

**FILED**

**FEB 11 2009**

Clerk's Office  
N.C. Utilities Commission

**Thomas Henkel, Ph.D  
Sustainable Energy Consulting  
3 Mt. Bolus Rd.  
Chapel Hill, NC 27514**

Telephone/Fax: 919-960-2589

E-Mail: [hen2589@bellsouth.net](mailto:hen2589@bellsouth.net)

February 10, 2009

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

**OFFICIAL COPY**

MM

RE: Docket No. E-~~7~~<sup>7</sup>, Sub 856

Dear Ms. Vance:

I am writing to support Duke Energy Carolina, LLC's motion for reconsideration in the above referenced docket. It is in the public interest to allow Duke Energy to deploy more than 10 MWs of utility owned and operated solar photovoltaic (PV) systems for the following reasons:

AG  
7 Comm.  
Bennett  
Kisby  
Legal  
Elec.

1. Whereas REPS legislation mandates could be credited with causing Duke Energy to take a serious look at various ways of deploying solar energy technologies, it cannot be assumed that these mandates are the only reason for Duke Energy's request to deploy company-owned and operated distributed solar PV systems.
2. The REPS mandates are clearly intended by the legislation to be minimum standards, so it is incorrect for the NCUC to deny Duke Energy's request to deploy a certain level of PV power capacity for the stated reason that this capacity will exceed the REPS mandates if this program has a sufficiently low impact on electricity rates.
3. I agree that it is in the public interest for Duke Energy to deploy solar energy systems in such a way so as to create the least impact on electricity rates in order to recover their costs. Any commercial entity that owns and operates solar energy systems in North Carolina and which also has federal and state tax liabilities can capture federal and state solar energy tax incentives and use their own tax liabilities to buy down the installed costs of solar energy systems. The net result is that the new money required for such a commercial company to install solar energy systems is about 20% of the actual capital costs. The federal Energy Improvement and Extension Act of 2008 expressly authorizes investor-owned utilities to use their company tax liabilities in this way. These solar incentives make North Carolina one of the best US markets to deploy solar energy technologies and very similar to California's, the nation's leader in solar PV installations.
4. An independent renewable energy services company (RESCO) can also own and operate solar energy systems whose capital costs are reduced by the RESCO's capturing federal and state solar energy tax incentives. Thus, all else being equal, the net capital costs for owning and operating solar energy systems should be about the same for Duke Energy as for an independent RESCO.

5. Because of its purchasing power, Duke Energy should be able to purchase solar PV equipment direct from manufacturers and distribute it to its PV program subcontractors at less cost than independent solar power producers can, so that the capital costs to Duke Energy could be less than for a RESCO, thus further reducing the impact on ratepayers for Duke Energy's own PV power generation.

6. It is probable that if Duke Energy is forced to purchase solar power from a RESCO under a PPA, which includes a profit markup from the supplier, then the cost of this power delivered to Duke Energy will be higher than if the utility owned and operated a solar power system itself. Therefore, there should be less impact on ratepayers if Duke Energy owns and operates solar power systems than if the company enters into PPAs with independent solar power producers in order to meet its REPS mandates.

7. Solar PV electricity displaces expensive peaking electricity that is generally supplied by natural gas power plants. With the federal 30% ITC, 5-year MACRS, and the North Carolina 35% tax credit included, the 20-year levelized cost of solar PV electricity produced by Duke Energy owned systems can be shown to be less than the levelized cost for natural gas produced peaking electricity. Therefore, as Duke Energy deploys more solar PV systems throughout its service area, we may see a reduction in upward pressures on electricity rates that will result from future increases in natural gas prices.

8. The costs of solar PV systems are trending down while the costs of fossil fuel fired and nuclear power plants are increasing. For this reason, utilities in other states have developed the business case for deploying solar PV systems and are delaying the construction of centralized fossil-fueled and nuclear power plants. Sacramento Municipal Utility District (SMUD) actually closed a nuclear power plant years ago and relies primarily on energy efficiency and renewable energy power generation to meet increasing demand for electricity.

9. In conclusion, I have been encouraging Duke Energy Carolinas, LLC to deploy utility owned and operated solar energy systems since 2006. The federal Energy Improvement and Extension Act of 2008, which expressly authorizes public utilities to capture solar tax incentives, is designed to encourage the deployment of utility-owned and operated solar energy systems, if a utility can make a business case to do so. Therefore, I strongly urge the North Carolina Utilities Commission to grant their request to reconsider Docket No. E-3, Sub 856.

Sincerely,

A handwritten signature in black ink, appearing to read "E. Thomas Henkel". The signature is fluid and cursive, with a large initial "E" and a stylized "H".

Thomas Henkel, Ph.D