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**VIA HAND DELIVERY**

March 4, 2009

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

**FILED**  
**MAR 04 2009**  
Clerk's Office  
N.C. Utilities Commission

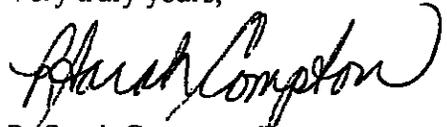
Re: Docket No., E-7, Sub. 856; Brief in Response to Motion for Reconsideration

Dear Ms. Vance:

Enclosed please find the original and 30 copies of The Solar Alliance's Initial Brief in Response to Duke Energy Carolinas LLC's Motion for Reconsideration filed in the above-referenced docket. I have served the enclosed Brief 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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BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

**FILED**  
**MAR 04 2009**

DOCKET NO. E – 7, SUB 856

Clerk's Office  
N.C. Utilities Commission

In the Matter of the Application of	)	
Duke Energy Carolinas, LLC	)	SOLAR ALLIANCE'S INITIAL
For Approval of a Solar Photovoltaic	)	BRIEF IN RESPONSE TO DUKE
Distributed Generation Program and for	)	ENERGY CAROLINA LLC'S
Approval of Proposed Method of	)	MOTION FOR
Recovery of Associated Costs	)	RECONSIDERATION

**INTRODUCTION**

The Solar Alliance files this brief in response to Duke Energy Carolinas, LLC's ("Duke's") *Motion for Reconsideration* dated January 29, 2009 ("Motion"). The Solar Alliance welcomes Duke's involvement in the installation of 10 megawatts ("MW") of new solar power in North Carolina, and it joins in Duke's request that the North Carolina Utilities Commission (the "Commission") find that the implementation of an appropriate solar photovoltaic ("PV") distributed generation ("DG") program is reasonable and prudent (*Motion* at p. 17, Request (1)(a)), *provided* that such a program be structured to allow for an in-depth exploration of the benefits of PV DG and a cost-benefit analysis of utility ownership versus third-party ownership of solar assets. In addition, Solar Alliance requests that the Commission address Duke's concerns over tax normalization in a definitive manner. Finally, Solar Alliance asks that the Commission deny Duke's request that its 2010 solar set-aside requirements be delayed, irrespective of the Commission's decisions regarding Duke's other requests.

## ARGUMENT

### **I. The Commission Should Find That the Implementation of an Appropriate Solar PV DG Program Is Reasonable and Prudent.**

#### **A. Large-Scale Centralized PV Systems Are Not Directly Comparable to Distributed PV and Therefore May Not Provide an Accurate Benchmark for Cost Recovery.**

In its *Order Granting Certificate of Public Convenience and Necessity with Conditions* issued in this docket on December 31, 2008 (the “Order”), the Commission determined that

[t]o the extent that the costs of [Duke’s proposed] program exceed the cost for which Duke could have reasonably purchased solar energy and RECs from a third party, Duke has not met its burden of proving that these costs are reasonable and prudent and, therefore, eligible for recovery as incremental costs through the REPS and REPS EMF riders.

*Order* at p. 5, Finding of Fact No. 13. The Solar Alliance fully supports this determination: A utility should not be allowed to recover costs over and above the cost for which it can obtain comparable solar energy and RECs without a further showing of the reasonableness and prudence of such additional costs.

In this case, however, the cost of comparable solar energy and RECs—that is, solar energy and RECs derived from PV DG in North Carolina—is not yet known. While the third-place solar bidder in Duke’s 2007 request for proposals (the “2007 RFP”) provides a logical, if rough, proxy in the absence of concrete data, distributed solar is, in fact, different in cost, scale, and benefits from the large-scale, central-station generation bid into the 2007 RFP.

For instance, even if distributed PV is more expensive than centralized PV on a per-MW-hour basis, it may offer other savings and benefits. As an example, the

installation of distributed PV entails lower distribution infrastructure costs in comparison to centralized PV because it does not require the construction of new lines, transformer banks, capacitors, or other distribution equipment. Indeed, because they can serve load on-site, well placed solar installations can reduce the need for new or expanded transmission on an absolute basis.

Without test cases, however, it is not possible to determine the value of these benefits or whether such value inures specifically to utility-ownership of distributed PV, and therefore, what constitutes a reasonable and prudent cost for purposes of cost recovery. In the following section, Solar Alliance details a plan for providing such test cases within the context of the proposed 10 MW PV DG program.

**B. The 10 MW PV DG Program Should be Designed to Provide an Assessment of the Benefits of PV DG and Data on the Costs and Benefits of Utility-Owned PV DG Versus Customer-Owned PV DG.**

The 10 MW PV DG Program should be considered a laboratory to assess the benefits of distributed PV versus centralized generation and to determine the costs and benefits of utility ownership of distributed generation versus customer ownership. The program should be designed to allow comparisons such that other utility programs can be structured to maximize the benefits and minimize the costs of distributed solar. Furthermore, if Duke requests an expansion of the program, it should be required to demonstrate the value of utility ownership of distributed solar.

To accomplish these goals, the Commission should impose two conditions. First, the Commission should require Duke to develop a detailed research plan regarding the benefits of targeted distributed generation. Duke is uniquely positioned to determine the

best location for distributed PV and to design systems to maximize its benefits. Thus, the results of Duke's study in these areas would provide invaluable information to inform future discussions about distributed generation. As such, the study results should be made public.

Second, the Commission should require that Duke install (through contractors, where possible), own, and operate 5 MW of the target amount of solar generation itself and procure the remaining 5 MW of RECs from customer-owned projects (the "Customer Standard Offer"). Under the Customer Standard Offer, interested customers would agree to install solar at their locations by a date certain (the "Commissioning Date") in exchange for Duke's purchase of 100 percent of the customers' RECs under standard long-term contracts. The REC purchase price under the Customer Standard Offer would be determined in accordance with Duke's estimated annual dollar-per-MWh cost for its proposed utility ownership program. In other words, Duke would not be required to pay more for RECs procured from customers than the amount at which it estimates it can generate RECs for itself. Participation in the Customer Standard Offer program would be limited to 5 MW and to customers who installed their systems by the Commissioning Date. If sufficient customer capacity were not operational by the Commissioning Date, Duke would install the remaining capacity as utility-owned DG.

Under this proposed program, Duke, the Commission, and the public would all learn more about the benefits and costs of photovoltaic distributed generation. Moreover, a comparison of projects owned by Duke and those owned or operated by customers would facilitate an understanding of the benefits of utility ownership versus customer ownership. If Duke were to suggest a program such as the one described here, the

Commission should find that the program's implementation is reasonable and prudent, subject only to the Commission's review of Duke's execution of the program.

**C. Customer-Owned or Operated Distributed PV is a Well Established, Reliable Source of REC Generation.**

Duke has expressed concern about relying on third-party ownership of solar assets to meet the goals of its proposed PV DG program. *See, e.g., Motion* at p. 10. This concern seems to arise from Duke's experience in implementing the winning project under the 2007 RFP. As noted above, the 2007 RFP focused on the procurement of solar energy and RECs from a large-scale, centralized solar installation. There are only a handful of truly utility-scale, centralized PV installations in the United States. Thus, relative to distributed generation solar, this particular area of the solar industry is, as Duke notes, a "rapidly evolving environment" and prone to the difficulties thereof. *Id.* at p. 11.

Distributed generation PV, on the other hand, has been implemented on a large scale in a number of states. It is the primary method used to achieve compliance with renewable portfolio standards in Colorado and Arizona. *See, e.g.,* 4 Colo. Code Regs. § 723-3-3658 (2009), Ariz. Admin. Code § R14-2-1805 (2009). Indeed, the third-party power purchase ("PPA") model for distributed generation solar has rapidly become the most common method of financing commercial photovoltaic systems in the United States. Systems installed pursuant to power purchase agreements accounted for nearly 50 percent of all non-residential photovoltaic installations in the country in 2007, and that percentage is expected to have increased to as much as 75 percent in 2008.<sup>1</sup> The PPA

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<sup>1</sup> Jon Guice & John D.H. King, *Solar Power Services: How PPAs are Changing the PV Value Chain* (exec. sum.), Greentech InDetail, Feb. 14, 2008, at 4. Available at

model has “not only outstripped conventional commercial PV sales, it has also *expanded* the market—acquiring new customers that would not have purchased solar hardware.”<sup>2</sup> Even in today’s turbulent financial markets, PPA providers continue to install and finance commercial distributed generation projects.

The very difficulties Duke notes with regard to one ownership model or system size highlight the desirability of the program Solar Alliance details above, which would provide Duke with RECs at a cost identical to its own with virtually no risk. Thus, contrary to Duke’s assertions, third-party photovoltaic distributed generation is a reliable and scalable source of RECs.

**II. The Commission Should Revise Its Order to Address Duke’s Concerns Over Tax Normalization in a Definitive Matter.**

All utilities and interested parties must understand how the Commission will treat the utility cost of tax normalization moving forward. While the Solar Alliance takes no position on whether Duke should be allowed to recover costs associated with tax normalization, it does support a definitive resolution of the issue.

**III. The Commission Should Deny Duke’s Request to Delay Its 2010 Solar-Set Aside Requirement Until 2011.**

Duke has requested that the Commission delay its 2010 solar-set aside requirements until 2011 if the Commission denies certain of Duke’s requests for relief. *Motion* at p. 18, Request (2). Solar Alliance submits that such delay would be neither necessary nor in the public interest. First, even if the Commission denies Duke’s request regarding its cost recovery opportunities, Duke will nonetheless be capable of complying with the 2010

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<http://www.greentechmedia.com/GreentechMedia/Report/SolarPowerServicesHowPPAsareChangingthePVValueChain.html> (last visited Nov. 20, 2008).

<sup>2</sup> *Id.*

solar set-aside requirements. Duke has provided no evidence to the contrary. Second, in accordance with N.C. Administrative Code Section 11-R8-67(c)(5), before granting Duke's request, the Commission must find that such a delay would be in the public interest. If Duke is allowed to delay compliance with the solar-set aside until 2011, it will have to generate the energy that otherwise would have been generated by solar from a non-solar, and likely non-renewable resource, thereby possibly resulting in emissions of air pollutants which would have otherwise been avoided. A delay in the reduction of such emissions is clearly not in the public interest. In addition, a delay in Duke's compliance would further delay the collection and assessment of information and data, thereby postponing North Carolina's ability to create a more comprehensive and successful solar market. Thus, Duke's request in this regard should be denied.

### **CONCLUSIONS**

For the reasons set forth above, the Solar Alliance requests that:

- (1) The Commission order that the proposed 10 MW PV DG program is reasonable and prudent, provided that it is structured as described at Section I.B. above;
- (2) The Commission revise its order to address Duke's concerns over tax normalization in a definitive manner; and
- (3) The Commission deny Duke's request to delay its compliance with its solar-set aside requirements in the event the Commission denies Duke's other requested relief.

Respectfully submitted this 4<sup>th</sup> day of March, 2009,

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

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N.C. State Bar No. 22642  
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On Behalf of The Solar Alliance

**CERTIFICATE OF SERVICE**

I hereby certify that this 4<sup>th</sup> Day of March, 2009, 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 Initial Brief of The Solar Alliance in Response to Duke Energy Carolinas LLC's Motion for Reconsideration by e-mail:

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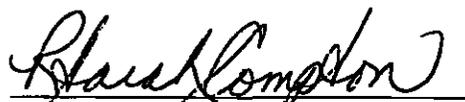
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