KEYES, FOX & WIEDMAN LLP

June 20, 2014

Via Electronic Filing

Ms. Gail Mount, Chief Clerk
North Carolina Utilities Commission
4325 Mail Service Center
Raleigh, North Carolina 27699-4325

Re: NCUC Docket No. E-100, Sub 140
REBUTTAL TESTIMONY OF J. RICHARD HORNBY ON BEHALF OF THE ALLIANCE FOR SOLAR CHOICE

Dear Ms. Mount,

Attached for filing in the above-referenced docket is the ***Rebuttal Testimony of J. Richard Hornby on Behalf of The Alliance for Solar Choice***. Please do not hesitate to contact me if you have any questions. Thank you for your assistance with this matter.

With best regards,

/s/ Thadeus B. Culley
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Attachments

cc: Service List for Docket No. E-100, Sub 140

CERTIFICATE OF SERVICE

I hereby certify that all persons on the service list for Docket No. E-100, Sub 140 have been served true and accurate copies of the foregoing ***Rebuttal Testimony of J. Richard Hornby on Behalf of The Alliance for Solar Choice*** by hand delivery, first class mail deposited in the U.S. Mail, postage pre-paid, or email transmission with the party's consent.

Dated June 20, 2014, at Cary, North Carolina.

/s/ Thadeus B. Culley
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STATE OF NORTH CAROLINA
UTILITIES COMMISSION
RALEIGH

DOCKET NO. E-100, SUB 140

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of
Biennial Determination of Avoided Cost)
Rates for Electric Utility Purchases from)
Qualifying Facilities — 2014)

REBUTTAL TESTIMONY

of

J. RICHARD HORNBY

On behalf of

THE ALLIANCE FOR SOLAR CHOICE

June 20, 2014

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME, EMPLOYER, AND PRESENT POSITION.

A. My name is James Richard Hornby. I am a Senior Consultant at Synapse Energy Economics, Inc., 485 Massachusetts Avenue, Cambridge, MA 02139.A.

Q. ARE YOU THE SAME JAMES RICHARD HORNBY WHO SUBMITTED ADDITIONAL DIRECT TESTIMONY IN THIS PROCEEDING?

A. Yes.

Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?

A. My rebuttal testimony responds to the Supplemental Direct Testimony of Mr. Snider, witness for Duke Energy Carolinas ("DEC") and Duke Energy Progress ("DEP") or DEC/DEP, in which he proposes to reduce the number of on-peak hours during which DEC/DEP pays avoided capacity credits to QF's. The fact that I do not respond to the other points in Mr. Snider's Supplemental Direct Testimony, or to the direct additional testimonies filed by other witnesses does not necessarily mean I agree with those other points.

Q. DID THE DIRECT ADDITIONAL TESTIMONIES OF ANY OF THE OTHER PARTIES DISPUTE YOUR POSITION THAT THE BENEFITS OF DISTRIBUTED SOLAR GENERATION ARE GREATER THAN THE COSTS UTILITIES AVOID BY PURCHASING ELECTRIC ENERGY FROM QFS?

A. No. My additional direct testimony explained that the benefits of distributed solar generation include the costs that utilities avoid by purchasing from QFs as defined by PURPA plus additional costs that society avoids and additional benefits that society receives. I noted that current PURPA regulations only allow utilities to consider eight of the fourteen benefits of distributed solar generation I identified in Exhibit JRH-2, which were drawn from Exhibit AS-1 of Ms. Smart. In their direct additional testimonies certain of the other parties argued against including the remaining six benefits in the calculation of costs utilities avoid by purchasing from QFs. However, those witnesses did not state that North Carolina would not receive those additional benefits nor did they state that those additional benefits to society could not be quantified.

Q. PLEASE SUMMARIZE MR. SNIDER'S PROPOSAL TO REDUCE THE NUMBER OF ON-PEAK HOURS DURING WHICH DEC/DEP PAYS AVOIDED CAPACITY CREDITS TO QF'S.

A. DEC/DEP pays QFs capacity credits and energy credits for the generation it acquires from them under Schedule PP-N (NC). Under that schedule DEC/DEP currently offers QFs a choice between Rate Option A and Rate Option B. DEC/DEP bases the credits it pays under each Rate on the same set of avoided capacity and energy costs. However, the levels of the credits under Rate A are different from the levels under Rate B because the two Rates use different definitions of on-peak and off-peak periods. For example, Rate A has 4,160 on-peak hours per year while Rate B has 1,864 on-peak hours per year.

In his Direct Testimony Mr. Snider recommended that DEC/DEP eliminate Rate Option A and that it pay energy credits according to the on-peak and off-peak periods defined in Rate Option B (DEC/DEP witness Snider, p. 43, lines 5 to 7). Mr. Snider also recommended that DEC/DEP reduce the number of on-peak hours during which it pays avoided capacity credits but he did not recommend a specific set of hours because DEC/DEP was completing a study of that issue (DEC/DEP witness Snider, p. 31, lines 5 to 8). In his Supplemental Direct Testimony Mr. Snider recommends that DEC/DEP limit its payment of avoided capacity credits to only 514 on-peak hours per year (DEC/DEP witness Snider, p. 19, lines 16 to 18).

Q. FROM A RATEMAKING POLICY PERSPECTIVE, WHAT CRITERIA SHOULD THE NORTH CAROLINA UTILITIES COMMISSION CONSIDER IN ORDER TO DETERMINE WHETHER MR. SNIDER'S PROPOSAL IS REASONABLE?

A. In order to determine whether Mr. Snider's proposed rate design is reasonable, the North Carolina Utilities Commission should consider the rate design criteria imposed by PURPA as well as the generally accepted principles of utility rate design.[1] The rate design criteria imposed by PURPA, specified in Section 292.304 of the PURPA regulations (18 C.F.R. § 292.304), require that rates for purchases from QFs be "…just and reasonable to the electric consumer of the electric utility and in the public interest" and that they not discriminate against qualifying cogeneration and small power production facilities.

Q. IS MR. SNIDER'S PROPOSAL REASONABLE BASED UPON THOSE RATEMAKING CRITERIA?

A. No. Mr. Snider's proposal does not satisfy the principle that rate design should be simple and appears to discriminate against QFs relative to DEC/DEP. In addition it does not appear to be just and reasonable to the electric consumers of DEC/DEP or in the public interest.

[1] Phillips, Charles F. Jr. *The Regulation of Public Utilities*, Public Utilities Reports, Arlington, VA, 1993, 434

Q. PLEASE EXPLAIN WHY MR. SNIDER'S PROPOSED RATE DESIGN IS NOT SIMPLE AND APPEARS TO DISCRIMINATE AGAINST QFS.

A. Mr. Snider's proposal is not simple because the tariff under which DEC/DEP would pay QFs would have two different definitions of on-peak periods, one for payment of capacity credits and one for payment of energy credits. His proposed definition of on-peak hours for payment of capacity credits is 2 pm to 7 pm from June – August and 6 am to 9 am from December – February, i.e., 514 "capacity" on-peak hours per year. He is proposing to retain the current definition of on-peak hours for payment of energy credits, i.e., 1 pm to 9 pm from June through September and 6 am to 1 pm from October through May, i.e., 1,864 "energy" on-peak hours per year.

Based on my review of DEC/DEP's current tariffs, and as indicated in Exhibit__(JRH-6), none of DEC/DEP's other tariffs use different definitions of on-peak periods for capacity and for energy. In addition, no other tariffs use an on-peak period of 2 pm to 7 pm from June – August and 6 am to 9 am from December – February.

Mr. Snider's proposal appears to discriminate against QFs in favor of DEC/DEP because DEC/DEP has the opportunity to recover its capacity costs over many more hours per year than QFs.

Under its rate schedules with demand charges DEC/DEP has the opportunity to recover its capacity costs by applying those demand charges in on-peak periods that range by rate schedule from 1,564 hours per year to 1,864 hours per year. In contrast, Mr. Snider is proposing that DEC/DEP pay QFs capacity credits in only 514 hours per year. Thus, QFs will be recovering their capacity costs over far fewer hours per year than DEC/DEP.

Q. PLEASE EXPLAIN WHY MR. SNIDER'S PROPOSAL IS NOT JUST AND REASONABLE TO THE ELECTRIC CONSUMERS OF DEC/DEP.

A. Mr. Snider's proposal is not just and reasonable to the Companies' electric consumers because DEC/DEP will not be providing QFs a financial incentive to maximize their generation during all of the hours in which that generation has the most value to the Companies' customers.

In his Direct Testimony, Mr. Snider recommended that DEC/DEP limit the on-peak hours during which it pays avoided capacity credits to the

"…seasonal hours that represent the most likely hours in which capacity will have value" (DEC/DEP witness Snider, p. 31, lines 1-2). Later he refers to the "…times when capacity has the most value to the Companies' customers" (emphasis added) (DEC/DEP witness Snider, p. 31, lines 12-13). A review of the Companies' currently effective rate schedules indicates that the times when capacity and energy have the most value to the Companies' customers ranges by rate schedule between 1,524 on-peak hours per year to 1,864 on-peak hours per year.

Rate schedule Optional Power Service, Time of Use, Industrial Service (OPT-1) indicates that capacity and energy have the most value to customers on that schedule in 1,864 on-peak hours per year, the same as existing Rate B. The testimony of DEC/DEP witness Jeffrey Baily in the Companies' most recent general rate case, Docket No. E-7, Sub 1026, indicates that capacity and energy have the most value to residential customers in 1,524 on-peak hours per year (DEC/DEP witness Bailey, p. 15, lines 1-16). DEC/DEP identified those hours in conjunction with Public Staff in order to develop time of use (TOU) pricing offerings for its residential and nonresidential customers. The hours are for on-peak periods of 12 to 6 pm on weekdays from June through September, and 7 am to 1 pm on weekdays from October through May.

Q. PLEASE EXPLAIN WHY MR. SNIDER'S PROPOSAL DOES NOT APPEAR TO BE IN THE PUBLIC INTEREST.

A. Mr. Snider's proposal does not appear to be in the public interest because it has the potential to discourage the development of solar generation QFs in North Carolina by reducing the annual amount of capacity credits those QFs can earn. For example, in his Supplemental Testimony Mr. Snider stated that the proposed on-peak periods are not so narrow as to substantially reduce a QF's annual capacity payment if they experience an unexpected outage. However, he has no analyses to support that statement (DEC/DEP Response TASC Data Request 4-4 a)[2]. He also stated that it is reasonable to consider the annual capacity payment implications to QFs when setting the on peak periods, but he did not present any analyses to support that statement (DEC/DEP Response to TASC Data Request 4-4 b). Mr. Snider also stated that the proposed periods would incent development of solar projects in a manner to seek to maximize output at times when capacity has the most value to ratepayers, but he has no analyses to demonstrate if this is feasible (DEC/DEP Response to TASC Data Request 4-5)[3].

Q. WHAT DO YOU RECOMMEND?

[2] DEC/DEP Response to TASC Data Request 4-4 is attached as Exhibit JRH-7.

[3] DEC/DEP Response to TASC Data Request 4-5 is attached as Exhibit JRH-8.

A. I recommend that the Commission not approve Mr. Snider's proposal to revise Rate Option B by revising the definition of on-peak hours for purposes of capacity credit payments, and thereby reducing the number of on-peak hours during which DEC/DEP pays those credits.

Q. **DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

A. Yes.

Docket E-100, Sub 140

TASC REBUTTAL EXHIBITS

June 20, 2014

JHR-6 (On-Peak Periods By Rate Schedule)

JHR-7 (DEC/DEP Response to TASC Data Request 4-4)

JHR-8(DEC/DEP Response to TASC Data Request 4-5)

On-peak periods by Rate Schedule

Rate schedule		Summer months	Non-summer months	Annual on-peak hours
RT NC	**Months**	June - Sept	Oct - May	
	time period	1 to 7 M to F*	7 to 12 M to F*	
	# of annual hours	516	840	1,356
	Demand Charge differs from summer to non-summer	Yes	Yes	
RST NC pilot	**Months**	June - Sept	Oct - May	
	time period	12 to 6 M to F*	7 to 1 M to F*	
	# of annual hours	516	1008	1,524
	Demand Charge differs from summer to non-summer	No	No	
SGST (NC) Pilot	**Months**	June - Sept	Oct - May	
	time period	12 to 6 M to F*	7 to 1 M to F*	
	# of annual hours	516	1008	1,524
	Demand Charge differs from summer to non-summer	Yes	Yes	
OPT-1	**Months**	June - Sept	Oct - May	
	time period	1 to 9 M to F*	6 to 1 M to F*	
	# of annual hours	688	1176	1,864
	Demand Charge differs from summer to non-summer	Yes	Yes	
PP-N (NC), Option B, Interconnected to Distribution	**Months**	June - Sept	Oct - May	
	time period	1 to 9 M to F*	6 to 1 M to F*	
	# of annual hours	688	1176	1,864
	Demand Charge differs from summer to non-summer	Yes	Yes	
DEC Proposal (Snider, Supplemental)	**Months**	June - August	Dec - Feb	
	time period	2 to 7 M to F*	6 to 9 M to F*	
	# of annual hours	325	189	514
	Demand Charge differs from summer to non-summer	unknown	unknown	

4-4. At page 21 lines 5 and 6 Mr. Snider states the proposed periods are not so narrow as to substantially reduce a QF's annual capacity payment if they experience an unexpected outage.

a. Please provide the analyses upon which that statement is based.

b. Mr. Snider's statement at page 21 lines 5 and 6 indicates that he believes it is reasonable to consider the annual capacity payment implications to QFs when setting the on peak periods. Is this Mr. snider's position? If not, why not?

RESPONSE:

a) This statement was in the context of the utilization of a pre-defined number of hours as compared to a coincident peak measurement approach. Since the recommended hours are broader than a CP approach, they are less subject to availability limitations during a single hour. No additional analysis is needed to support this position.

b) Not explicitly. The statement simply represents a more generic recognition that the approach reaches a middle ground for capacity calculations within the context of this proceeding.

4-5. At page 21 line 9 to 11 Mr. Snider states the proposed periods will incent development of solar projects in a manner to seek to maximize output at times when capacity has the most value to ratepayers. Please provide all analyses prepared by, or for, the Company of the ability developers have to design solar projects that maximize their output from 2 pm to 7 pm as opposed to 1 pm to 7 pm in summer and from 6 am to 9 am as opposed to 7 am to 12 pm in winter.

RESPONSE:

The Companies did not develop a specific analysis that provides the optimization characteristics of a project that would fit the proposed hours. It is, however, the Companies' understanding that there are many design configurations and equipment choices available for solar developers to optimize production based on variables, such as proposed capacity hours.