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VIA HAND DELIVERY

November 21, 2008

Ms. Renne C. Vance Chief Clerk The NC Utilities Commission 4325 Mail Service Center Raleigh, NC 27699-4325 Voice: 919-812-4977 Facsimile: 919-786-1459 email: rscompton@nc.rr.com www.comptonmediation.com

FILED NOV 2 1 2008

Clerk's Office N.C. Utilities Commission

Re: Intervenors' Brief in Docket No. E-7, Sub. 856

Dear Ms. Vance:

Enclosed please find the original and 15 copies of the Confidential Version of the Joint Brief and Proposed Order of Intervenors The Solar Alliance and The Vote Solar Initiative in Docket No. E-7, Sub. 856.

Also enclosed please find the original and 30 copies of the Public Version of the Joint Brief and Proposed Order of Intervenors The Solar Alliance and The Vote Solar Initiative in this proceeding. I have served the Public Version on all parties to this proceeding.

As we discussed by telephone, I will be filing a CD containing the briefs on Monday, November 24, 2008.

Thank you for your assistance with this filing.

Very truly yours,

Compton

R. Sarah Compton, Esq.

Counsel for the Vote Solar Initiative and The Solar Alliance



Enclosures

1	PUBLIC VERSION	
2 3	BEFORE THE NORTH CAROLINA UTILITIES COM	
4	DOCKET E – 7, SUB 856	NOV 2 1 2008
5 6 7 8 9 0 1 2	In the Matter of the Application of) Duke Energy Carolinas, LLC) JOINT BRIEF AN For Approval of a Solar Photovoltaic) ORDER OF THE S Distributed Generation Program and for) ALLIANCE AND Approval Of Proposed Method of) VOTE SOLAR IN Recovery of Associated Costs)	Clerk's Office N.C.Utilities Commission ND PROPOSED SOLAR THE ITIATIVE
3		
4	INTRODUCTION AND SUMMARY OF POSITION	ON
5		
6	The Vote Solar Initiative ("Vote Solar") and The Solar Alliance (herein	after referred to
7	collectively as "Solar Intervenors') appreciate the opportunity to partici	ipate in this
8	proceeding and to comment on Duke Energy Carolinas, LLC ("Duke")	proposed solar
9	photovoltaic distributed generation ("PVDG") program. The PVDG pr	ogram represents a
0	potentially valuable means of compliance with Duke's obligations unde	er the Renewable
1	Energy Portfolio Standard ("REPS"), and Solar Intervenors welcome D	Duke's interest in
2	pursuing a leading position in utility solar development. The PVDG pr	ogram, however,
3	should not be the only means of developing customer-sited solar energy	y under the REPS.
4		
5	Under its proposed plan, Duke would install and own enough solar cap	acity to meet its
6	REPS obligations for several years into the future. In doing so, Duke w	ould eliminate the
7	market for all other solar RECs, thereby effectively precluding the use	of other proven and
8	cost-effective models for the deployment of photovoltaic distributed ge	eneration. Solar

Brief and Proposed Order of the Solar Alliance Jointly With The Vote Solar Initiative

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1	companies would be limited to the mere role of subcontractors to Duke – in effect,
2	incapable of performing their own sales, marketing, finance, or other functions key to the
3	development of private investment in solar energy. Further, only those customers selected
4	by Duke would be able to participate in the solar market, and then only as lessors of roof or
5	ground space. Because Duke's plan calls for in-front-of-the-meter installations only,
6	customers would realize no energy savings from the presence of a solar installation. In
7	effect, Duke would gain a monopoly hold on the solar market in its territory.
8	
9	As the Commission is aware Duke has not been granted a monopoly franchise service
10	territory on other energy saving measures; likewise it should not be effectively granted one
11	for customer-sited solar energy systems. This is particularly true because solar distributed
12	generation does not have attributes that might otherwise justify an exclusive franchise. For
13	instance, there is no danger of duplicative service. ¹ Customers have the choice of whether
14	to allow the installation of a solar energy system on their premises or not. Nor is there any
15	evidence that a single owner would provide the lowest cost of installed solar. Finally,
16	because customer-sited solar will always be a complement to utility-provided energy, there
17	is no danger that a customer might be left without energy service if a solar energy system is
18	taken offline.
19	
20	Indeed, Duke has made no showing in the record that it should be granted exclusive
21	domain over customer deployment of solar energy in its territory. Specifically:
22	

¹ Cf. N.C. Gen. Stat. § 62-110.2(c)(1) (2008) (granting electric suppliers exclusive rights to given service territories in order to "avoid unnecessary duplication of electric facilities".

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1	•	Duke has not made an adequate showing that its proposed costs for this program are
2		based on a realistic analysis, let alone that those costs represent the best use of
3		ratepayer funds for solar development. Duke's projections of lower costs for its
4		program as compared to customer-sited development models rely largely on
5		unrealistically low installation costs, which, depending on the mode of approval,
6		Duke would apparently have carte blanche to increase later.
7		
8	•	Most of the public benefits Duke has identified as arising from its program are the
9		same benefits that arise from the development of solar energy in general (as
10		required by the REPS) and are not unique to the specific deployment method
11		proposed by Duke.
12		
13	•	Even those benefits that Duke has identified as being specific to its procurement
14		design the gathering of system operational knowledge and the systematization
15		and standardization of deployment are not exclusively associated with the PVDG
16		mode of utility-controlled solar deployment. Neither requires that the utility be the
17		sole agent for solar energy deployment in Duke territory.
18		
19	٠	Because Duke's plan calls for in-front-of-the-meter installations only, customers
20		would realize no energy savings from the presence of a PVDG program solar
21		installation.
22		

1	•	Contrary to Duke's claims, customer sited solar deployment is a reliable
2		complement to a utility owned program.
3		
4	•	If the PVDG program is approved as proposed by Duke, without a parallel
5		alternative, the program would leave ratepayers with very limited and not so
6		attractive alternatives: a system installed under the NC GreenPower program, with
7		its very real budget limitations, a system installed by the utility with no savings to
8		the customer, or a system unable to participate in the REPS, because the utility's
9		own program will have reserved the REPS requirements for many years in the
10		future.
11		
12	In sun	nmary, the Solar Intervenors propose:
13		
14	٠	That the Commission approve Duke's reduced proposal for the 2-year, 10 MW
15		PVDG program.
16		
17	•	That the Commission establish a formula for calculating the effective REC price
18		paid by Duke under this program—i.e., the 20- year amortized cost of its actual (as
19		opposed to initially estimated) investment in solar, plus operations and maintenance
20		expenses, exclusive of overhead or equipment required strictly for the data
21		gathering portion of the program and exclusive of its estimated avoided costs for
22		energy and capacity over the same period.
23		

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1	٠	That this same price and 20-year terms be made available on a "first come, first
2		served" standard offer basis to all customer-sited solar systems installed by Duke
3		customers, up to a total of 10 MW in total capacity over the same period-with a
4		contract for such transactions to be developed and issued within 120 days of Duke's
5		announcement of the awardees in the currently open Request for Proposal ("RFP")
6		for the PVDG program.
7		
8	٠	That only the above-described calculated price for RECs be charged against the
9		per-customer price caps established in the REPS.
10		
11	٠	That Duke be permitted (at its sole expense) to install the same instrumentation or
12		data-gathering equipment on customer-operated systems as on PVDG systems.
13		
14	•	That the Commission schedule a review of both the PVDG program and the
15		customer-operated program 12 months from the date of its final Order to evaluate
16		the success of each.
17		•
18	In esse	ence, Solar Intervenors propose parallel programs—a) the program proposed by Duke
19	and b)	a standard offer for RECs generated by customer-operated solar systems at the price
20	Duke j	proposes for purchasing such compliance from itself. Most emphatically, Solar
21	Interv	enors are not requesting that the Commission offer customer-sited solar deployment
22	at who	ntever RECs price is necessary to make such development viable, as Duke suggests is
23	Solar	Intervenors' position. Rather, Solar Intervenors are proposing only that customers be

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1	offered a REC price identical to the price Duke makes available to itself-provided that
2	this offer represents the true cost of the PVDG systems as acquired, not proposed. Solar
3	Intervenors' proposal amounts to a risk-free opportunity to develop more nonutility
4	investment in solar energy, and more robust options for customers to save energy with their
5	own systems.
6	
7	
8	ARGUMENT
9	I. Duke's Proposed Costs for the PVDG Program Are Not Based on Adequate Data or
10	Analysis and Do Not Provide an Adequate Basis for Cost Comparisons
11	
12	Duke asserts that customer-sited solar deployment, leveraging nonutility investment in
13	solar, is more expensive and that the proposed PVDG program would provide the lowest-
14	cost approach for meeting the solar power component of its REPS requirement. However,
15	Duke has provided inadequate information about the analysis it performed to warrant such
16	a conclusion, and what little information it has provided is unsupported and does not
17	provide an adequate basis for comparison to the competitive option proposed by Solar
18	Intervenors.
19	
20	Duke cited little detail regarding the economic analysis it conducted to determine the cost
21	of the PVDG program. The few assumptions Duke did make contain apparent
22 .	contradictions. In contrast, Vote Solar provided a detailed economic analysis, which

1	included all of the assumptions that went into its analysis (Testimony of Thomas J. Starrs
2	on Behalf of the Vote Solar Initiative, ("Starrs Test.") Exhibit 2).
3	
4	Duke stated, for example, that expected costs for PV systems would average \$5.00 per
5	Watt (Hearing Transcript, Vol.1, p. 47). Yet, Duke also cited a range of system costs,
6	depending on system sizes, only the lowest of which matched its overall cost estimate of \$5
7	per Watt. Specifically, Duke cited expected costs of \$5 per Watt for systems over 1 MW;
8	\$6.50 per Watt for systems from 250 kW to 500 kW; and \$8.50 per Watt for systems up to
9	250 kW. Because Duke also indicated that it intended to build and own hundreds of
10	separate PV systems, it cannot reasonably expect to keep the average system cost at that of
11	the lowest-cost element in the mix.
12	
13	Moreover, Duke's anticipated cost of \$5 per Watt is substantially below the actual costs
14	cited in publicly-available studies. A detailed study of the California Public Utility
15	Commission's Solar Generation Incentive Program, prepared by Itron and published in
16	February 2007, ² cited historic overall system average costs of \$8.56 per Watt. Even the
17	largest tier of systems analyzed, those over 800 kW, had average costs of more than \$7.00
18	per Watt (Itron Study, at Pages 4.1 and 4.3) for a program several times larger than the one
19	Duke proposes

- 21 Admittedly there have been continued reductions in solar energy installation costs over the
- 22 two years since the Itron report. To accommodate this trend, in his economic analysis,

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² See <u>http://www.energycenter.org/uploads/Selfgen_SolarPVCosts_FinalReport.pdf</u>, at

1	Vote Solar's witness used an optimistic figure of \$6.50 per Watt for average system cost.
2	(Starrs Test., Ex. 2) However, Duke's assumption that its system costs will be almost 25
3	percent less than even this Vote Solar's optimistic estimate is excessive
4	
5	Second, Duke's critical assumption that an average 1500 MWh per year will be generated
6	per MW (DC) of solar installed also does not withstand careful scrutiny. Duke indicated
7	that its analysis was based, at least in part, on the publicly-available PVWATTS estimation
8	program, developed and made publicly available by the National Renewable Energy
9	Laboratory. ³ However, using this same tool, and using the most favorable assumptions
10	possible for locations in the Raleigh, North Carolina vicinity, Vote Solar was able to
11	generate an output estimate matching Duke's 1,500 MWh per year only with the most
12	optimistic assumptions for the configuration and location of the PV systems. (See
13	Appendix A, attached hereto.)
14	

Specifically, only systems that use single- axis or double-axis trackers to follow the path of the sun through the sky (as opposed to systems mounted in any fixed position) could be capable of producing 1,500 MWh / MW per year, and even then only in the most favorable locations within Duke's North Carolina service territory. Although such systems are readily available, they are currently only feasible for the largest-scale PV systems, typically 1,000 kW or larger.

21

³ <u>http://rredc.nrel.gov/solar/codes_algs/PVWATTS/</u>

Although Duke has indicated that such large-scale systems will be part of its investment,
the Company also has indicated that its PV portfolio will include "hundreds of systems,"
including much smaller residential- and commercial-scale systems. For these smaller-scale
facilities, energy production is likely to be 20-25 percent below Duke's projection, and
more consistent with Vote Solar's projected output of approximately 1,200 MWh / MW /
year.

7

8 Thus, Duke appears to have assumed PV system costs that are approximately 25 percent 9 below reasonable estimates—even for the largest of systems that are likely to have the 10 lowest cost per Watt—and appears to have assumed a level of PV system performance that 11 is approximately 20 percent above reasonable estimates.

12

13 Combined, these two factors alone would suggest that Duke may be underestimating the 14 likely cost of energy from its PV investments by approximately 50 percent. Yet, because it 15 has not provided any of its other assumptions, its methodology, or its own economic 16 analysis, the parties to this proceeding are unable to make any effective comparison 17 between the expected cost of energy and RECs from Duke's proposed PV investments and the cost of energy and RECs from alternative approaches. 18 19 20 It is on this basis that Solar Intervenors propose a competitive alternative to Duke's 21 proposal. If Duke is in fact able to deliver solar energy at an above-market price too low 22 for private solar developers to make their projects economically viable, then the result will

23 simply be the procurement of the amount of solar energy (10 MW) Duke proposes..

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2	If, however, the true above-market costs per MWh of solar deployment are significantly
3	higher than in Duke's initial filing, and if those above-market costs can be matched or
4	bettered by customers' own solar deployments, the result will be the procurement of the
5	same 20 MW originally proposed by Duke, at the identical cost to ratepayers as PVDG, and
6	with the additional benefit of a more diverse and robust solar industry.
7	To approve Duke's proposed program without approving a competitive alternative, in
8	addition to the negative impacts stated above, would be to inappropriately reward Duke for
9	the lack of transparency in its economic assumptions and analysis.
10	
11	11. Duke's Own RFPs for Solar RECs and Systems Have Brought in Superior Prices to
12	Those Duke Requests for Its Own Program
13	[CONFIDENTIAL TEXT REDACTED]
14	
15	Ш. The System Knowledge and Data Which Duke Proposes to Gain From PVDG Can
16	Be Obtained From Customer-Sited Systems; Further, Duke Has Proposed No Specific
17	Subjects for Investigation, Data Requirements, Equipment, Analytical Plan, etc.
1 8	
19	In the rebuttal testimony of Owen Smith, Duke makes the case that its proposed program is
20	partially justified by the fact that it will "enable the Company to understand the impact of
21	distributed generation on its system" (Rebuttal Testimony of Owen Smith, at 7). While it is
22	undoubtedly true that its proposed program could have such a result, it is also true that the

same educational opportunities can be achieved via a program that incorporates customer sited, customer-owned generation.

3

There are numerous monitoring and reporting technologies and services that could be 4 employed regardless of ownership of systems (some state solar programs have required a 5 certain amount of monitoring,⁴ and the explosion of the Power Purchase Agreement (PPA) 6 7 model in other states has resulted in a similar increase in revenue-grade data monitoring 8 and collection systems). Moreover, because Duke has not proposed any specific subjects 9 for investigation or a data collection plan, it is difficult to assess the magnitude of any 10 benefits from this exercise that may accrue to the ratepaver. 11 12 IV. Solar Renewable Energy Credits Derived from Customer Systems Can Be a Reliable 13 Source For REPs, Especially Given the Protections Built into the REPS rules, and 14 Duke's Own Proposed Overcompliance. 15 16 Duke has expressed a concern that RECs generated by systems developed at customer 17 facilities would not be predictable enough for Duke to rely on for its REPS compliance. 18 Duke seems to argue against a proposal that no party to the proceeding has advanced. 19 Solar Intervenors have not taken the position that Duke should rely exclusively on RECs

- 20 delivered from customer-developed installations; instead, Solar Intervenors submit that
- 21 such RECs should be purchased in parallel with and in addition to Duke's own efforts.

⁴ Perhaps most extensive are the data collection and reporting requirements in the California Solar Initiative – see the CSI handbook at <u>http://www.gosolarcalifornia.ca.gov/documents/CSI_HANDBOOK.PDF</u> for more.

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2	Considering that the proposed PVDG program—even its now-reduced form, and in
3	combination with other solar developments currently being undertaken by Duke-would
4	already provide for compliance far in excess of minimum requirements, there should be no
5	danger of undercompliance from these REC sources.
6	· · · · · ·
7	This should not by any means be taken as an agreement that RECs from facilities
8	developed by customers are an inadequate or unreliable source of compliance-in fact,
9	they have proven a robust and adequate source of compliance in several other states with
10	renewable energy requirements. Duke's arguments to the contrary do not provide a basis
11	for approving an exclusively utility-owned program.
12	
13	V. The REPS Regulations Does Not Foreclose Development of a Standard REC Offer
14	
15	In cross-examination, Duke claimed that the Commission had "ruled that unlike the
16	PURPA obligation to purchase power produced by QFs, the electric power suppliers are
17	not obligated to purchase all RECs offered for purchase; the Commission is not persuaded
18	that it is appropriate to impose such an obligation." (Hearing Transcript, Vol. 2, p. 129).
19	
20	This is a false comparison. Neither N.C. Gen. Stat. § 62-133.8 nor N.C. Admin. Code tit.
21	4, r. 11.R8-67 proscribes or prohibits any particular method of REC procurement, including
22	a Standard REC Offer such as the one Solar Intervenors have proposed herein.

1	On the contrary, the Commission has "conclude(ed) that the rules need not spell out
2	specific circumstances under which purchases of available RECs are or are not
3	appropriate." ⁵ Indeed, the Commission stated that "[t]he clear implication of the [REPS
4	rule] and Senate Bill 3 is that the electric suppliers are expected to take all actions
5	reasonably necessary to satisfy the REPS requirement unless such actions would cost more
6	than the annual cost caps." Thus, a Standard REC Offer falls well within the bounds of
7	permissible methods of procurement.
8	
9	Proposed Order
10	
11	1. That Pursuant to G.S.62-110.1, a blanket Certificate of Public Convenience and
12	Necessity be issued to Duke Energy Carolinas, LLC, ("Duke") for the construction and
13	operation of up to 5 MW of solar distributed generation, collectively, at the premises of the
14	customers in Duke's franchised service territory who elect to take service under the Solar
15	Photovoltaic Distributed Generation Program (the "Program.") This certificate is
16	applicable to new installations for a 12 -year period beginning on January 1, 2009, after
17	which time, the blanket certificate may be renewed by the Commission for an additional 5
18	MW and 1 – year period.
19	

- 20 2. That Duke may recover its costs for Renewable Energy Credits ("RECs") associated
- 21 with the Program through the proposed REPS cost recovery mechanism and annual rider

⁵ Order Adopting Final Rules, Docket No. E-100, Sub 113, In the Matter of Rulemaking Proceeding to Implement Session Law 2007-397, p. 59, *available at* <u>http://www.ncuc.net/selorder/rules/SW022908.pdf</u> (italics added).

1	provided for in G.S. 62 – 133.8(h) and Commission Rule R8-67(e).), with additional costs
2	associated with the procurement to be recovered in the company's base rates. Pursuant to
3	the requirements of the annual rider, such REC costs are to be calculated annually based on
4	a 20-year amortization of the responses to Duke's actual experienced costs for initial
5	Request for Proposals for construction of the systems under the program, together with
6	experienced and projected costs for the operations and maintenance of such systems, and
7	lease payments to customers who elect to take service under the Program. Only such
8	specified REC costs shall be recovered through the REPS cost recovery mechanism, and
9	these costs shall be exclusive of the avoided energy and capacity costs realized from the
10	Program, which shall be recovered in base rates.
11	
12	3. That within 120 days of the successful completion of the Company's existing RFP for
13	construction of solar facilities under this Order, the same REC price per MWh recovered by
14	the Company through the cost recovery mechanism shall be made available to such
15	customers in Duke 's franchised service territory who elect to develop their own solar
16	generation, through a Standard Offer Contract and Tariff for 20 years' purchase of
17	Renewable Energy Credits, such contract to be made available through Dec. 31, 2010 or
18	such time as 5 MW of solar distributed generation, collectively, have been installed under
19	the terms of the Standard Offer Contract, whichever comes first. The Standard Offer
20	Contract and Tariff shall be available for a period beginning with its issuance and ending
21	on Dec. 31, 2010, after which time the Standard offer Contract and Tariff could be renewed
22	by the Commission for an additional 5 MW and one year period.

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1	4. That the proposed tariff provided by Duke as Attachment A to its Application in this
2	Docket be modified to represent the reduced capacity reflected in the blanket Certificate of
3	Public Convenience and Necessity, and to include the Standard Offer Program for
4	Distributed Solar Renewable Energy Credit Purchase.
5	
6	5. That the proposed tariff provided by Duke as Attachment A to its Application in this
7	Docket be modified to include a standard lease agreement and other necessary contracts to
8	be used with customers under the Program.
9	
10	6. That Duke shall provide, within 120 days of this Order, an initial Statement of Work
11	reflecting the proposed investigative plan for obtaining comparative cost, performance, and
12	reliability data, including data on the impact to the grid and to the reliability of Duke's
13	electric service from installations installed under both the REC Standard Offer Contract
14	and the Program.
15	
16	7. That the Commission shall review the results of the Program and the Standard Offer

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18 Standard Offer Contract and Tariff should be renewed.

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- 2 Respectfully Submitted,

3 ampton Lard 4

- 5 R. Sarah Compton, Esq.
- 6 N.C. State Bar No. 22642
- 7 PO Box 12728
- 8 Raleigh, NC 27605
- 9
- 10 On Behalf of The Solar Alliance and The Vote Solar Initiative

Run #1 – Note that a system ideally oriented due South, and ideally tilted at latitude, generates just 1296.365 MWH / MW / year.



Station Identification				
Cell ID:	0259384			
State:	North Carolina			
Latitude:	35.9 ° N			
Longitude:]78.9 ° W			
PV System Specifications				
DC Rating:	1000.0 kW			
DC to AC Derate Factor.	0.770			
AC Rating:	770.0 EW			
Алгау Туре:	Fixed Tilt			
Anay Tilt:	35.9°			
Аплу Агітасы:	180.0 *			
Energy Specifications				
Cast of Electricity:]8.9 ¢/k₩b			

******	******					
	Results					
Month	Solar Radiation (kWb/m ² /day)	AC Energy (aWa)	Energy Value (\$)			
1	3.83	92093	8191.67			
2	4.25	98109	8022.05			
3	5.32	121183	10779.23			
4	5.78	123901	11021.00			
5	5.68	121304	10789_99			
6	5.80	118196	10513.53			
7	5.49	115294	10255,40			
8	5.24	110337	9814. 48			
9	5.57	115283	10254.25			
20	5.19	114716	10203.99			
11	4.01	88318	7855.89			
32	3.68	85556	7610.21			
Year	4.99	1296365	115311.67			

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(Output Results as Text)

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RUN PYWATTS Y & FOR ANOTHER LOCATION

RUN PYWATTS «.1

Phone coul questions and comments to Webmarter Disclution and copyright artics.

energy (http://www.conf.gov) 🧹

Run #2 – The production numbers estimated by Duke (1499.551 MWh / MW / year) can only be achieved with a one-axis tracking device (that is, one which mechanically orients itself throughout the day towards the Sun.) Such devices obtain higher solar production at the cost of higher installed capital costs, and are very rare in all but large groundmounted applications.

PVWATTS NZ: AC Energy and Cost Saidings 11/17/08 10:05 AM AC ENERGY 8 COST SAVINGS Station Identification Results Cell ID. 0259384 Solar AC Energy Month Radiation Energy (kWh) Value State: North Carolina (kWb/m²/dzy) **(\$)** 35.9 ° N Latitude: 1 3.42 82098 7302.62 78.9 ° W Longitude: 4.15 90922 8087.51 2 **PV System Specifications** 5.85 3 136755 12164.36 4 7.23 157711 14028.39 DC Rating: 1000.0 kW 7.49 162884 14488.53 5 DC to AC Derate Factor. 8,770 8.04 167258 14877.60 Ó AC Rating: 770.0 EW 7 7.34 156475 13918.45 I-Axis Tracking Array Type: 12500.68 8 6.57 140536 0.0 * Anay Tile 9 6.26 132208 11759.90 Anay Azimuth: 180.0 * 10 5.25 118387 10530.52 **Energy Specifications** 7175.69 11 3.60 80671

(Output Results as Text)

12

Year

3.13

5.70

8.9 ¢/kWh

RAYING TEX) # 1000 A EXIMUSED

RUN PYWATTS V.2 FOR ANOTHER LOCATION

Cost of Electricity:

RUN PYWATTS V.1

6550.90

133385.07

73647

1499553

Please send questions and comments to Webwaster Disclaimer and copyright reduce.

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CERTIFICATE OF SERVICE

I herby certify that the following persons on the docket service list for Docket No. E-7, Sub. 856 have this date been served true and accurate copies of the foregoing Public Version of the Joint Brief and Proposed Order of The Solar Alliance and The Vote Solar Initiative by e-mail:

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1

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This the 21st day of November, 2008

N

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