewable generation. She testified that Senate Bill 3 allows for the recovery of avoided costs associated with renewable energy purchases for REPS compliance through the fuel and fuel-related costs clause, which results in inconsistent rate treatment for the avoided cost portion as between purchased renewable generation and utility-owned renewable generation. (Id., pp. 35-36).

Witness McManeus also testified that although the Company does not believe that the General Assembly intended to afford less timely cost recovery to utility-owned renewable resources, Duke Energy Carolinas has agreed that the definition of the term incremental cost in Senate Bill 3 may not be fulfilled unless both avoided capacity and avoided energy costs are deducted in determining incremental costs. (Id.). Additionally,

witness McManeus testified that the Company is not requesting a rate change at this time. (Id., p. 32).

Duke Energy Carolinas' utility-wide ceiling for REPS compliance is dependent on the estimated number of customer accounts to which the cost cap amounts by customer class will be applied. (Id., pp. 37-38). Witness McManeus explained that at the time it requests approval for a REPS rider, the Company will propose modifications to the number of accounts as reported to the Energy Information Administration in order to mitigate the impacts of the REPS rider on low-usage customers. (Id.). Witness McManeus also testified that the Company's most recent estimate of the number of customer accounts, using a modified definition, is approximately $26 million in 2010 and 2011 and increases to $45 million in 2012. (Id.). The Company's revised estimate of the annual incremental Program costs expected to be recovered through the REPS rider of $2.7 million represents approximately 10% of the aggregate cost cap in 2010 and 2011, declining to approximately 6% in 2012 and to 3% in 2015. (Id.).

Witness McManeus also explained that although the Company's estimate of the impact on the residential customer's monthly bill as filed in her direct testimony was $0.34 per month, several revisions to the underlying assumptions of this estimate have changed, resulting in a revised estimate of $.08 per month per residential customer account. (Id., p. 36). The revised assumptions include (1) a change in the size of the Program as discussed by Company witness Smith, (2) inclusion of both avoided capacity costs and avoided energy costs in the definition of avoided costs for determination of incremental costs, and (3) recognition of the tax benefits of the North Carolina property

tax exclusion for solar investment and extension of the federal income tax credit to utilities. (Id.).

Witness McManeus also testified that the estimated levelized annual Program cost is **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** which is $33 per mwh less than the **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** Program cost provided to the Public Staff during discovery. (Id., p. 38). The **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]** cost reflects a refinement of the impact of the federal energy investment tax credit and recognition of the tax benefits of the North Carolina property tax exclusion for solar investment. (Id.). Additionally, as a public utility, the Company is required to follow certain tax normalization requirements with respect to the treatment of the federal energy investment tax credit. Witness McManeus testified that absent these requirements, the cost estimate would be approximately **[BEGIN CONFIDENTIAL]** [redacted] **[END CONFIDENTIAL]**. (Id.).

Effect of Tax Normalization Requirements

The Public Staff recommends that the Commission grant a blanket CPCN for up to 10 MW (DC) of solar PV distributed generation under the Program, but only with certain conditions: the Public Staff would limit the amount of Program costs the Company may recover under the REPS rider to no more that the bid price of the third place solar bidder in the 2007 RFP for renewable energy resources (less avoided cost). (Id., 226, 241-42). In its Post-Hearing Brief, Duke Energy Carolinas noted that the Public Staff takes this position despite (1) presenting no evidence that the remainder of the costs are imprudent, (2) admitting that their derived cost cap is "subjective," (Id., p.

224) and (3) fully expecting the Commission to hold Duke Energy Carolinas to an exceptionally high standard of not excusing non-compliance with the REPS requirements in the event that a third party solar supplier defaults. (Id., pp. 248-49). The Company argued that in addition to being admittedly subjective, the Public Staff's position is based upon a series of assumptions that the Commission should not accept. In response to cross-examination questions by counsel for the Public Staff attempting to quantify the "true solar cost" discussed by the Public Staff, Witness Smith responded:

> . . . .Your question requires one to assume that the second-place bidder in the RFP was a price and a developer that . . . had no risk of changing, that the price as originally proposed would not change if we had undertaken extensive negotiations with that bidder to finalize terms and conditions, and would also require us to have full confidence that that project as proposed would come to fruition as proposed. And those are assumptions that, *I think, stretch beyond what I would be comfortable making.*

(Tr. Vol. 1, pp. 147-48). Witness McManeus provided similar testimony. (Tr. Vol. 2, pp. 85-86).

The Commission recognizes that the Public Staff is attempting to arrive at the value of the "solar only" cost of the Program, (see Tr. Vol. 2 at 235, 245-46); however, the Commission agrees with Duke Energy Carolinas that ultimately this exercise is unwarranted. The Company argued in its Post-Hearing Brief that by attempting to limit the amount Duke Energy Carolinas may recover through the REPS rider, the Public Staff both ignores the impact of the federal tax normalization rules on investment tax credit for utility-owned solar generation and seeks to impose its view as to Program design upon the Company. As witness McManeus explained, as a public utility the Company is required to follow certain tax normalization requirements with respect to the treatment of the federal energy investment tax credit. (Tr. Vol. 2, pp. 38-39). The impact of these

requirements is the most significant driver affecting the cost of the Program as compared to the solar bids. Absent these requirements, the levelized annual Program cost would be in line with the lower cost solar bids in the 2007 RFP for renewable energy resources. (Id., p. 38; Public Staff Smith Confidential Cross Examination Exhibit 1).

Witness McManeus also explained that the only means to avoid the impact of the tax normalization requirements would be for the Company to rely one hundred percent on third parties to meet its Solar Carve Out obligations. (Id., p. 196). As discussed above, the Commission agrees that Duke Energy Carolinas' portfolio approach of using utility-owned solar generation, purchased power agreements and REC purchases to meet its Solar Carve Out obligation is a prudent strategy. Retail customers benefit if the Company can build its competencies to own renewable assets and not be left to rely solely on third parties. In its Post-Hearing Brief, the Company highlighted the comments of the Public Staff in the Commission's rulemaking proceeding to implement Senate Bill 3 regarding the possible failure of third-party solar providers to perform:

> In the Public Staff's view, a contractual default by a solar or solar thermal operator (or, for that matter, any other provider of renewable energy or energy efficiency) should not ordinarily relieve an electric power supplier from its obligations under the REPS requirements. This is especially true with respect to the State's electric public utilities, which are large corporations with extensive experience in procurement and contingency planning. . . . The Public Staff's proposed Rule R8-67(d)(2) authorizes an electric power supplier to petition for full or partial relief from its obligations under G.S. 62-133.7(d) in the event of default by a new solar or solar thermal facility, but it also provides that **such relief will not be granted to an electric public utility except in extraordinary circumstances.**

Public Staff Comments and Proposed Rules Implementing Session Law 2007-397, Docket No. E-100, Sub 113 (November 14, 2007) at 12 (emphasis added). (*See also* Tr. Vol. 2, pp. 247-48). Duke Energy Carolinas argued that given the difference between the mature

national wholesale power market versus the nascent North Carolina solar energy market, these comments highlight the need for utility-owned solar generation.

Company Witness McManeus explained that all of the kilowatt hours generated by the Program will go towards Duke Energy Carolinas' REPS compliance. Section 62-133.8(h) places cost caps on the amount of compliance costs to be recovered from customers through the annual REPS rider and offers no apparent mechanism for recovery of compliance costs that exceed the cap. Witness McManeus expressed concern that if the Commission approves the Company's Program Application but a limitation is placed on the amount of incremental REPS compliance costs recoverable through the REPS rider for the approved Program, recovery of REPS compliance costs above the imposed limit through its base rates will not honor the intent of the cost cap. (Id., pp. 39-40; Tr. Vol. 1, pp. 74-75). The Commission commends Duke Energy Carolinas for taking the initiative to achieve more than mere REPS compliance. As reflected in the testimony of Company witnesses Ruff, Smith, and McManeus, however, the primary purpose of the Program is to produce megawatt hours that fulfill the Solar Carve Out obligation. The Commission recognizes that the Company would not have undertaken this initiative had the REPS legislation not been enacted.

The Commission concludes that the appropriate cost recovery mechanism for the incremental costs associated with the Program above the avoided cost of conventional generation displaced by the Program is through the REPS rider. The Public Staff's recommendation that the Commission limit the amount of recoverable Program costs raises concerns regarding meeting the letter and intent of the REPS cost caps under N.C. Gen. Stat. § 62-133.8(h). The Commission understands that the Public Staff seeks to

parse the relative costs and value of the various benefits of the Program. The Commission need not engage in this subjective exercise because of the conclusion, discussed above, that the primary purpose of the Program is REPS compliance and, as such, the Company must comply with the REPS customer cost caps. Given that the Commission has concluded that the Program is prudent and necessary for REPS compliance, the Commission declines to artificially limit the amount of recoverable Program costs through the REPS rider. In its subsequent REPS rider proceedings it will be incumbent upon Duke Energy Carolinas to demonstrate that it has executed the approved Program prudently. The Commission also concludes that Duke Energy Carolinas' estimated construction costs for the Program are reasonable and approved. As required by N.C. Gen. Stat. § 62-110.1(f), the Company shall submit a progress report each year during construction that includes revisions in the cost estimates.

IT IS THEREFORE ORDERED:

1. That the Application filed in this docket should be, and the same is hereby, approved and a blanket Certification of Public Convenience and Necessity for up to 10 MW (DC) of solar photovoltaic distributed generation within the Company's North Carolina service territory under the Program is granted;

2. That the proposed Program tariff implementing the Program is approved; and

3. That the estimated construction costs for the Program are reasonable and approved and the appropriate cost recovery mechanism for costs associated with the Program is through the REPS cost recovery mechanism provided for in N.C. Gen. Stat. § 62-133.8(h) and Commission Rule R8-67(e).

This the ____ day of _____, 2008

NORTH CAROLINA UTILITIES COMMISSION

_____

Renné C. Vance, Chief Clerk

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a copy of Duke Energy Carolinas, LLC's Post-Hearing Brief and Proposed Order in Docket No. E-7, Sub 856, has been served by hand delivery or by depositing a copy in the United States Mail, first class postage prepaid, properly addressed to parties of record.

This, the ____ day of _____, 2008.

Lara Simmons Nichols
Associate General Counsel
Brian L. Franklin
Senior Counsel
Duke Energy Corporation
526 S. Church Street, EC03T
Charlotte, North Carolina 28202
Tel: 704-382-9960 and 980-373-4465
Fax: 704-382-5690 and 704-383-4494
lsnichols@duke-energy.com
blfranklin@duke-energy.com

Robert W. Kaylor
Law Office of Robert W. Kaylor, P.A.
3700 Glenwood Avenue, Suite 300
Raleigh, North Carolina 27612
Tel: 919-828-5250
North Carolina State Bar No. 6237

ATTORNEYS FOR DUKE ENERGY CAROLINAS, LLC

CERTIFICATE OF SERVICE

I certify that a copy of Duke Energy Carolinas, LLC's Proposed Order in Docket No. E-7, Sub 856, has been served by electronic mail (e-mail), hand delivery or by depositing a copy in the United States Mail, first class postage prepaid, properly addressed to parties of record.

This the 21st day of November, 2008.

Robert W. Kaylor

Robert W. Kaylor
Law Office of Robert W. Kaylor, P.A.
3700 Glenwood Avenue, Suite 330
Raleigh NC 27612
(919) 828-5250
NC State Bar No. 6237