BEFORE THE NORTH CAROLINA UTILITIES COMMISSION
DOCKET NO. E-100, SUB 136

In the Matter of:	)	
Biennial Determination of Avoided Cost Rates	)	**POST-HEARING**
for Electric Utility Purchases from Qualifying	)	**BRIEF**
Facilities - 2012	)	

NCSEA'S POST-HEARING BRIEF

Pursuant to both the 15 November 2013 *Notice of Due Date for Briefs and/or Proposed Orders* and the 12 December 2013 *Order Granting Motion for Extension of Time to File Proposed Orders* issued in this proceeding, the North Carolina Sustainable Energy Association ("NCSEA") submits the following post-hearing brief. The brief sets out (or incorporates by reference) arguments in support of five requests for relief: (1) To ensure that solar QFs eligible to subscribe to the standard rates receive full avoided cost payments and are not discriminated against, a 2.0 performance adjustment factor ("PAF") should be applied to the 2012 biennial standard "Option A" avoided *capacity* rates ultimately approved by the North Carolina Utilities Commission ("Commission") in this proceeding; (2) in advance of the opening of the 2014 biennial avoided cost proceeding, the Commission should open a separate docket and oversee the development of consensus methodologies for (a) determining the value of solar ("VOS") *and* (b) incorporating the VOS into future proposed standard avoided cost rates; (3) as to the terms and conditions in the utilities' proposed standard contracts, the Commission should grant the relief/modifications being requested by the Renewable Energy Group and the Public Staff; (4) the Commission should adopt the rate availability standard proposed by the Public Staff in their 28 March 2013 Reply Comments filed in this proceeding; and

(5) the Commission should remind the utilities to make good faith projections of future avoided cost rates in their annual REPS compliance plans.[1]

Putting This Proceeding in Context

As the Commission determines the standard avoided cost rates for the 2012 biennium – covering 1 November 2012 through 31 October 2014 – NCSEA asks the Commission to keep in mind that this proceeding does not exist "outside" of time or in isolation from the avoided cost proceedings that preceded it and those that will follow it. The temporal context should be considered as the Commission deliberates and arrives at its findings and conclusions of law.

In recent past avoided cost proceedings, natural gas prices were higher, new solar renewable energy certificates ("SRECs") were more valuable, and the solar industry in North Carolina was immature enough not to be perceived as a disruptive threat to the incumbent utilities. These three factors enabled solar developers to execute power purchase agreements ("PPAs") and SREC purchase agreements that together generated enough revenue to finance projects. Because projects were being financed, developers

[1] As to combustion turbine ("CT") costs, NCSEA concurs that the confidential per kW figure it and other parties have stipulated to is a reasonable and appropriate installed CT cost per kW for purposes of calculating both Duke Energy Carolinas, LLC's ("Duke") and Duke Energy Progress, Inc.'s ("Progress") avoided capacity rates in this proceeding. NCSEA offered no testimony on the issue of the appropriate installed CT costs to be used in Duke's and Progress's avoided capacity rates. NCSEA did, however, raise various issues in its filed Comments based on Duke and Progress emails and data responses attached thereto as exhibits. There was considerable divergence in the CT costs that the parties proposed to be used to calculate Duke's and Progress' avoided capacity rates. NCSEA supports Commission reliance upon the stipulated cost per kW in this proceeding as it falls within the range of CT costs proposed by the parties. NCSEA's cost per kW stipulation does not constitute an agreement to any of the various positions on cost inputs that have been taken by Duke and Progress in this proceeding and is without prejudice to any position on these cost inputs that may be taken in any future proceeding. Similarly, NCSEA does not oppose the confidential per kW figure other parties have formally stipulated to with regard to Dominion North Carolina Power and its calculation of avoided capacity rates in this proceeding.

did not feel the need to "fight" about the fact that they were not receiving full capacity payments under the standard avoided cost rates in place at the time.[2]

For purposes of this proceeding, everything has changed. Natural gas prices are now lower, the new SREC market is depressed, and the solar industry has matured to the point that it is now perceived as a disruptive threat[3] to the utilities. These three changed circumstances have made it much more difficult for developers to execute PPAs and complementary SREC purchase agreements that will generate sufficient revenue to secure financing.[4] This present difficulty with project finance partially explains why, for the first time since enactment of the Renewable Energy and Energy Efficiency Portfolio Standard ("REPS"), solar developers are "fighting" to secure the full avoided capacity payments they are entitled to under the law.

Solar developers are keenly aware that their present difficulties with project finance are likely to persist or even grow more challenging in the 2014 biennium – covering 1 November 2014 through 31 October 2016. Developers anticipate a difficult road ahead for a number of reasons. For example, since the utilities' proposed their avoided cost rates in this proceeding, natural gas prices have dropped still lower; if they do not rise significantly in the next half year, the utilities' 2014 proposed rates will reflect

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[2] "The [2.0 PAF for solar] issue was not litigated during the last two biennial proceedings." *Transcript of Testimony Heard on October 29-30, 2013, Volume 3 (Public Version)*, p. 27, Commission Docket No. E-100, Sub 136 (14 November 2013) (Public Staff Witness Ellis testimony).

[3] *See, e.g.,* Kind P., *Disruptive Challenges: Financial Implications and Strategic Responses to a Changing Retail Electric Business* (January 2013) (available at http://www.eei.org/issuesandpolicy/finance/Documents/disruptivechallenges.pdf).

[4] Michael Shore testified that "[t]he margins of a solar project in North Carolina are extremely thin, as Mr. Morrison was already sharing with you. They are thin for FLS Energy as well, even with the old [2010] avoided cost rate." *Transcript of Testimony Heard 2-12-13, Vol. 1, Raleigh*, p. 26, Commission Docket No. E-100, Sub 136 (22 February 2013).

the downwardly-revised price forecasts. Additionally, Duke Energy Carolinas, LLC ("Duke") and Duke Energy Progress, Inc. ("Progress") (collectively "Duke Energy") have indicated that their post-merger Joint Dispatch Agreement ("JDA") will likely drive their 2014 proposed rates lower. In 2014, Duke Energy will also apparently "ask the N.C. Utilities Commission to reconsider regulations it adopted in 1984 requiring Duke to make 15-year contracts to purchase power from solar installations 5 megawatts and under."[5] On top of all this, the North Carolina renewable energy tax credit is slated to sunset half way through the 2014 biennium (and the federal tax credit will drop from 30% to 10% at the beginning of the 2016 biennium). These anticipated difficulties help round out why solar developers have chosen to make a stand in this proceeding.

Multiple solar developers testified on 12 February 2013 to the positive impacts that the maturing solar industry is having in North Carolina. For example, Michael Shore testified that "[s]ince 2009, FLS Energy has brought 69.9 million of project equity investment dollars into our state.[6] . . . All of this capital fuels job creation and economic activity throughout our state" – including, importantly, in rural areas that are often overlooked by other development. *Transcript of Testimony Heard 2-12-13, Vol. 1, Raleigh*, p. 25, Commission Docket No. E-100, Sub 136 (22 February 2013). The maturing industry has been an incredible success story and has contributed in an

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[5] Downey J., "Regulation remake for Duke Energy," Charlotte Business Journal (6 December 2013) (available to subscribers at http://www.bizjournals.com/charlotte/print-edition/2013/12/06/regulation-remake.html) (citing an interview with Duke Energy President Paul Newton).

[6] A North Carolina Department of Revenue analysis indicates that, for calendar year 2012, corporate and individual taxpayers claiming the State renewable energy tax credit invested over $214 million in projects in the State. The analysis is available at http://www.dornc.com/publications/incentives/2013/2_3b_ren_engy_prop12.pdf. N.C. Gen. Stat. § 62-65(b) permits the Commission to take judicial notice of "public information and data published by official State . . . agencies . . . ."

amazingly short time to transforming solar from a high cost resource into something that Duke Energy now envisions could soon be integrated into the utilities' "least cost" generation fleets as owned assets.[7]

The utilities – reacting knee-jerkedly to the perceived mid-term threat rather than in thoughtful support of the near-term opportunity – have attempted to cast solar developers as greedy and desirous of using a performance adjustment factor ("PAF") modification to achieve a windfall overpayment at the expense of ratepayers. Thus, for example, Duke's counsel at one point asked Witness Karl Rabago: "[Y]our contention is that the solar [developer] should, in addition to peanut butter and bread, also get jelly, bananas, sprinkles, whipped cream and a cherry on top, right?" *Transcript of Testimony Heard on October 29-30, 2013, Volume 2 (Public Version)*, p. 203 ("Tr. Vol. __ at p. __"), Commission Docket No. E-100, Sub 136 (14 November 2013). Witness Rabago quickly responded with the solar developers' counter-position: "No. You would get a livable wage worth of peanut butter and bread, because that was the employment contract." *Id.*

The final order issued by the Commission in this proceeding will likely determine North Carolina's solar energy landscape for years to come. What future do we want? Will solar projects in North Carolina continue to contribute to the maturation of solar into a portfolio-diversifying low cost resource? Or will solar in North Carolina – together

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[7] *See, e.g.,* Downey J., "Duke Energy mulls adding solar to utilities' mix," Charlotte Business Journal (8 November 2013) (available to subscribers at http://www.bizjournals.com/charlotte/print-edition/2013/11/08/duke-mulls-adding-solar-to-utilities.html?page=all) (citing an interview with Duke Energy Vice President Rob Caldwell); *see also, Petition for Approval of Rider GC (Green Source Rider) Pilot*, Commission Docket No. E-7, Sub 1043 (15 November 2013) (indicating potential for Duke ownership of solar and other renewable energy projects).

with its attendant jobs, economic development, and emissions benefits – be hamstrung by underpayment? If we want the former future and not the latter, solar developers must receive "livable wages" in the form of full capacity payments and they must receive them in this biennium. As Witness Rabago testified:

> Time is of the essence, and approval of the utilities' proposed [underpaying] avoided costs for solar comes with a significant opportunity cost. Solar markets are largely driven by economics of manufacturing scale. That is, the more systems that are deployed, the faster the market moves to lower prices and greater value. Now is the time for the utilities to accurately value solar generation in North Carolina. Doing so will benefit their customers.

Tr. Vol. 2 at p. 186. It is in the foregoing context that NCSEA makes the following arguments.

Arguments

I. TO ENSURE THAT SOLAR FACILITIES ELIGIBLE TO SUBSCRIBE TO THE STANDARD RATES RECEIVE FULL AVOIDED COST PAYMENTS AND ARE NOT DISCRIMINATED AGAINST, A 2.0 PERFORMANCE ADJUSTMENT FACTOR ("PAF") SHOULD BE APPLIED TO THE 2012 BIENNIAL STANDARD "OPTION A" AVOIDED *CAPACITY* RATES ULTIMATELY APPROVED BY THE COMMISSION.

A. PURPA Establishes a Rate "Test" Applicable to this Proceeding.

As Duke Energy Witness Kendal Bowman testified:

> In 1978, Congress enacted the Public Utility Regulatory Policy Act of 1978 ("PURPA"). PURPA was enacted . . . in part, to promote development of cogeneration and small power production facilities in the United States. . . . These cogenerators and small power producers, collectively called "Qualifying Facilities" or "QFs," were granted new rights under PURPA to interconnect to the electrical grid and to sell their output in the wholesale marketplace. To this end, Section 210(a) of PURPA directed the Federal Energy Regulatory Commission ("FERC") to develop rules to implement PURPA's requirements. One of those rules was to require the incumbent electric utility to offer to purchase electric energy produced by a QF. *The rates should be both just and reasonable to*

> *the electric utility's electric consumers, in the public interest, and non-discriminatory to the QF.*

Tr. Vol. 1 at p. 90 (emphasis added). It is worth emphasizing that there is no disagreement among the parties about the "test" that rates must pass to be PURPA-compliant. Quoting this Commission's final order in the 2010 avoided cost proceeding, Witness Rabago similarly testified that

> [e]ach electric utility is required under Section 210 of PURPA to offer to purchase available electric energy from cogeneration and small power production facilities that obtain qualifying status under Section 210 of PURPA. For such purchases, *electric utilities are required to pay rates which are just and reasonable to ratepayers of the utility, are in the public interest, and do not discriminate against cogenerators or small power producers.*

Tr. Vol. 2 at p. 158 (emphasis added) (quoting *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 2, Commission Docket No. E-100, Sub 127 (27 July 2011)).

B. Solar QFs are Being Discriminated Against By Being Underpaid for Capacity.

If rates fail to fairly approximate the utilities' full avoided costs,[8] then QFs are being underpaid for the energy and/or capacity they provide. Material underpayment is discriminatory for purposes of the rate "test" set out in Arguments Section I.A. above. In this case, approval of the utilities' proposed/stipulated rates will result in material capacity underpayments to solar QFs and will be particularly insidious because the "margins of . . . solar project[s] in North Carolina [we]re [already] extremely thin . . . [under] the old[, higher 2010] avoided cost rate[s]." *Transcript of Testimony Heard 2-*

[8] Solar QFs, like other QFs eligible to subscribe to the standard avoided cost rates, are "*entitled* to *full* avoided costs[.]" *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 16, Commission Docket No. E-100, Sub 100 (29 September 2005) (emphasis added).

12-13, Vol. 1, Raleigh, p. 26, Commission Docket No. E-100, Sub 136 (22 February 2013) (testimony of Public Witness Michael Shore, President of FLS Energy). Relatedly, as Witness Rabago testified, "the systematic undervaluation of solar electric generation under the utilit[ies'] proposed avoided cost rates is not in the public interest because it promotes suboptimal and economically inefficient investment levels in the solar resource, and by definition leads to overinvestment in second-best resource choices and riskier generation alternatives." Tr. Vol. 2 at pp. 175-176.

To understand how solar QFs are being underpaid for capacity, one must first understand what a performance adjustment factor ("PAF") is. The Commission

> has traditionally used a PAF in calculating avoided cost rates for utilities that use the peaker methodology. This adjustment takes into account the fact that a generating facility cannot be in operation at all times. A wholesale power contract typically includes a capacity charge that is calculated on a per-kW basis and is payable regardless of the number of kWhs the seller provides. In contrast, the standardized capacity rates for purchases from QFs in North Carolina are calculated on a cents per-kWh basis. As a result, if rates were set at a level equal to a utility's avoided costs without a PAF, a QF would not receive the full capacity payment to which it is entitled unless it operated 100% of the on-peak hours throughout the year. The PAF is used to increase the capacity rates and, thus, allow a QF to experience a reasonable number of outages and still receive total payments equal to the utility's avoided costs. . . . [T]he Commission has used a PAF of 2.0 for hydro QFs with no storage capacity and no other type of generation (run-of-river hydro QFs), allowing such hydro QFs to collect their full capacity payments if they operate 50% of the time. For other QFs, the PAF adjustment factor has been set at 1.2, allowing such non-hydro QFs to receive payment for the utility's full avoided costs if they operate 83% of the time.

Order Establishing Standard Rates and Contract Terms for Qualifying Facilities, p. 17, Commission Docket No. E-100, Sub 106 (19 December 2007). In brief, an appropriately set PAF ensures that a QF "receive[s] the full capacity payment to which it is entitled[.]" *Id.* Solar QFs are currently paid for capacity by applying a 1.2 PAF to the utilities'

standard avoided capacity rates. As the Commission noted, this means the solar QFs will receive the full capacity payment to which they are entitled "if they operate 83% of the time." Solar QFs cannot, however, operate 83% of the time and they are therefore not receiving payment for the utilities' full avoided costs. This fact is uncontroverted. On cross-examination, Duke Energy Witness Bowman engaged in the following exchange:

> Q: [A] solar QF in Duke territory has to operate at a currently impossible 83 percent capacity factor to recover its full capacity payment, correct?
> A: But the QF is already getting an avoided cost which includes capacity and energy.
> Q: So you started your sentence with "but." Does that mean it is correct but –
> A: Yes.

Tr. Vol. 1 at p. 134. Witness Bowman later confirmed her response:

> Q: But a solar QF would still have to operate at an 83 percent capacity factor to recover the full capacity credit it is entitled to; isn't that correct?
> A: I believe I've already answered this question multiple times before. I said – yes.

Tr. Vol. 1 at p. 136. Solar QFs in North Carolina operate at roughly a 17% capacity factor[9] and therefore solar QFs cannot operate at the level required to recover the full capacity credits they are entitled to. Consequently, there is no question that an underpayment for capacity is occurring when a 1.2 PAF is applied to a solar QF's capacity payments. The Commission should carefully scrutinize the utilities' assertions to the contrary. The real question facing the Commission is how best to remedy the underpayment.

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[9] *See NCSEA Bowman Cross-Exhibit No. 1* at p. 20 (Duke data response indicating "Solar PV Capacity Factor – 17.4%"); *see also* Tr. Vol. 1 at pp. 131-132 (Duke Energy Witness Bowman's acknowledgment of 17% capacity factor for solar).

C. Applying a 2.0 PAF to Solar QFs Subscribing to the Utilities' 2012 Biennial Standard "Option A" Rates is a Fair Stop-Gap Remedial Measure.

Dominion North Carolina Power ("Dominion") and the Public Staff, through their witnesses, both indicated that they do not believe the record contains sufficient evidence to precisely set an appropriate PAF for solar QFs. *See, e.g.,* Tr. Vol. 1 at pp. 299-300 *and* Tr. Vol. 3 at p. 98 (the cited testimony of Dominion Witness Petrie and Public Staff Witness Ellis is set out more fully in Arguments Section II below). Even if this is taken as true, *arguendo*, it does not permit the Commission to disregard the discrimination against solar QFs, particularly as (a) the record of this proceeding contains sufficient evidence to support applying a 2.0 PAF to solar QFs subscribing to the standard 2012 biennial "Option A" rates[10] and (b) such an application would be consistent with this Commission's own prior orders in avoided cost proceedings.

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[10] To the extent the utilities all begin offering "Option B" rates with more narrowly defined on-peak hours, NCSEA is not opposed to the continued application of a 1.2 PAF to these "Option B" rate offerings. However, because it is not clear that "Option B" rates subject to a 1.2 PAF adequately remedy the discrimination faced by solar QFs in each of the utilities' territories, NCSEA believes a 2.0 PAF should be applied to solar QFs that subscribe to the utilities' "Option A" rates. The concept of an "Option B" rate serving as a proxy of sorts for a solar 2.0 PAF appears to trace back to the *Rebuttal Testimony of Steve W. Smith, P.E., for Duke Energy Carolinas, LLC*, p. 5, Commission Docket No. E-100, Sub 106 (18 July 2007). Whether "Option B" rates can serve as true proxies for a solar 2.0 PAF is questionable for at least three reasons. First, at the time Witness Smith testified, Duke had not completed any studies with regard to solar costs and benefits. *See* Tr. Vol. 1 at pp. 141-142 (Duke Energy Witness Bowman testimony). As such, it is difficult to fathom how Witness Smith could have so assuredly testified that "the *benefits* of photovoltaic power contribution during peak hours is *already recognized and appropriately priced* in the Company's 'Option B' rates[.]" (Emphasis added). Second, Public Staff Witness Hinton acknowledged that the Public Staff has not calculated what PAF the utilities' proposed/stipulated "Option B" rates are equivalent to. Tr. Vol. 3 at p. 99. Finally, though the Public Staff is not advocating for a 2.0 PAF for solar QFs, Public Staff Witness Ellis testified that the Public Staff is "certainly aware that there's a discriminatory issue out there, but we were advised by counsel that's . . . a legal issue and

"[A] PAF of 2.0 for . . . QFs . . . allow[s] . . . QFs to collect their full capacity payments if they operate 50% of the time." *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 17, Commission Docket No. E-100, Sub 106 (19 December 2007). As already mentioned, solar QFs in North Carolina can operate roughly 17% of the time. *See NCSEA Bowman Cross-Exhibit No. 1* at p. 20 (Duke data response indicating "Solar PV Capacity Factor – 17.4%"); *see also* Tr. Vol. 1 at pp. 131-132. Thus, even with application of a 2.0 PAF, solar QFs would have to operate at a currently impossible 50% capacity factor in order to recover their full capacity payments under the utilities' standard "Option A" rates. In other words, the evidence of record in this proceeding indicates that there is little to no risk that solar QFs will be overpaid if, as to them, a 2.0 PAF is applied to the standard "Option A" capacity rates. To the extent there is some small risk that technological innovations will someday permit solar QFs to operate at higher capacity factors, this risk is mitigated by limiting application of the 2.0 PAF for solar QFs to the current biennium, which we are already more than half-way through. See *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 21, Commission Docket No. E-100, Sub 106 (19 September 2007) (indicating that the Commission has the discretion to reach "interim solution" decisions "concerning PAF-related issues").

In past avoided cost proceedings, four main arguments have been advanced to justify the application of a 2.0 PAF to run-of-river hydro. These arguments are: (1) A

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we couldn't say any more in that regard." Tr. Vol. 3 at p. 97. An "Option B" does not clearly remediate the discrimination.

state statute "establishes a policy of encouraging hydro generation[;]"[11] (2) run-of-river hydro provides unquantified but real "environmental benefits[;]"[12] (3) run-of-river hydro QFs "are unique since their ability to generate is beyond the control of their operators because their fuel is essentially stream flow which is influenced by rainfall"[13] and "a 2.0 PAF . . . allows them to receive the full capacity payments to which they are entitled while operating under the constraints caused by their stream flows[;]"[14] and (4) "using a 2.0 PAF places run-of-river hydro QFs on an equal footing with the run-of-river hydro generating facilities included in the rate base of the State's utilities, which are able to recover the full costs of these facilities."[15]

The record in this case indicates that solar QFs, like run-of-river hydro, now meet each of the four previously articulated criteria. First, Duke Energy Witness Bowman

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[11] *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 19, Commission Docket No. E-100, Sub 79 (19 June 1997).

[12] *Carolina Power & Light Company's Reply Comments*, p. 5, Commission Docket No. E-100, Sub 79 (3 February 1997); *Carolina Power & Light Company's Proposed Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 13, Commission Docket No. E-100, Sub 79 (3 March 1997); *Brief of the Public Staff*, p. 2, Commission Docket No. E-100, Sub 79 (4 March 1997) (noting hydro "provides special benefits" and ratifying adoption of Carolina Power & Light Company's 3 March 1997 proposed order that acknowledges hydro's "environmental benefits" as a justification for applying a 2.0 PAF).

[13] *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 19, Commission Docket No. E-100, Sub 79 (19 June 1997).

[14] *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 20, Commission Docket No. E-100, Sub 106 (19 September 2007).

[15] *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 20, Commission Docket No. E-100, Sub 106 (19 September 2007); *see Carolina Power & Light Company's Proposed Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 12, Commission Docket No. E-100, Sub 79 (3 March 1997) (noting, with the Public Staff's ratification and support, that the "Public Staff asserts . . . that the capacity credits paid hydroelectric generating facilities should reflect an even higher performance factor due to . . . the fact that the Commission allows Duke Power to recover all of the capacity costs of its hydro units, notwithstanding the fact that their capacity factors are substantially below the level a QF hydro would have to operate to recover the full capacity credit.").

agreed that "the General Assembly has certainly expressed a desire to encourage solar generation[.]" Tr. Vol. 1 at p. 119; Tr. Vol. 1 at p. 121 (similar concession). The Commission itself has also acknowledged that "SB3 . . . which creates an REPS . . . establishes strong state policy support for renewable energy resources." *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 21, Commission Docket No. E-100, Sub 106 (19 September 2007). Second, Duke Energy Witness Bowman testified that Duke "[a]bsolutely" agrees solar has environmental benefits. Tr. Vol. 1 at p. 121. Third, Duke Energy Witness Bowman agreed that "solar facilities don't control the sun that is their fuel[.]" Tr. Vol. 1 at p. 122. The Commission has also "agree[d] that solar . . . QFs, like run-of-river facilities, have no control over their energy source . . . [which] is a legitimate argument for treating them in the same manner as run-of-river hydro QFs." *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 20, Commission Docket No. E-100, Sub 106 (19 September 2007). Finally, Duke Energy Witness Bowman acknowledged that Duke at least does now have solar in rate base. Tr. Vol. 1 at pp. 128-134; NCSEA *Bowman Cross-Exhibit No. 1*, p. 19 (Duke Energy data response); *NCSEA Confidential Bowman Cross-Exhibit No. 2* (identifying Duke's rate-based solar facilities). Duke Energy Witness Bowman also indicated that Duke and Progress have definitive plans to add more solar to rate base "[i]f it is a least cost resource, yes." Tr. Vol. 1 at pp. 134-135; *see* Downey J., "Duke Energy mulls adding solar to utilities' mix," Charlotte Business Journal (8 November 2013) (available to subscribers at http://www.bizjournals.com/charlotte/print-edition/2013/11/08/duke-mulls-adding-solar-to-utilities.html?page=all) (citing an interview with Duke Energy Vice President Rob Caldwell); *see also, Petition for*

Approval of Rider GC (Green Source Rider) Pilot, Commission Docket No. E-7, Sub 1043 (15 November 2013) (indicating potential for Duke ownership of solar and other renewable energy projects in the next 3 years). Similarly, Dominion indicated that "there are some solar facilities in development" and "the direction [Dominion's] moving" will see the solar in the company's North Carolina rate base in "fairly short order[.]" Tr. Vol. 2 at pp. 12, 15-16 (Dominion Witness Petrie testimony).

As set out at the conclusion of Arguments Section I.B., the real question facing the Commission is how best to remedy the capacity underpayment that solar QFs are receiving under the current paradigm. Based on the foregoing evidence of record and Commission precedent, NCSEA believes the best remedial measure is application of a 2.0 PAF to solar QFs who subscribe to the utilities' 2012 biennial standard "Option A" rates. NCSEA urges the Commission to adopt this "interim solution" approach in the current proceeding. (Beyond this proceeding, NCSEA believes a solar avoided cost rate should be determined and applied – *see* Arguments Section II below.)

D. Once One Cuts Through the Utilities' Obfuscatory Fog of Information and Implications, One Can See That a 2.0 PAF for Solar QFs is not Unjust or Unreasonable to Ratepayers.

NCSEA's advocacy in this proceeding tends to focus on the third prong of the rate "test" – *i.e.*, PURPA-compliant avoided cost rates cannot discriminate against QFs. The utilities' advocacy in this proceeding tends to focus on the first prong – *i.e.*, PURPA-compliant rates must be just and reasonable to the utilities' ratepayers. In trying to advance an argument that applying a 2.0 PAF to solar QFs will result in rates that are unjust and unreasonable, the utilities' have made statements and presented information

that, left unaddressed, would permit misimpressions. In this section, NCSEA will dispel the potential misimpressions.

1. Application of a 2.0 PAF to solar QFs, as requested by NCSEA, does not result in rates that exceed avoided costs.

The utilities argue that application of a 2.0 PAF in the manner requested by NCSEA will result in solar QFs receiving rates in excess of the utilities' avoided costs and that this is not just and reasonable to the utilities' ratepayers. For example, Duke Energy Witness Glen Snider testified as follows:

> The Utilities' strong opposition to [the 2.0] PAF recommendation is not in opposition to solar . . . technology nor the Commission's historical encouragement of QFs in compliance with FERC's directive to provide them the Utilities' full avoided costs. *Its opposition is based on the recognition that PURPA was not intended – and does not allow – QFs to receive rates in excess of the Utilities' avoided costs.*

Tr. Vol. 1 at p. 236 (emphasis added); *see* Tr. Vol. 2 at p. 15 (Dominion Witness Petrie testimony). Despite their strong conclusory statements, the utilities conceded that their statements were based on an assumption. On cross-examination, Duke Energy Witness Snider participated in the following exchange:

> Q: And so you would agree that the Utilities' opposition to an increased PAF is based on an assumption that an increased PAF results in payments to QFs that are in excess of the Utilities' avoided costs?
>
> A: Yes. It's based on the *assumption* that if you increase the PAF you would have a rate that would result in a cost that is more than is actually avoided but for that QF coming into fruition.

Tr. Vol. 1 at pp. 237-238 (emphasis added); *see* Tr. Vol. 2 at pp. 10-12 (on cross-examination, Dominion Witness Petrie conceded that a 2.0 PAF for solar does not necessarily result in rates that exceed avoided costs).

It is critically important that the Commission recognize that the assumption underlying the utilities' conclusory statements that a 2.0 PAF for solar would result in rates that exceed avoided costs is a *bad* assumption. Progress itself made a representation to the Commission over 15 years ago that shows it knows its assumption is tenuous. In the 1996 biennial avoided cost proceeding, Progress filed a proposed order which stated, "Importantly, [t]he use of a different performance factor for hydroelectric generators does not affect CP&L's avoided cost, rather it simply changes the manner in which avoided costs are paid. Thus, the use of such a performance factor does not result in CP&L paying these hydro QFs more than CP&L's avoided cost." *Carolina Power & Light Company's Proposed Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 13, Commission Docket No. E-100, Sub 79 (3 March 1997). The Public Staff, in ratifying Progress' 1997 proposed order, wrote, "[T]he use of a higher [2.0] performance factor is not preempted as argued by Duke. It is not an adjustment to avoided costs; instead, it is a change in the methodology by which a QF is paid." *Brief of the Public Staff*, p. 2, Commission Docket No. E-100, Sub 79 (4 March 1997). The Commission thereafter issued an order in which it concluded as follows: "Some parties comment that a higher performance adjustment factor for certain QFs is . . . in excess of avoided costs decreed by PURPA. . . . [U]se of a higher performance factor for these hydro facilities does not exceed avoided costs; it simply changes the method by which avoided costs are paid. It allows these QFs to operate less in order to receive the full capacity payments to which they are entitled[.]" *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 19, Commission Docket No. E-100, Sub 79 (19 June 1997).

In the 2002 biennial avoided cost proceeding, Progress again filed a proposed order stating, "Importantly, the use of a different performance factor for hydroelectric generators does not affect PEC's avoided cost, rather it simply changes the manner in which avoided costs are paid. Thus, the use of such a performance factor does not result in PEC paying these hydro QFs more than PEC's avoided cost." *Progress Energy Carolinas, Inc.'s Proposed Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 10, Commission Docket No. E-100, Sub 96 (23 June 2003).

As best the undersigned can decipher the record, the utilities' real objection is not to the application of a 2.0 PAF to avoided capacity rates vis-à-vis any one solar QF eligible to subscribe to the standard rates; their real objection can best be summed up in the form of a question: "Even if application of a 2.0 PAF is just, reasonable and non-discriminatory for the first 5 MW solar QF that subscribes to the standard rates, is it still just, reasonable and non-discriminatory for the twentieth 5 MW solar QF that subscribes? Or the one hundredth 5 MW solar QF that subscribes?" In other words, the utilities' real objection is not to the application of a 2.0 PAF to the first or second solar QF that subscribes; it is to the application of a 2.0 PAF to *each and every* solar QF that subscribes during a biennium, particularly as the utilities fear an "over-subscription" to the standard rates. The best evidence of the utilities' true objection and fear can be found in a recommendation made by Dominion Witness Petrie: "[T]he Company believes that the Commission should impose an annual maximum or 'cap' on capacity payments resulting from the application of a PAF in order to avoid the real possibility of payments to QFs in excess of the Company's avoided costs." Tr. Vol. 1 at p. 309. The utilities' fear of the aggregate cannot be used to justify a regime in which *each and every* solar QF is

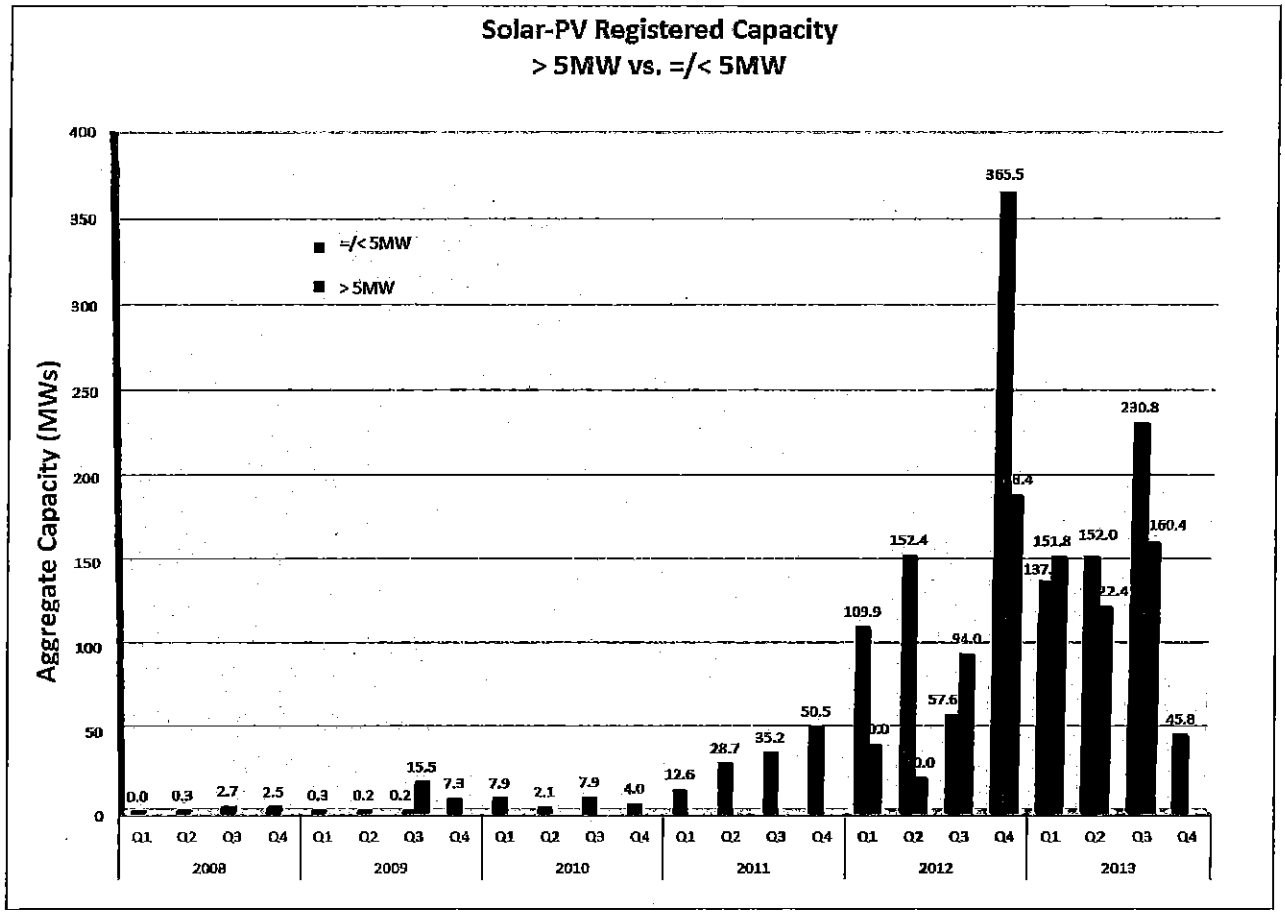
discriminated against by being underpaid for capacity. This is especially true where the utilities' fear of the aggregate is based on an exaggerated "threat."

2. *The "doomsday" subscription scenario being used as the basis for the utilities' opposition to application of a 2.0 PAF to solar QFs represents a grossly exaggerated "threat" or "risk."*

Duke Energy Witness Bowman testified that "[a]s of March 28, 2013, there were over 1,650 MWs of proposed solar generation facilities . . . in the Utilities' interconnection queues. Since that time, the amount of solar . . . generation in the Utilities' transmission queues has grown to approximately 2,300 MWs[.]" Tr. Vol. 1 at p. 105. While these numbers may be accurate with respect to Duke Energy's interconnection queues, these numbers do not accurately represent the current aggregate solar QF capacity that is eligible for the standard rates being established in this proceeding. These numbers therefore misrepresent the potential for "over-subscription" to the standard rates.

The 2,300 MW number misrepresents the potential for "over-subscription" because it includes two types of solar projects that are not eligible to subscribe to the standard rates at issue in this proceeding – the only rates to which a 2.0 PAF would be applied. First, not all solar projects are QFs that subscribe to the utilities' avoided cost rates. Thus, for example, smaller-scale rooftop solar projects that make use of net metering may be in the utilities' interconnection queues but they are not QFs for purposes of this proceeding. Duke Energy Witness Bowman herself highlighted this point during her testimony: "I want to note a lot of these properties are rooftops, which is not a comparable comparison to a QF that is entitled to avoided cost payment. A lot of these would be comparable to a rooftop solar that's under the net metering program in North

Carolina." Tr. Vol. 1 at p. 130. Second, while most utility-scale solar farms are QFs, the standard rates at issue in this proceeding are not available to all of them. The standard rates are only available to QFs up to 5 MWs in size. A solar QF larger than 5 MWs in size is not eligible to subscribe to the standard rates and instead must negotiate its rates with the incumbent utility.



Even if one assumes for the sake of argument that all of the solar in the Duke and Progress interconnection queues is actually going to be built out and will receive some type of payment for the electricity they generate,[16] the aggregate capacity (MWs) of projects eligible for the standard rates being set in this proceeding is far less than the

[16] This is in fact a very poor assumption because proposed projects regularly "line up" in the interconnection queue but thereafter fail to be built for a number of reasons, including but not limited to failure to secure financing or failure to hit a contractual milestone.

2,300 MWs Duke Energy Witness Bowman cited. The graph above, conservatively derived from Commission registration filings,[17] evidences that the current "worst case scenario" – in terms of the maximum potential aggregate capacity (MWs) eligible for the standard rates being set in this proceeding (the blue bars for Q4 2012 and Q1-Q4 2013 in the graph above) – is significantly less than the "doomsday" numbers offered into evidence by the utilities. When one considers that a large portion of the Q4 2012 registrations – totaling 365 MWs – will be eligible, via grandfathering, for the *2010* standard Progress rates, it becomes even more apparent that the 2,300 MWs figure is an absurd over-estimation of the potential aggregate capacity eligible for the standard rates being set in this proceeding.

The 2,300 MW number also misrepresents the potential for "over-subscription" because there is a very significant difference between what is in the interconnection queue and what actually gets built out (and thus gets paid at either a standard or a negotiated avoided cost rate). Duke and Progress are well aware that a proposed project can "line up" in the interconnection queue and thereafter fail to be built for a number of reasons, including but not limited to failure to secure financing or failure to hit a contractual milestone. The Commission need look no further than the confidential Duke and Progress triannual reports filed in Commission Docket No. E-100, Sub 113A to see some examples of how proposed swine and poultry waste-to-energy projects can be in the queue and yet ultimately fail to be built out. The same or similar issues can bump solar projects out of the queue. For this reason, the queue should not be regarded as a proxy for what will be built out. Instead, the queue is best viewed as representative of "the

[17] N.C. Gen. Stat. § 62-65(b) permits the Commission to take judicial notice of "public information and data published by official State . . . agencies . . . ."

optimism of . . . entrepreneur[s,]" and reflects the creation of "a pipeline so that in the event things go our way [from a development standpoint], we can be ready to move." Tr. Vol. 2 at p. 139 (Witness John Morrison testimony).

Perhaps the best illustration that the queue cannot serve as a proxy for what is likely to be built out and paid an avoided cost rate is the experience of Duke and Progress with solar farms larger than 5 MW in size. While the aggregate registered/queued capacity (MWs) of solar projects greater than 5 MWs (the red bars in the graph above) is over 700 MWs, Duke and Progress have, to date, signed *only two PPAs with such projects representing a total of 35.5 MWs.* As Duke and Progress state on pages 3-4 of their 2 December 2013 *Revised Late-Filed Exhibit*, Duke has so far entered into only two contracts – one with Apple Inc. for a 20 MW solar facility that began operating in November, 2012, and another with SunE DEC1 LLC for a 15.5 MW solar facility that began operating in December, 2009. *Progress has not entered into a single solar QF contract for a project with a capacity greater than 5 MW. Id.* Consequently, even if one were to include the larger solar QFs that are <u>not</u> eligible for the standard rates to which a 2.0 PAF would be applied, the utilities' 2,300 MWs figure grossly over-estimates the near-term aggregate registered/queued capacity that will actually end up being paid standard *or* negotiated avoided cost rates.

Aside and apart from the 2,300 MWs figure, the utilities also try to exaggerate the "over-subscription" threat by intimating that, while run-of-river hydro can be built only in certain locations, solar can be built *anywhere*. For example, Duke Energy Witness Bowman testified that "hydro facilities are unique. They are different than solar. There's a finite amount of places in the state of North Carolina where you can install a hydro

facility. There are unlimited rooftops that you can put solar on[.]" Tr. Vol. 1 at p. 137. Similarly, Duke's counsel at one point asked Witness Don Reading: "[A]re there *any* limits on the number of solar sites in North Carolina?" Tr. Vol. 2 at p. 81 (emphasis added). The utilities' intimation runs directly counter to their own testimony. As already pointed out, Duke Energy Witness Bowman testified: "[A] lot of these properties are rooftops, which is not a comparable comparison to a QF that is entitled to avoided cost payment. A lot of these would be comparable to a rooftop solar that's under the net metering program in North Carolina." Tr. Vol. 1 at p. 130. The utilities know that solar QFs are not so different from hydro in terms of being limited to a finite number of viable sites. As Witness Morrison testified, "QF facilities are not unconstrained in where they can be located and developed. It's actually rather difficult to find locations for QF facilities where we can meet the necessary environmental conditions where we have access and effectively – cost effective access to the grid, and so the – what seemed to be the comment earlier was that it's unconstrained is actually not [Strata Solar's] experience. *We are rather quite constrained in where we can put our QF facilities.*" Tr. Vol. 2 at p. 123 (emphasis added).

3. The utilities use the grossly exaggerated "threat" or "risk" to generate an incendiary $150 million figure that they claim will be a minimum additional burden on ratepayers if a 2.0 PAF is approved for solar QFs.

As already noted above, this Commission has held that, under PURPA, "electric utilities are required to pay rates which are just and reasonable to the ratepayers of the utility, are in the public interest, and do not discriminate against cogenerators or small power producers." *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 2, Commission Docket No. E-100, Sub 127 (27 July 2011).

NCSEA is advocating for application of a 2.0 performance adjustment factor ("PAF") to the standard avoided capacity rates that will be made available to solar QFs up to 5 MWs in size *during the 2012 biennium*. NCSEA believes a 2.0 PAF, instituted as an interim solution, is needed to ensure these solar QFs are not being discriminated against. *See* Arguments Sections I.A. & I.B. above. NCSEA's position focuses on the anti-discrimination prong of the rate "test." In an effort to distract from the discrimination inherent in the *status quo*, the utilities have chosen to focus on the ratepayer impact prong of the rate test.

Thus, for example, in providing an overview of her direct testimony, Duke Energy Witness Bowman testified as follows: "I discuss the proposal to increase the PAF for solar . . . QFs to 2.0. In particular, I explain why increasing the PAF would be detrimental to our customers . . . . [Also,] I discuss an issue that is critically important to this proceeding, but is largely unaddressed by the other parties – the potential impact of the Commission's decision in this Docket on the Utilities' customers." Tr. Vol. 1 at p. 93.[18] In order to exaggerate the potential ratepayer impact, the utilities proffered the 2,300 MWs figure cited in Arguments Section I.D.2. above and then went on to testify that "for every 1,000 MWs of new solar QFs that execute 15-year fixed rate contracts, the Utilities estimate that [the] proposal to increase the applicable PAF to 2.0 would impose an incremental cost of over $150 million on consumers." Tr. Vol. 1 at p. 106 (Duke

[18] To be clear, from a ratepayer perspective, a 5 MW solar QF that subscribes to Duke's or Progress' 2012 standard rates *and* has a 2.0 PAF applied will be paid less than an identical 5 MW solar QF that subscribed to Duke's or Progress' 2010 standard rates and had a 1.2 PAF applied, all else being equal. Tr. Vol. 2 at pp. 60-62 (Witness Don Reading testimony). In other words, even if a 2.0 PAF is approved, ratepayers will still be paying less per unit of solar QF electricity this biennium than they have become accustomed to paying under the last biennium's rates.

Energy Witness Bowman testimony). This $150 million figure was obviously introduced to grab the Commission's attention and it has probably accomplished that goal, but it is ultimately sound and fury, signifying nothing.

There are two fundamental problems with the $150 million figure. First, the $150 million figure is based on 1,000 MWs of aggregate solar QF capacity being eligible to subscribe to the standard rates being set in this proceeding. As pointed out in Arguments Section I.D.2. above, there are currently – more than half way through the 2012 biennium – far from 1,000 MWs of solar projects that are 5 MWs or smaller that (a) will sign PPAs at the 2012 standard rates *and* (b) will actually be built out such that an adjusted capacity payment will be made. Second, even if we assume for the sake of argument that the $150 million figure is correct, there is no credible evidence that payment of such an amount would not "reflect the cost that the purchasing utility can avoid as a result of obtaining energy and capacity from these sources, rather than generating an equivalent amount of energy itself or purchasing the energy or capacity from other suppliers." *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, p. 2, Commission Docket No. E-100, Sub 127 (27 July 2011). In other words, there is no evidence that this amount – over-inflated as it is – would not reflect costs that customers would bear regardless. For example, there is no evidence that, in the absence of the $150 million in capacity payments to solar QFs, the electric suppliers would not incur $150 million in additional costs to generate electricity themselves or buy electricity from neighboring utilities. As such, there is no basis for concluding that the $150 million would be the "incremental" burden to customers that the utilities represent it to be. This is critically important because, despite what the utilities would have the Commission

infer, a large aggregate avoided cost expense, standing alone, does not evidence the presence of avoided cost rates which are unjust and unreasonable to the ratepayers of the utility. Put another way, a large aggregate avoided cost expense, by itself, is insufficient to evidence that avoided cost rates fail the ratepayer prong of the PURPA rate "test."

II. IN ADVANCE OF THE 2014 BIENNIAL AVOIDED COST PROCEEDING, THE COMMISSION SHOULD OVERSEE THE DEVELOPMENT OF CONSENSUS METHODOLOGIES FOR (A) DETERMINING THE VALUE OF SOLAR AND (B) INCORPORATING THE VALUE OF SOLAR INTO FUTURE PROPOSED AVOIDED COST RATES.

Regardless of how the Commission rules with regard to application of a 2.0 PAF to capacity payments for solar QFs subscribing to this biennium's standard "Option A" rates, the Commission should take steps to ensure that solar QFs are being appropriately compensated under the rates set in future avoided cost proceedings.

The record of this proceeding contains substantial, largely uncontroverted evidence that solar QFs provide numerous benefits that (a) both inure to the utilities' ratepayers and enable the utilities to avoid costs they would otherwise incur, yet (b) are not accounted for in the utilities' proposed/stipulated avoided cost rates. *See, e.g., generally,* the testimony of Witness Rabago, including Tr. Vol. 1 at pp. 159-176 (noteworthy specific portions of Witness Rabago's direct testimony); Exhibit KRR-7 (Crossborder Energy study entitled "The Benefits and Costs of Solar Generation for Electric Ratepayers in North Carolina"[19] and introduced as an attachment to Witness

[19] While this study was not "peer-reviewed," it is worth noting that two Crossborder Energy studies were reviewed in the Rocky Mountain Institute meta-analysis of value of solar studies, attached to Witness Rabago's testimony as Exhibit KRR-2, and there is no indication therein that Crossborder Energy's analytical approach is fundamentally flawed or yields inaccurate conclusions.

Rabago's testimony); Tr. Vol. 3 at pp. 21-24, 86-89 (Public Staff Witness Ellis' discussion of solar's benefits).

As Witness Rabago testified,

> the evidence shows that the avoided cost methodologies used by the utilities are deficient and should be improved in order to more accurately capture the full avoided cost of solar generation. . . . [B]ased on the studies of others, but not the utilities, solar generation appears to offer resource value that greatly exceeds the utilities' proposed avoided costs and justifies a PAF adjustment now, and then further analysis following this proceeding to quantify and characterize the full avoided cost of solar – the avoided cost value of solar.

Tr. Vol. 2 at pp. 185-186.

Not only does the record support the Commission taking steps to ensure that solar QFs receive full avoided cost payments, but the law permits the taking of such steps. As the Renewable Energy Group ("REG") pointed out in an earlier filing in this docket,

> FERC recently ruled that it is permissible for states to differentiate among QFs using various technologies when establishing avoided cost rates. "Because avoided cost rates are defined in terms of cost that an electric utility avoids by purchasing capacity from a QF, and because a state may determine what particular capacity is being avoided, the state may rely on the cost of such avoided capacity to determine the avoided cost rate. Thus, the avoided cost rate may take into account the cost of electric energy from the generators being avoided, *e.g.*, generators with certain characteristics."

REG's Initial Comments, pp. 9-10, Commission Dòcket No. E-100, Sub 136 (7 February 2013)(citing California Public Utilities Commission, Docket No. EL 10-64-002, Southern California Edison Company, Docket No. EL 10-66-002, 133 FERC ¶ 61,059 (2010), *rehearing denied*, 134 FERC ¶ 61,044 (2011), p. 15 (emphasis added) (footnotes omitted)).

Duke Energy opposes the relief NCSEA seeks in this proceeding but even it concedes the time has come to more thoroughly consider the value of solar:

> In light of the significant, ongoing upsurge in the amount of intermittent resources being proposed and recently certified for construction in North Carolina, it may be the appropriate time for the Commission, the Utilities and other stakeholders to consider these issues. . . . Therefore, the Utilities submit that, if the Commission believes that REG's suggestion to increase the avoided cost payments to solar and wind QFs warrants any consideration, the Commission should do so in a separate workshop on the integration of intermittent resources into the Utilities' systems.

Duke and Progress Joint Reply Comments, p. 39, Commission Docket No. E-100, Sub 136 (28 March 2013). Dominion's position appears to be substantially identical. Dominion Witness Petrie testified that "[t]he appropriate PAF should reflect both the availability and capability during the tariff defined on-peak hours, and also both availability and capability of the QF resource at the time of the utility's system peak load. The Company does not believe that there is sufficient evidence in the record of this proceeding to make such a determination, and rather than further prolonging this proceeding, and the attendant uncertainty for both QFs and the Company, *the issue should be examined in a separate proceeding or workshop.*" Tr. Vol. 1 at pp. 299-300 (emphasis added). Finally, the Public Staff appears to agree that value of solar and the setting of PAFs merits additional consideration. Commissioner Brown-Bland and Public Staff Witness Ellis engaged in the following exchange:

> Q: Do you believe that the Commission currently has enough information before it to decide what, if any, changes to make to solar and wind PAFs as well as hydro at this time, or is some other proceeding in order or some other study required?
>
> A: I personally believe they need additional information in order to make a recommendation as far as a new PAF.

Tr. Vol. 3 at p. 98.

NCSEA reiterates that its primary and most pressing request for relief is application, on a 2012 biennial interim basis, of a 2.0 PAF to solar QFs to remedy the

discriminatory underpayment of capacity credits to these QFs. NCSEA recognizes, however, that a better "fix" is needed on a going-forward basis. As Witness Rabago put it: "[F]rom what I've heard of the other witnesses, from what I've seen of the discussion around the PAF, that is a reasonable, probably a little low, but reasonable valuation, a 2.0 adjustment – PAF adjustment would be, let's say, rough justice until a full [solar] avoided cost could be calculated." Tr. Vol. 2 at p. 230.

For the foregoing reasons, the Commission should – in addition to (and not in lieu of) the 2012 biennium 2.0 PAF relief requested by NCSEA – oversee the development of consensus methodologies for (a) determining the value of solar and (b) incorporating the value of solar into future proposed avoided cost rates. In ordering the development of said methodologies, the Commission could look to the similar (but not identical) process that is currently being worked through in Minnesota. The Commission might, for example, use language found in MN Laws 2013, Chapter 85 HF 729, Article 9, Section 10, as a template for directing a stakeholder workshop to establish and submit to the Commission for approval, no later than 31 August 2014, a distributed solar value methodology that accounts for the value of energy and its delivery, generation capacity, transmission capacity, transmission and distribution line losses, environmental value, and other values for which there is known and measurable evidence.

III. AS TO THE TERMS AND CONDITIONS IN THE UTILITIES' PROPOSED STANDARD CONTRACTS, THE COMMISSION SHOULD GRANT THE RELIEF/MODIFICATIONS BEING REQUESTED BY THE RENEWABLE ENERGY GROUP AND THE PUBLIC STAFF

NCSEA generally supports the REG and Public Staff arguments/proposals for amending the utilities' standard contract terms.[20] (NCSEA also supports the Public Staff's argument/proposal for revising existing Duke standard contracts signed between 1 November 2010 and 31 October 2012 to include the "Note" in the standard contract Duke filed in the 2010 biennial avoided cost proceeding and thus clarifying that the ability to change the rates in the contract does not apply to the 5-, 10-, and 15-year fixed long-term rates.)

NCSEA specifically supports REG's argument/proposal regarding Dominion's Regulatory Disallowance Clause. The Regulatory Disallowance Clause, Article 6 of Dominion's Agreement for the Sale of Electrical Output to Virginia Electric and Power Company, addresses a situation in which a regulatory body with jurisdiction, such as this Commission or the Virginia State Corporation Commission, issues an order that disallows the recovery by the utility of payments previously made to a QF or to be made to a QF in the future ("Disallowance Order").

The Regulatory Disallowance Clause is inconsistent with the clear and unambiguous right of the QF, set forth in 18 C.F.R. § 292.304(d)(2), to fixed rates over the term of the power purchase agreement. Additionally, the record in the instant proceeding includes competent, material and substantial evidence -- provided by Witness

[20] NCSEA is unaware of substantially different positions having been taken by REG and the Public Staff where each addresses the same term or provision. To the extent, however, that the Commission perceives a difference in position, NCSEA supports REG's arguments/proposals.

Morrison, by REG Affiant Stuebe, and by Dominion itself – that the Regulatory Disallowance Clause discourages QF development by introducing enough uncertainty to thwart the QF's ability to secure project financing. For these reasons, the Regulatory Disallowance Clause should be stricken, in its entirety, from Dominion's standard contract.

IV. THE COMMISSION SHOULD ADOPT THE RATE AVAILABILITY STANDARD PROPOSED BY THE PUBLIC STAFF IN THEIR 28 MARCH 2013 REPLY COMMENTS FILED IN THIS PROCEEDING.

In their 28 March 2013 filing in this proceeding, the Public Staff stated:

> The Public Staff believes that for the same reasons the Commission concluded that PEC must offer approved rates to QFs that had timely filed applications for certificates of public convenience and necessity (CPCNs) of reports of construction,[21] DEC's and DNCP's avoided cost tariffs must be changed so that fixed long-term rates remain available to QFs. The Public Staff recommends that the Commission approve the following standard:
>
> - For QFs that have not filed their applications for CPCNs or reports of construction by the November 1 filing date of new proposed avoided costs (or the actual filing date, if later), the proposed new long-term avoided cost rates are available, subject to true-up if the Commission approves higher rates (assuming the QFs are otherwise eligible).
> - For QFs that have filed their applications for CPCNs or reports of construction by or on the November 1 filing date of new proposed avoided costs (or the actual filing date, if later), all of the approved long-term avoided cost rate options are available (assuming they are otherwise eligible).

The Public Staff's Reply Comments, pp. 14-15, Commission Docket No. E-100, Sub 136 (28 March 2013). NCSEA supports adoption of the standard articulated by the Public Staff and believes the proposed standard is consistent with this Commission's prior

[21] *See Order on Motion to Suspend Avoided Cost Rates*, Commission Docket Nos. E-100, Sub 127 and E-100, Sub 136 (21 December 2012).

orders on rate availability, including the recently issued *Order on Availability of Rates*, Commission Docket No. E-100, Sub 136 (14 May 2013).

Relatedly, in light of the facts that (1) Duke Energy will apparently "ask the N.C. Utilities Commission to reconsider regulations it adopted in 1984 requiring Duke to make 15-year contracts to purchase power from solar installations 5 megawatts and under[;]"[22] (2) N.C. Gen. Stat. § 62-133.8(d) provides that "[t]he terms of any contract entered into between an electric power supplier and a new solar electric facility . . . shall be of sufficient length to stimulate development of solar energy[;]" and (3) the distinct possibility that QFs, including solar QFs, will oppose elimination of the 15-year fixed rate option, NCSEA believes the Commission should prohibit the utilities from unilaterally declining to propose a 15-year fixed rate option (or otherwise materially limiting the availability of the standard rates approved in this proceeding) at the time they file their proposed rates for the 2014 biennium.

V. THE COMMISSION SHOULD REMIND THE UTILITIES TO MAKE GOOD FAITH PROJECTIONS OF AVOIDED COST RATES IN THEIR ANNUAL REPS COMPLIANCE PLANS.

Commission Rule R8-67(b)(1)(v) requires electric power suppliers to include "the current and projected avoided cost rates for each year" in their REPS compliance plans. On 4 September 2012, Duke and Progress filed their 2012 REPS compliance plans in Commission Docket No. E-100, Sub 137. Neither Duke nor Progress projected a drop in avoided costs rates in its filing. Instead, as evidenced by the two excerpts below, both

[22] Downey J., "Regulation remake for Duke Energy," Charlotte Business Journal (6 December 2013) (available to subscribers at http://www.bizjournals.com/charlotte/print-edition/2013/12/06/regulation-remake.html) (citing an interview with Duke Energy President Paul Newton).

companies' September filings projected avoided cost rates to remain at the 2010 Commission-approved levels through the 2013-2014 biennium.

VII. CURRENT AND PROJECTED AVOIDED COST RATES

The current and projected avoided cost rates represent the annualized avoided cost rates for Cogeneration and Small Power Producer (CSP) Schedule CSP-27, approved in the Commission Order issued in Docket No. E-100, Sub 127 in August 2011.

Table 7: Annualized Capacity and Energy Rates (cents per KWh)

	2012 (Current)	2013 (Projected)	2014 (Projected)
Variable Rate	5.786¢	5.786¢	5.786¢
5 Year	6.184¢	6.184¢	6.184¢
10 Year	6.816¢	6.816¢	6.816¢
15 Year	7.286¢	7.286¢	7.286¢

A. CURRENT AND PROJECTED AVOIDED COST RATES

The current and projected avoided cost rates represent the annualized avoided cost rates in Schedule PP-N (NC), Distribution Interconnection, approved in the Commission's *Order Establishing Standard Rates and Contract Terms for Qualifying Facilities*, issued in Docket No. E-100, Sub 127 (July 27, 2011).

Table 2: Annualized Capacity and Energy Rates (cents per KWh)

	2012 (Current)	2013 (Projected)	2014 (Projected)
Variable Rate	5.48¢	5.48¢	5.48¢
5 Year	5.63¢	5.63¢	5.63¢
10 Year	6.28¢	6.28¢	6.28¢
15 Year	6.63¢	6.63¢	6.63¢
20 Year (extrapolated)	7.02¢	7.02¢	7.02¢
25 Year (extrapolated)	7.42¢	7.42¢	7.42¢

See NCSEA's Comments [Public Version], Exhibit B, Commission Docket No. E-100, Sub 136 (7 February 2013) (containing more complete excerpts of the utilities' public 2012 REPS compliance plan filings). Duke's and Progress' September 2012 filings stand in stark contrast to Dominion's 2012 REPS compliance plan filing, where a decline in rates was actually projected (compare, for example, the approved 2013 on-peak rate of $54.84 set out in Dominion's Figure 1.6.1 below with the projected 2013 on-peak rate of $47.22 set out in Dominion's Figure 1.6.2 below):

1.6 AVOIDED COST RATES

In accordance with Rule R8-67 (b) (v), the Company provides the following statement regarding the current and projected avoided cost rates for each year.

Figure 1:6.1 identifies the projected avoided energy and capacity cost from the Biennial Determination of Avoided Costs Rates for Electric Utility Purchases from Qualifying Facilities – 2010 proceeding E-100, SUB 127 before the North Carolina Utilities Commission. Avoided energy and capacity cost as used in the 2012.IRP are given below in Figure 1.6.2.

Figure 1.6.1 PROJECTED AVOIDED ENERGY AND CAPACITY COST (from E-100 sub 127)

	On-Peak ($/MWh)	Off-Peak ($/MWh)	Capacity Price ($/kW-Year)
2012	52.31	40.09	20.23
2013	54.84	41.19	8.41
2014	60.13	45.22	18.27

Figure 1.6.2 PROJECTED AVOIDED ENERGY AND CAPACITY COST (from NC 2012 IRP)

	On-Peak ($/MWh)	Off-Peak ($/MWh)	Capacity Price ($/kW-Year)
2012	44.39	29.51	20.05
2013	47.22	33.80	8.30
2014	50.38	37.97	30.58

Id. The Commission should remind the utilities to make good faith projections of the next two years' avoided cost rates in their annual REPS compliance plans. The more advanced notice the utilities can provide to QFs about the up or down movement of future avoided cost rates, the better QFs can plan and the less surprised they will be once the next biennium's proposed rates are actually filed.

Conclusion

For the reasons set forth in the foregoing post-hearing brief, NCSEA prays the Commission grant the following relief:

(1) To ensure that solar QFs eligible to subscribe to the standard rates receive full avoided cost payments and are not discriminated against, a 2.0 PAF should be applied to the 2012 biennial standard "Option A" avoided *capacity* rates ultimately approved by the Commission in this proceeding;

(2) in advance of the opening of the 2014 biennial avoided cost proceeding, the Commission should open a separate docket and oversee the development of consensus methodologies for (a) determining the value of solar ("VOS") *and* (b) incorporating the VOS into future proposed standard avoided cost rates;

(3) as to the terms and conditions in the utilities' proposed standard contracts, the Commission should grant the relief/modifications being requested by the Renewable Energy Group and the Public Staff;

(4) the Commission should adopt the rate availability standard proposed by the Public Staff in their 28 March 2013 Reply Comments filed in this proceeding; and

(5) the Commission should remind the utilities to make good faith projections of future avoided cost rates in their annual REPS compliance plans.

Respectfully submitted,

Michael D. Youth
Counsel for NCSEA
N.C. State Bar No. 29530
P.O. Box 6465
Raleigh, NC 27628
(919) 832-7601 Ext. 118
michael@energync.org

CERTIFICATE OF SERVICE

I hereby certify that all persons on the docket service list have been served true and accurate copies of the foregoing brief by hand delivery, first class mail deposited in the U.S. mail, postage pre-paid, or by email transmission with the party's consent.

This the 20th day of December, 2013.

Michael D. Youth
Counsel for NCSEA
N.C. State Bar No. 29533
P.O. Box 6465
Raleigh, NC 27628
(919) 832-7601 Ext. 118
michael@energync.org