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VIA HAND DELIVERY

October 10, 2008

Ms. Renne C. Vance
Chief Clerk
The NC Utilities Commission
4325 Mail Service Center
Raleigh, NC 27699-4325

FILED

OCT 10 2008

Clerk's Office
N.C. Utilities Commission

Re: Testimony in Docket No. E-7, Sub. 856

Dear Ms. Vance:

Enclosed please find the original and 30 copies of The Solar Alliance's Testimony in Docket No. E-7, Sub. 856. I have served the enclosed Testimony on all parties to this proceeding.

Thank you for your assistance with this filing.

Very truly yours,



R. Sarah Compton, Esq.

Counsel for The Solar Alliance

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STATE OF NORTH CAROLINA
UTILITIES COMMISSION

DOCKET NO. E-7, SUB 856

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

Application of Duke Energy
Carolinas, LLC for Approval of a Solar
Photovoltaic Distributed Generation
Program and for Approval of Proposed
Method of Recovery of Associated Costs

Initial Testimony of The Solar Alliance

FILED

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Clerk's Office
N.C. Utilities Commission

INTRODUCTION

The Solar Alliance is pleased to provide testimony to the North Carolina Public Utilities Commission (NCUC) in the above- referenced case. Solar Alliance's testimony, presented by Carrie Cullen Hitt, follows. In addition to this testimony, The Solar Alliance also supports the submission made by Vote Solar.

1 * * * * *

2

3 **Q: Please state for the record your name, position, and business address.**

4 A: My name is Carrie Cullen Hitt. I am President of the Solar Alliance. My business
5 address is 132 Front Street, Scituate Massachusetts. My mailing address is PO Box 534,
6 North Scituate, Massachusetts 02060.

7

8 **Q: Please describe your experience and qualifications.**

9 A: My experience and qualifications are described in my *curriculum vitae*, which is
10 Attachment A to this testimony. I have experience and knowledge with respect to the
11 matters to be decided in this case. As the former Vice President for Regulatory Affairs at
12 Constellation New Energy, I was involved in or oversaw participation in numerous cases
13 throughout the United States related to utility retail rates and cost recovery. In addition, I
14 am familiar with policies and industry frameworks that ensure competition among
15 industry participants, particularly as they relate to the treatment of utility-owned
16 generation. With respect to solar issues, I am familiar with the technical and economic
17 characteristics of the solar photovoltaic (PV) industry. In addition, as an owner of a new
18 solar energy rooftop system, I am aware of the myriad technical and cost issues from the
19 consumer's perspective.

20

21 **Q: Please summarize the recommendations you present in this testimony.**

22 A: My testimony recommends that NCUC not limit ownership of PV systems in any
23 market segment to any particular entity or market participant. Rather, in order to support
24 North Carolina's ongoing efforts aimed at helping PV achieve grid parity, NCUC should

encourage a wide range of ownership structures to maximize both competition and innovation in the solar PV industry and thereby maximize the use of solar energy. Specifically, NCUC should require that Duke establish a long-term contract price for the solar renewable energy certificates (RECs) obtained through this program, and make that same price available to non-utility, third-party customers alongside the Duke-provided program.

Policies should support the deployment of large, utility scale projects as well as smaller, distributed generation. Programs and policies that maximize competition and innovation are critical to encouraging deployment of PV in North Carolina.

Q: Do you agree with Duke's statement that a utility-owned solar PV distributed generation program of this size will enable Duke to develop competency as an owner of renewable assets, leverage volume purchases . . . facilities?

Yes, the Solar Alliance agrees that a utility-owned PV distributed generation program will enable the Company to learn more about solar PV. The solar PV market and industry, however, is broader than utility-owned systems. As stated earlier, customer-owned and third party owned systems are also viable models. Encouragement of alternative ownership models will result in a more diverse experience in terms of types of technology deployed, location of facilities, number and types of market participants/providers. Duke will learn considerably more if deployment of other models is also encouraged.

Q: Does Duke's Proposal Exclude Other Models for the Future Development of the Solar PV market in Duke Territory?

Yes, in part. The Solar Alliance supports Duke's interest in promoting utility-owned solar PV. However, the size of the Duke program as proposed is such that (in combination with the existing utility-scale solar projects proposed by the Company), it could represent the entirety of the solar market in Duke territory for the foreseeable future.

Promoting utility-owned solar PV to the exclusion of other ownership models is detrimental to future development of the industry, because it would result in only one type of ownership model being deployed. This situation would eliminate any possibility of competition and reduce supplier interest in the market. Competition among ownership models, providers, installers, etc. is essential to meet some of the State's goals for renewable energy production. In its application, Duke states that its proposed program would 1) meet the demands of customers, 2) enable Duke to learn more about solar PV, and 3) enable Duke to build relationships with PV developers, etc.¹ Although laudable, all of these goals would be better served with a program that encouraged customer and third-part ownership of solar energy systems.

In promoting only the utility-owned model, Duke assumes that customers only want utility owned solar. For example, the Company proposal will keep all RECs

¹ Application of Duke Energy Carolinas, Inc. LLC for Approval of a Solar Photovoltaic Distributed Generation Program and for Approval of Proposed Method of Recovery of Associated Costs (Duke App.), at 4.

created as a result of this program. In many cases, however, customers would like to keep RECs so they may lay claim to their environmental benefits. A third scenario would allow developers to provide financial payment to customers in order to purchase and own the RECs. If the utility-owned model were the only model in North Carolina, these potential options would not be available to customers.

It is also obvious that Duke would learn a great deal more about solar energy production if more than one model of ownership were employed.

As for building relationships with providers, it is Solar Alliance's experience that many providers support the use of different models. Duke's proposal would limit its experience with providers.

Q: Do you support Duke's proposal to identify, collect, and analyze the similarities and differences in local requirements which Duke hopes will yield benefits including, but not limited to the following:

- Development of standardized requirements for PV system installation
- Reduced administrative burden for utilities and installers;
- Lower installed costs as installation efficiencies are gains; and

92 ○ Education and familiarization with solar PV solar facility installation
93 for local inspection authorities?

94

95 The Solar Alliance supports Duke's proposal to collect data and other key
96 information to learn more about the economic and physical impacts (positive and
97 negative) of solar PV facility installations. We also support utility efforts to educate
98 local building code officials so that solar installations can be installed effectively and
99 efficiently with the lowest overall costs to North Carolina consumers.

100

101 **Q: Should Duke Be Required to Collect the Same Information from Facilities**
102 **Owned by Customers or Third Parties?**

103

104 I recommend that the same data be collected from systems that are not owned by
105 Duke. In fact, Duke is likely to gather more comprehensive information if it
106 encourages and permits non-utility-owned systems and collects information from
107 those systems as well. In order to facilitate this, in exchange for its payment for
108 RECs, Duke could require any customer or third party owned system to install
109 necessary data equipment, preferably at Duke's expense.

110

111 **Q: Should Duke be required to make Public, via the NCUC, the Findings of the**
112 **Information Collected as referenced in Section 17 of its Application?**

113

114 Yes. As Duke itself points out, the data and related information collected could yield
115 benefits including reduced administrative burden for utilities and installers and lower
116 installed costs. Installers, manufacturers, and other market participants may use
117 such information to modify practices and seek system improvements.

118
119 **Q: Does Duke's Requirements for Vendor Participation in the Utility-Owned**
120 **Program Limit the Interest of Some Potential Providers, and Thereby Limit Private**
121 **Investment in Solar Energy?**

122
123 Yes, it could in several ways. The Company states that it may issue a competitive
124 solicitation to fulfill its needs.² The Solar Alliance supports this effort but notes that
125 one solicitation has already been issued and a contract awarded early this year.

126
127 In effect, the Duke program solicits contractors to construct systems on facilities
128 identified by Duke, using a finance model supplied by Duke; there is some
129 suggestion in the discussion of volume purchasing and the like that the contractors
130 will even be using materiel supplied by Duke. Again, this will discourage
131 competition in the field and ultimately negatively affect Duke's ratepayers. At the
132 least, Duke should allow solar equipment suppliers to meet competitive solicitations
133 by doing what they do best while Duke focuses on providing brand identification,
134 scale of operations, rate supported financing, etc.

135

² Duke App., at 7.

136 Duke's approach will no doubt result in some growth in the business of solar
137 contracting and installation in Duke's territory, a commendable outcome. However,
138 under this scenario *only* the installation component of the industry would be
139 developed because it would be apparently impossible or unnecessary for contractors
140 to develop their own customers – stunting development of sales, marketing, finance,
141 and other key components of the industry.

142

143 In fact, Duke's proposal, intended to increase investment in solar energy, may limit
144 most if not all private investment in favor of public utility investment. As designed,
145 the Duke proposal for the creation of 20MW of solar power would not include any
146 private investment and apparently will exhaust the available RECs. Such a system
147 will discourage other entities from participating in and developing solar energy in
148 North Carolina.

149

150 As opposed to a more traditional project model, wherein a private developer
151 provides value-added in all phases of project development (sales, marketing, design,
152 finance procurement, construction, operations and maintenance,) the Duke proposal
153 would place the majority of the value stream within the sphere of utility control.
154 Further, the utility customer hosting the solar system would bring no financial
155 resources to the table; in fact, it would receive additional utility money, in the form
156 of the yet to be determined lease payment from Duke.

157

158 Q: Do you concur with Duke's assertion that its commercial deployment of solar
159 distributed generation will promote "faster, larger, and coordinated installations as
160 opposed to sporadic installations by individual owners?"

161

162 A: Not as stated. The choice is not simply between sporadic, individual installations
163 on the one hand, and the Duke program on the other. In fact, if Duke's program
164 foreclosed on customer use of RECs, it would prevent the expansion into North
165 Carolina of some of the largest and most expeditiously and best-coordinated
166 installations of solar energy to date. Significantly, several individual solar clients
167 (very large retailers) have programs underway that are of a scale comparable to the
168 entirety of the Duke program including:

169

170 • Kohl's Department Stores, with 63 California stores and more than 25 MW
171 of total capacity underway with Sun Edison, LLC

172 (<http://www.sunedison.com/images/press/092607-kohls.pdf>)

173

174 • Macy's, Inc. with 28 stores and 8 MW of capacity with SunPower
175 Corporation),

176 (<http://investors.sunpowercorp.com/releasedetail.cfm?ReleaseID=266457>),

177

178 • Wal-Mart with 22 stores producing 10 MW with SunPower, SunEdison, and
179 BP Solar) (, <http://walmartstores.com/FactsNews/NewsRoom/6442.aspx>)

180

- Safeway Stores with 23 locations with Solar Power Partners, LLC)
(http://shop.safeway.com/corporate/safeway/windenergy/solar_stores_release.pdf)

On the residential side, similarly significant, rapid, and systematic installations are becoming commonplace. (See <http://www.sunpowercorp.com/For-Homes/Homebuilders/New-Home-Communities.aspx> or <http://www.ocrsolarandroofing.com/en/homebuilders/solar-communities.php> for a list of more than 78 residential developments where either 100% of homes are solar – powered, or where it is an option on all available homes). These residential systems, developed by Solar Alliance members SunPower Corporation and BP Solar (in BP's case, through exclusive partner OCR Solar & Roofing), were systematically and rapidly built using standardized techniques and in partnership with leading production homebuilders.³

However, these efficient large scale solar deployment programs could not be employed in Duke's territory under the contemplated program, for the simple reason that all available solar RECs would have been consumed, and thus the only economically competitive way to obtain rooftop solar energy would be through

³ These homebuilders include Atherton Homes, Castle & Cooke, Centex, Christopherson, Community Dynamics, Davidson Communities, D.R. Horton, Elliott Homes, Grupe, Heartwood Communities, Hugh Futrell, JKB Homes, Kirk Enterprises Lennar, Mertiage, Pardee, Pinn Brothers Fine Homes, Ponderosa Homes, Premier Homes, , Shea Homes, Standard Pacific, Tim Lewis Communities, Homes by Towne, William Lyon Homes, Wilson Homes, and Woodside homes.

200 Duke's program.⁴ Because this leaves little or no room for a contractual or
201 developer relationship other than that between Duke and the end use customer, there
202 is no ability to leverage the national programs described above (with their specialized
203 financing and construction terms, negotiated with each host customer according to
204 their varying facilities and requirements.)

205
206 Under Duke's proposal there would be a potentially significant loss of efficiency, as
207 it precludes the employment of those customers most familiar with streamlined, pre-
208 existing arrangements between solar developers and their customers. Several
209 national solar developers have already negotiated agreements with host customers
210 that contemplate myriad contract terms, any one of which could introduce
211 unforeseen delay in the implementation of Duke's proposed programs.

212
213 The existing contractual understandings and rapid deployment programs already in
214 place are not workable in a program where a customer merely leases its roof space
215 for a utility-owned power plant.

216
217 In my opinion, then, the Duke program is a significant improvement over "sporadic
218 installations by individual owners" and should in fact be approved on that basis. It
219 should not, however, be permitted to serve as the sole means of obtaining rooftop
220 solar in Duke's territory, thereby foreclosing existing national customer – developer

⁴ In the specific case of residential integrated construction, it is difficult to contemplate how Duke's proposal could adequately accommodate them.

221 relationships that are to date the best example of “larger and coordinated”
222 installations.

223

224 Approval of Duke’s Proposal should be accompanied with a NCUC directive that
225 Duke continue to expand its exploration of various business models beyond the
226 utility ownership in the distributed solar market.

227

228 Does this conclude your testimony?

229 Yes.

Carrie Cullen Hitt

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Scituate, MA 02066
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PROFESSIONAL EXPERIENCE

President, Solar Alliance

August 2008 - Present

- Oversees all activities of the organization - a 501C6 corporation

The Solar Alliance is a state-focused association of the world's leading solar photovoltaic (PV) manufacturers, integrators, installers and financiers dedicated to accelerating the deployment of solar electric power in the United States. The Solar Alliance and its members have a strong interest in the adoption and implementation of far-reaching policies and programs that will accelerate the movement toward a low-carbon economy and stimulate the development and use of zero-carbon, renewable energy technologies such as solar PV.

Vice President, Sustainable Energy Solutions, Constellation Energy Resources

March 2007 - July 2008

- Responsible for new product development for retail sustainability products, including renewable energy, greenhouse gas assessment and carbon offsets.
- Develop and implement market strategy, product margin and pricing.
- Manage team of 10 subject and functional experts, as well as revenues and SG&A for product line.
- Oversee marketing and public relations campaign; operational/processing and sales support.
- Lead company external interface. Including relationships with NGOs and other standard setting parties.
- Direct CNE internal GHG assessment and mitigation program.

Vice President, National Government and Regulatory Affairs, Constellation NewEnergy

January 2004 – February 2007

National Director, Government and Regulatory Affairs, Constellation NewEnergy

April 2003 – December 2003 - Baltimore, MD and Boston, MA

- Directed public affairs initiatives for Constellation New Energy, the largest retail electricity company in the U.S. Develop strategy for all company political and regulatory activities in all U.S. and Canadian markets.
- Managed a \$7 million budget and staff of 15 located throughout the U.S. and Canada.
- Managed relationships with policymakers, company representatives and industry organizations. Represent the company at industry forums, including government officials and testimony before legislatures and regulatory agencies. Serve as an expert witness.
- Lead public affairs interface and analysis with holding company (Constellation Energy, Fortune 200) and all company affiliates.
- Member of the company's risk, sales commitment and stakeholder management committees.
- Reported to the President and CEO and served as an officer of the company.

PROFESSIONAL EXPERIENCE (CONT.)

Director, Product Development, Constellation NewEnergy, New England

March 2001 – May 2003 (under AES management) and August 1997-March 1999 - Boston, MA

- Represented the company in the New England and New York markets.
- Developed regulatory strategy for retail and wholesale operations, include ISO/RTO matters.
- Participated in various national industry associations. Managed renewable energy initiatives.
- Responsible for managing the region's budget process and develop expense forecasts.
- Established and launched program for small commercial customers.

Director, Regional Business Development, Green Mountain Energy Company

April 1999 – March 2001 - Austin, TX

- Created and implemented business plan for the New England region. Primary focus was residential customers.
- Managed cross-functional project team, negotiated wholesale supply contract, and arranged for substantial investment from state renewable energy fund.
- Represented the company on regional and national regulatory matters.

Assistant Director, Harvard Electricity Policy Group

June 1995 – July 1997 - Cambridge, MA

- Served as administrator for a project focused on competition in the electricity industry in the US and other countries.
- Conducted research and authored reports for project participants, including state and federal policy makers, private and public companies and academics.
- Co-authored several published articles on issues such as wholesale market power.
- Participated in consulting projects for Japan and Thailand. Administered budget and managed participant communication.

Senior Research Analyst, Joint Committee on Energy, Massachusetts Legislature Boston, MA

1991 – 1993

- Analyzed and advised in various aspects of energy policy.
- Reviewed economic and environmental impacts of generation facilities.
- Wrote testimony, authorized reports and opinion pieces.

Internships:

The Alliance to Save Energy, September 1994-1995

Massachusetts Department of Telecommunications and Energy, Summer 1994

Teaching Assistant, Holy Cross and Clark University summer program in Luxembourg, 1990

Consulting:

Served as consultant to the Massachusetts Joint Committee on Energy on restructuring matters throughout 1997.

EDUCATION

M.A. International Economics, the School of Advanced International Studies,
Johns Hopkins University, Bologna, Italy & Washington, DC 1995

B.A. Government & History, Clark University, Worcester, Massachusetts 1990

Papers and presentations available upon request.

CERTIFICATE OF SERVICE

I hereby certify that this 10th Day of October, 2008, the following persons on the docket service list for Docket No. E-7, Sub. 856 have been served true and accurate copies of the foregoing Testimony of The Solar Alliance by e-mail:

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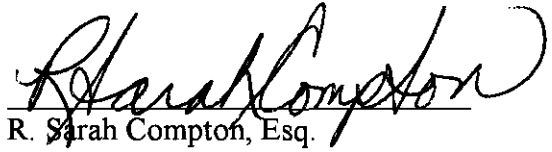
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A handwritten signature in black ink, appearing to read "R. Sarah Compton", written over a horizontal line.

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