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

Re: Docket No. E-100, Sub 127

Dear Ms. Vance:

Enclosed are the original and thirty (30) copies of the Proposed Order Establishing Standard Rate and Contract Terms for Qualifying Facilities of Progress Energy Carolinas, Inc. in the above referenced docket. Also enclosed is a compact disk containing this document in MS-Word format. All parties of record have been served in accordance with the enclosed Certificate of Service.

Very truly yours,

Len S. Anthony  
General Counsel  
Progress Energy Carolinas, Inc.

(20)  
a.p.  
r.com.  
President  
Walter  
Hess  
Lessons  
Mike  
Ephraim  
Jones  
Ridge  
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Attachment

STAREG1483

CD to Bartles

**STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH**

**FILED**  
**APR 29 2011**  
Clerk's Office  
N.C. Utilities Commission

**DOCKET NO. E-100, SUB 127**

**BEFORE THE NORTH CAROLINA UTILITIES COMMISSION**

In the Matter of

	)	<b>PROGRESS ENERGY CAROLINAS,</b>
Biennial Determination of Avoided	)	<b>INC. PROPOSED ORDER</b>
Cost Rates for Electric Utility	)	<b>ESTABLISHING STANDARD RATES</b>
Purchases from Qualifying	)	<b>AND CONTRACT TERMS FOR</b>
Facilities - 2010	)	<b>QUALIFYING FACILITIES</b>

**HEARD:** Tuesday, January 25, 2011, at 9:00 a.m. in the Commission Hearing Room, Dobbs Building, 430 North Salisbury Street, Raleigh, North Carolina

**BEFORE:** Commissioner William T. Culpepper, III, Presiding; Chairman Edward S. Finley, Jr., Commissioners Lucy T. Allen, Lorinzo L. Joyner, Bryan E. Beatty, ToNola D. Brown Bland, and Susan Rabon

**APPEARANCES:**

**For Carolina Power & Light Company, d/b/a Progress Energy Carolinas, Inc.:**

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General Counsel – Progress Energy Carolinas, Inc.  
Progress Energy Service Co., LLC  
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For the Using and Consuming Public:

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Raleigh, North Carolina 27699-4326

**BY THE COMMISSION:** These are the current biennial proceedings held by the North Carolina Utilities Commission pursuant to the provisions of Section 210 of the Public Utility Regulatory Policies Act of 1978 (PURPA) and the Federal Energy Regulatory Commission's (FERC) regulations implementing those provisions, which delegated responsibilities in that regard to this Commission. These proceedings are also held pursuant to the responsibilities delegated to this Commission under G.S. § 62-156(b) to establish rates for small power producers as that term is defined in G.S. § 62-3(27a).

Section 210 of PURPA and the regulations promulgated pursuant thereto by FERC prescribe the responsibilities of FERC and of State regulatory authorities, such as this Commission, relating to the development of cogeneration and small power production. Section 210 of PURPA requires the FERC to prescribe such rules as it determines necessary to encourage cogeneration and small power production, including rules requiring electric utilities to purchase electric power from, and to sell electric power to, cogeneration and small power production facilities. Under Section 210 of PURPA, cogeneration and small power production facilities that meet certain standards and are not owned by persons primarily engaged in the generation or sale of electric power can become "qualifying

facilities” (QFs), and thus become eligible for the rates and exemptions established in accordance with Section 210 of PURPA.

Each 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 QF status. For such purchases, 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. The relevant FERC regulations require that the rates electric utilities pay to purchase electric energy and capacity from qualifying cogenerators and small power producers 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.

With respect to electric utilities subject to state regulation, FERC delegated the implementation of these rules to State regulatory authorities. State commissions may implement these rules by the issuance of regulations, on a case-by-case basis, or by any other means reasonably designed to give effect to FERC's rules.

The Commission has implemented Section 210 of PURPA and the related FERC regulations by holding biennial proceedings. The instant proceeding is the latest such proceeding to be held by this Commission since the enactment of PURPA. In prior biennial proceedings, the Commission has determined separate avoided cost rates to be paid by the electric utilities subject to the Commission's jurisdiction to the QFs with whom they interconnect. The Commission has also reviewed and addressed other matters involving the relationship between the electric utilities and QFs, such as the terms and conditions of service, contractual arrangements and interconnection charges.

This proceeding also results from the mandate of G.S. § 62-156, which was enacted by the General Assembly in 1979. This statute provides that, “no later than March 1, 1981, and at least every two years thereafter,” the Commission shall determine the rates to be paid by electric utilities for power purchased from small power producers according to certain standards prescribed therein. The statutory standards set out in G.S. § 62-156 generally approximate those prescribed in the FERC regulations prescribing the factors to be considered in the determination of avoided cost rates. The definition of the term “small power producer” as used in G.S. § 62-156 is more restrictive than the PURPA definition of that term, in that

G.S. § 62-3(27a) includes only hydroelectric facilities of 80 MW or less, thus excluding other types of renewable resources.

On May 5, 2010 the Commission issued its Order Establishing Biennial Proceeding, Requiring Data and Scheduling Public Hearing. That Order made Carolina Power & Light Company d/b/a Progress Energy Carolinas, Inc. (PEC); Duke Power Company, LLC d/b/a Duke Energy Carolinas, LLC (Duke); Virginia Electric and Power Company d/b/a Dominion North Carolina Power (NC Power); and Western Carolina University (WCU) parties to this proceeding in order to establish the avoided cost rates each is to pay for power purchased pursuant to the provisions of Section 210 of PURPA and associated FERC regulations and G.S. § 62-156. The order also required each electric utility to file proposed rates and proposed standard form contracts.

The procedural order also stated that--in lieu of holding a full evidentiary hearing -- the Commission would attempt to resolve all issues arising in this docket based on a record developed through public witness testimony, written statements, exhibits and avoided cost schedules verified by persons qualified to present expert testimony, and written comments on the statements, exhibits, and schedules. PEC, Duke, NC Power, and WCU were required to file their statements and exhibits by November 1, 2010. Other persons desiring to become parties were allowed to intervene and file their statements and exhibits by January 10, 2011. All parties, other than the four electric utilities, were allowed to file comments and exhibits that they wish to present on or before January 10, 2011; this deadline was subsequently extended to February 22, 2011. The electric utilities and intervenors were to file reply comments on or before February 16, 2011; this deadline was subsequently extended to March 30, 2011, and further extended to April 4, 2011. Proposed orders were to be filed on or before March 16, 2011; this deadline was subsequently extended to April 27, 2011. The Commission scheduled a public hearing for January 25, 2011 solely for the purpose of taking nonexpert public witness testimony. Finally, the Commission required PEC, Duke, NC Power, and WCU to provide public notice and submit Affidavits of Publication no later than the date of the hearing.

The Public Works Commission of Fayetteville (FPWC), the North Carolina Sustainable Energy Association (NCSEA), and the Carolina Industrial Group for Fair Utility Rates (CIGFUR) filed petitions to intervene, all of which were granted. Carolina Utility Customers Association, Inc. (CUCA), and Charles B. Mierek (Mierek) subsequently filed petitions to intervene, which were also granted.

WCU filed Comments and Proposed Rates on October 21, 2010. In accordance with the Commission's order of May 5, 2010, PEC and Duke filed their initial statements and exhibits and NC Power filed its Comments, Exhibits and Avoided Cost Schedules on November 1, 2010. Duke subsequently submitted a revised initial statement and revised exhibit on November 29, 2010.

The Commission held a hearing on January 25, 2011, for the sole purpose of taking nonexpert public witness testimony. No witnesses appeared at this hearing.

On February 24, 2011, the Commission granted the Public Staff's Motion for Extension of Time, allowing a three business-day extension of the due date for intervenor comments. On March 1, 2011, the Public Staff filed its initial statement in response to the electric utilities' statements and exhibits.

On March 2, 2011, New River Light and Power Company (New River) filed comments and proposed avoided cost rates. On March 16, 2011 WCU filed a clarification of its proposed exhibits.

On April 4, 2011, PEC, Duke and NC Power filed their reply comments. PEC also filed a revised rate schedule and exhibit adopting a change recommended by the Public Staff in its Initial Statement. Proposed orders were filed by PEC, Duke, NC Power, WCU and the Public Staff on April 27, 2011.

Various filings were made and orders were issued which are not discussed in this order but are included in the record of the proceeding.

Based on the foregoing, all of the parties' comments and other filings, and the entire record in this proceeding, the Commission now makes the following:

### **FINDINGS OF FACT**

1. PEC and Duke should continue to offer long-term levelized capacity payments and energy payments for 5-year, 10-year and 15-year periods as standard options to (a) hydroelectric QFs owned or operated by small power producers as defined in G.S. § 62-3(27a) contracting to sell 5 MW or less capacity and (b) non-hydroelectric QFs fueled by trash or methane derived from landfills, swine waste, poultry waste, solar, wind, and non-animal forms of biomass contracting to sell 5 MW or less capacity. The standard levelized rate options of 10-years and 15-years should include a condition making contracts under those options renewable for subsequent term(s) at the option of the utility on substantially the same terms and provisions and at a rate either (1)

mutually agreed upon by the parties negotiating in good faith and taking into consideration the utility's then avoided cost rates and other relevant factors or (2) set by arbitration. PEC and Duke shall offer their standard 5-year levelized rate option to all other QFs contracting to sell 3 MW or less capacity.

2. PEC and Duke should continue to offer QFs not eligible for the standard long-term levelized rates the following three options if PEC or Duke has a Commission-recognized active solicitation underway: (1) participating in PEC's or Duke's competitive bidding process, (2) negotiating a contract and rates with PEC or Duke, or (3) selling energy at PEC's or Duke's Commission-established variable energy rate. If PEC or Duke does not have a Commission-recognized active solicitation underway, PEC or Duke should offer QFs not eligible for the standard long-term levelized rates the options of (1) contracting with PEC or Duke to sell power at the variable energy rate established by the Commission in these biennial proceedings or (2) contracting with PEC or Duke to sell power at negotiated rates. If PEC or Duke does not have a solicitation underway, such negotiations will be subject to arbitration by the Commission at the request of either party to determine PEC's or Duke's actual avoided cost, including both capacity and energy components, as appropriate; however, the Commission will only arbitrate if the QF is prepared to commit its capacity to PEC or Duke for a period of at least two years. In either case, whether there is an active solicitation underway or not, QFs not eligible for the standard long-term levelized rates have the option of selling into the wholesale market. The exact points at which an active solicitation should be regarded as beginning and ending for these purposes should be determined by motion to, and order of, the Commission. Unless there is such a Commission order, it will be assumed that there is no solicitation underway. If the option of the variable energy rate is chosen, such rate may not be locked in by a contract term, but shall instead change as determined by the Commission in the next biennial proceeding.

3. PEC and Duke use the peaker method to develop avoided capacity costs. The peaker method is generally accepted and used throughout the electric utility industry and is reasonable for use in this proceeding.

4. A performance adjustment factor of 2.0 should be utilized by PEC and Duke for their avoided cost calculations for hydroelectric facilities with no storage capability and no other type of generation.

5. Except for hydroelectric facilities with no storage capability and no other type of generation, a performance adjustment factor of 1.2 should be utilized by PEC and Duke for their avoided cost calculations for all QFs in this proceeding, including photovoltaic generators.

6. In order to appropriately balance the Commission's duty to both encourage qualifying facilities and ensure that a utility's avoided cost rates are just and reasonable to an electric utility's consumers and are in the public interest, the Commission should amend its current criteria for determining the date when a legally enforceable obligation occurs to include a "viability prerequisite," which establishes that the qualifying facility is in fact ready, willing, and able to enter into a contract with the utility. The addition of the "viability prerequisite" will ensure that a qualifying facility is not unfairly allowed to lock in higher rates to the detriment of the utility's customers.

7. PEC should use the Total System Cost output data in its PROSYM production simulation model (which includes start costs) for all four proposed avoided energy rates (i.e., variable, five-year, ten-year and 15-year).

8. The ministerial changes proposed by PEC to its Terms and Conditions for the Purchase of Electric Power are reasonable and should be approved.

9. The rate schedules proposed in this proceeding by PEC in its November 1, 2010 filing as revised by its filing on April 4, 2011 should be approved. PEC shall continue to use the Standard Contract Form as approved by the Commission in Docket No. E-100, Sub 117. Such rate schedules, the revised Terms and Conditions for the Purchase of Electric Power, and Standard Contract Form shall go into effect 10 days after the date of this order.

#### **DISCUSSION AND CONCLUSIONS FOR FINDING OF FACT NO. 1**

The evidence for this finding is found in the Initial and Reply Comments of Duke, the Public Staff and PEC and in the Commission's prior avoided cost orders.

This is an issue that the Commission must continually reconsider as economic circumstances change from one biennial proceeding to the next. In doing so, the Commission must balance the need to encourage QF development, on the one hand, and the risks of overpayments and stranded costs, on the other. The increasingly competitive nature of the utility industry makes the latter considerations more compelling today than in the past. However, the Commission continues to believe that its decisions in the most recent avoided cost proceedings strike an appropriate balance between these concerns. The Commission therefore concludes that PEC and Duke should continue to offer long-term levelized rate options of 5-, 10-, and 15-year terms to hydro QFs contracting to sell 5 MW or less and to QFs contracting to sell 5 MW or less that are fueled by solar, wind, non-animal waste biomass, trash or methane from landfills or swine waste or poultry waste and that they should offer 5-year levelized rates to all other QFs contracting to sell 3 MW or less. With these limitations, long-term contract options serve important statewide policy interests while reducing the utilities' exposure to overpayments. The policy interests to be served include those stated in G.S. § 62-156(b)(1), which specifically provides that long-term contracts "shall be encouraged in order to enhance the economic feasibility of small power production facilities." This is a State policy, and it supports a decision to require long-term rate options for hydro QFs. We believe that the State policy of reducing and managing solid waste landfills set forth in G.S. §§ 130A-309.01 to 130A-309.29 supports extending these options to facilities fueled by trash or methane from landfills. G.S. § 62-133.8 created specific requirements that the State's electric suppliers seek to purchase electricity generated from solar energy and from swine and poultry waste. While the Commission believes that these policies should be furthered, it is also concerned about reducing the utilities' exposure to overpayments, and our decision accomplishes this as well. The facilities entitled to long-term rates are generally of limited number and size. Few new hydro facilities are being certificated; most sites are already developed. The number of trash and methane sites large enough to support generation also appears to be limited. Although G.S. § 62-156(b)(1) applies to hydros of 80 MW or less, there are few large hydro sites available in North Carolina, and the Commission has limited long-term rates to hydros contracting to sell 5 MW or less in order to further reduce the exposure inherent in rates based on long-term forecasts of the utilities' costs.

No other party proposed any changes to the availability of the standard long-term levelized rates.

## **DISCUSSION AND CONCLUSIONS FOR FINDING OF FACT NO. 2**

The evidence for this finding is found in the Initial and Reply Comments of Duke, the Public Staff and PEC and in the Commission's prior avoided cost orders.

The Commission continues to believe that it is appropriate to require all QFs not eligible for the standard long-term levelized rates to negotiate purchase power arrangements with PEC and Duke.

In the Commission's Order in Docket No. E-100, Sub 41A, the Commission found that QFs of 5 MW or larger have such substance as to have the resources and expertise to negotiate with utilities and that the competing interests of the parties can best be resolved by negotiations. The Commission further explained that one of the primary reasons for requiring large QFs to negotiate rates was the large financial risk a utility and its retail customers are exposed to when a utility signs a long-term purchased power agreement at fixed avoided cost rates based on long-term cost forecasts, given the uncertainty involved in forecasting a utility's avoided cost. If a utility overestimates its avoided costs, the utility and its customers are forced to pay higher costs for electricity than would otherwise be the case for up to 15 years. The Commission's primary duty is to ensure retail utility customers are furnished electricity at the lowest reasonable cost. Unnecessarily exposing retail customers to the risk of overpayment does not serve that goal.

In addition, a utility must maintain the ability to negotiate all aspects of contracts with larger QFs because their operational flexibility and size may negatively impact system operations. Any change affecting the economic operation of a utility system caused by a QF indiscriminately providing energy into the utility's system results in costs to that utility that would have not otherwise been incurred. As a result, the utility must maintain the option of controlling deliveries from the QF to not only prevent incurring additional costs, but to preserve system reliability.

In the past, certain large QFs not eligible for the standard long-term rates have asserted that the utilities have greater bargaining power than the

QFs and that the utilities have, at times, used this greater power to negotiate in bad faith. Beginning in Docket No. E-100, Sub 53, the Commission explained that the proper remedy in this situation is for such a QF to file a complaint with the Commission against the utility in question. In addition, in the Commission's 2005 avoided cost proceeding, Docket No. E-100, Sub 96, the Commission established an arbitration process for those QFs that believe they are being treated unfairly by a utility.

In Docket Nos. E-100, Sub 74, and E-7, Sub 545, the Commission found that generators not directly connected to a utility are not entitled to a utility's standard avoided cost rates. The Commission further found that it must consider factors such as the availability of a QF, the reliability of a QF, the value of the QF power to a utility, and the utility's alternative power sources in determining the avoided cost rates to be paid to a QF with which the purchasing utility is not directly connected. The Commission then concluded that purchasing power from such QFs causes a utility to incur costs that are not present when a utility purchases power from an interconnected facility and that these costs are not reflected in a utility's avoided cost rates.

The Commission concludes that PEC and Duke should continue to be required to offer QFs not eligible for the standard long-term levelized rates the option of contracts and rates derived by free and open negotiations or, when explicitly approved by Commission Order, participation in Duke's or PEC's competitive bidding process for obtaining additional capacity. The QF also has the right to sell its energy on an "as available" basis pursuant to the methodology approved by the Commission. Under PURPA, a larger QF is just as entitled to full avoided costs as a smaller QF. The exclusion of larger QFs from the long-term levelized rates in the standard rate schedules was never intended to suggest otherwise.

The Commission has previously ruled that, absent an approved, active solicitation, negotiations between a utility and a larger QF are subject to arbitration by the Commission at the request of either the utility or the QF to determine the utility's actual avoided cost, including both capacity and energy components, as appropriate, as long as the QF is willing to commit its capacity for a period of at least two years. Such arbitration would be less time consuming and expensive for the QF than the previously available complaint process. The Commission concludes that the arbitration option should be preserved.

## **DISCUSSION AND CONCLUSIONS FOR FINDING OF FACT NO. 3**

The evidence to support this finding of fact is found in the Commission's Orders in Docket No. E-100, Subs 59, 66, 74, 100, 106 and 117 and the Initial and Reply Comments of Duke, the Public Staff and PEC.

The Commission observes that PEC and Duke have used the peaker methodology in every avoided cost proceeding since the passage of PURPA.

In Docket Nos. E-100, Subs 59, 66, 74, 100, 106 and 117, the Commission discussed that the peaker methodology used by PEC and Duke is based on a method for estimating marginal costs developed by the National Economic Research Associates, Inc. (NERA). The method was described in detail in what became known as the "Grey Books" series of publications, jointly sponsored by the National Association of Regulatory Utility Commissioners, the Electric Power Research Institute, the Edison Electric Institute, the American Public Power Association, and the National Rural Electric Cooperative Association. It is one of four marginal costing methodologies developed in the "Electric Utility Rate Design Study" portion of the "Grey Books" series (Topics 1.3 and 1.4).

According to the theory underlying the peaker method, if the utility's generating system is operating at equilibrium (i.e., at the optimal point), the cost of a peaker (a combustion turbine or CT) plus the marginal running costs of the system will produce the utility's avoided cost. It will also equal the avoided cost of a baseload plant, despite the fact that the capital costs of a peaker are less than those of a baseload plant. This is because the lower capital costs of the CT are offset by the fuel and other operation and maintenance expenses included in system marginal running costs, which are higher for a peaker than for a new baseload plant. Thus, the summation of the peaker capital costs plus the system marginal running costs will theoretically match the cost per kWh of a new baseload plant, assuming the system is operating at the optimum point. Stated simply, the fuel savings of a baseload plant will offset its higher capital costs, producing a net cost equal to the capital costs of a peaker.

Under both PURPA and G.S. § 62-156, a utility's avoided cost rates must not exceed, over the term of the purchase power contract, the incremental cost to the electric utility of the electric capacity and energy which, but for the purchase

from the small power producer, the utility would generate or purchase from another source. As explained in the Commission's previous avoided costs orders, in determining the total avoided cost rates paid by electric utilities to QFs, the calculation requires the estimation of two distinct types of costs: (i) avoided capacity cost and (ii) avoided energy cost.

The peaker method develops these costs in the following manner. The avoided capital cost is determined using the economic principles associated with long run generation system planning. These principles indicate that the cost of a simple cycle combustion turbine, or "peaker unit," is the appropriate basis for the establishment of a utility's avoided capacity cost. The avoided energy cost in this method is simply the marginal hourly running costs of the last generating unit dispatched to meet load, also known as system lambda.

For a growing utility a system planner must forecast and make comparisons between constructing a baseload plant, an intermediate plant, or a peaker plant, or perhaps purchasing power in the wholesale market. The most economical way to meet short duration peaks is with a peaker, or peaking type capacity purchases, or even interruptible load. However, over a planning horizon, at some point in time it becomes less expensive to add a baseload plant than to continue to increase the running time of a peaker plant.<sup>1</sup> Essentially, the higher fuel costs of the peaker plant can be offset by the lower fuel costs of the baseload plant, even with its higher capacity costs. This point is referred to as the "crossover point" or optimal point.

As a result, with respect to avoided capacity costs, the peaker methodology reflects optimal long range planning and given its use of marginal energy costs properly values all types of generation alternatives. Therefore, as this Commission has repeatedly found, an appropriate avoided capacity cost is based on the cost of a peaker plant.

With respect to the avoided energy costs, the peaker methodology simply uses the fuel and variable costs of the resource(s) dispatched to serve the last incremental block of load in any one hour, often referred to as system lambda. The economic rationale behind this cost estimate is the fact that generating plants will be dispatched over some future time period based on the lowest variable cost plants, baseload plants, generally being dispatched first. Assuming this occurs, than the proper variable (or energy) related costs should be equal to the variable

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<sup>1</sup> Peaking plants have low capital investment costs, but high operating costs. while baseload plants have high capital investment costs, and low operating costs.

costs of an incremental block of load. This variable cost is forecasted for as many years into the future as required, using computer based generation system planning or production models.

The peaker method has many benefits including: it provides a more accurate estimate of capital costs than methods which rely on costs of generating units requiring longer siting and construction timeframes; it provides a more accurate estimate of capital costs than relying on costs associated with generating plants that might be subject to more regulatory and environmental uncertainties; it does not depend on the estimated costs of a specific unit, which as this Commission has repeatedly found, the avoided costs of a real system are not necessarily unit specific; it is relatively easy to understand; is theoretically sound; is relatively accurate over a wide range of avoided load or capacity factors; is applicable to various sizes of QFs; is relatively stable over time, and has wide regulatory acceptance. The peaker methodology is a sound method for determining avoided costs to be used in encouraging cogeneration, demand side management, and other ratemaking endeavors. Finally, evidence submitted in previous avoided cost proceedings established that the peaker method is widely accepted in the industry, used by approximately 80% of the utilities calculating marginal costs for rate-making purposes.

The Commission has repeatedly reaffirmed that the peaker method is appropriate for calculating Duke's and PEC's avoided cost rates. (See Docket Nos. E-100, Sub 53, E-100, Sub 74, E-100, Sub 106, and E-100, Sub 117).

No new evidence has been offered in this proceeding to support the Commission altering its conclusion in every avoided cost proceeding to date that the peaker methodology is the most appropriate method for calculating PEC's avoided cost rates.

For the purposes of this proceeding, the Commission concludes that the peaker method is still generally accepted and used throughout the electric utility industry and is reasonable for use in this proceeding.

## **DISCUSSION AND CONCLUSIONS FOR FINDINGS OF FACT NOS. 4-5**

The evidence to support this finding of fact is found in the Commission's Orders in Docket No. E-100, Subs 59, 66, 74, 100, 106 and 117 and the Initial and Reply Comments of Duke, the Public Staff and PEC.

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 kWh the seller provides. In contrast, the standardized capacity rates for purchases from QFs in North Carolina are calculated on a 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 payments equal to the utility's avoided costs. As explained by the Public Staff in their direct testimony in Docket No. E-100, Sub 106, until 1997, a PAF of 1.2 was approved by the Commission for use in calculating the appropriate avoided cost rates for all QFs. In 1997 the Commission approved a PAF of 2 to be used in determining the avoided cost rate for hydro QFs with no storage capability and no other type of generation, allowing such QFs to recover their full capacity payments if they operate 50% of on-peak hours. In making this determination, the Commission recognized that G.S. § 62-156 demonstrates a preference by the North Carolina General Assembly for encouraging hydro generation; therefore, the Commission found that the use of a higher PAF for hydro QFs was appropriate. The 1.2 PAF used by the Commission in previous cases (for QFs other than run-of-the-river hydro facilities) reflects the Commission's judgment that, if a unit is available 83% of on-peak hours, it is operating in a reasonable manner and should be allowed to recover the utility's full avoided capacity costs.

The Commission believes that a PAF of 2 should continue to be used by PEC and Duke in determining the avoided cost rates for hydro QFs with no storage capability and a PAF of 1.2 should continue to be used by PEC and Duke in determining the avoided capacity cost rates for all QFs (including solar and wind) other than hydro facilities with no storage capability and no other type of generation.

## DISCUSSION AND CONCLUSIONS FOR FINDING OF FACT NO. 6

The evidence to support this finding of fact is found in the Initial and Reply Comments of the Public Staff and PEC.

In their comments, the Public Staff asserts that PURPA and the FERC's enabling regulations grant a QF the right to request rates based upon the date of "a legally enforceable obligation" (LEO), as opposed to rates based upon the utility's avoided cost at the time the QF actually begins delivery of energy. Further, it is in the QF's complete discretion to unilaterally set the date of the LEO which then governs the vintage of the utility's forecasted avoided costs that fix the basis of the energy and capacity rates the utility must offer the QF. (See 18 C.F.R. § 292.304(d)). PEC disagreed with this interpretation. PEC argued that the applicable federal laws and regulations require the Commission to balance the dual and competing interests of encouraging QFs and its duty to ensure that a utility's avoided cost rates are just and reasonable to the electric utility's customers and are in the public interest. (See 18 C.F.R. § 292.304(a)) To achieve such a balance, PEC recommended the Commission establish a "viability prerequisite" as a condition for determining the date of an LEO. The "viability prerequisite" would require that a QF be ready, willing, and able to enter into a contract within 12 months of any LEO. PEC claimed that this will ensure that QFs are not allowed to unfairly lock in higher rates to the detriment of the utility's customers.

PEC explained in its comments that while the determination of the LEO is "up to the States," the FERC has stressed that the States are still confined to the requirements of PURPA which require that "the rates for qualifying facilities shall: (1) be just and reasonable to the electric utility's consumers and in the public interest; and (2) not discriminate against qualifying cogenerators or small power producers."<sup>2</sup>

*"[A] balance must be struck between the local public interest of a utility's electric consumers and the national public interest in development of alternative energy sources."*<sup>3</sup>

PEC noted that in pursuit of this balance, the interpretation of the "just and reasonable" language has spawned brisk debate in many jurisdictions. The

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<sup>2</sup> 16 U.S.C. § 824a-3(b); 18 C.F.R. § 292.304(a)(1), (2) (1995).

<sup>3</sup> *Rosebud Enter., Inc. v. Idaho Pub. Util. Comm'n*, 917 P.2d 766, 770-71 (1996).

Supreme Court of the United States addressed the ambiguity of what constitutes “just and reasonable” rates in the *American Paper Institute* case, and consulted the legislative history behind the language for guidance.<sup>4</sup> The Supreme Court stated,

*We interpret the ‘just and reasonable’ language of § 210(b) to require consideration of potential rate savings for electric utility consumers. Of course, even when utilities purchase electric energy from qualifying facilities at full avoided cost rather than at some lower rate, the rates the utilities charge their customers will not be increased, for by hypothesis the utilities would have incurred the same costs had they generated the energy themselves or purchased it from other sources. ... But it does not follow that the full-avoided-cost rule is necessarily “just and reasonable to the electric consumers of the electric utilities” within the meaning of § 210(b) of PURPA. Unless the “just and reasonable” language is to be regarded as mere surplusage, it must be interpreted to mandate consideration of rate savings for consumers that could be produced by setting the rate at a level lower than the statutory ceiling.*<sup>5</sup>

Further, the market forces which act as an impetus for the actions of the utilities and QFs may also be taken into account by a state utility commission when determining what is “just and reasonable.”<sup>6</sup> “[T]he Commission must consider the rules’ impact on these consumers and the public interest in striking the proper balance.”<sup>7</sup>

State utility commissions may consult other states’ analyses for guidance on issues such as when an LEO is present in order to ensure that interpretation of PURPA is uniform.<sup>8</sup> When the Commonwealth Court of Pennsylvania was grappling with the issue of whether the Pennsylvania Utilities Commission appropriately incorporated a “viability prerequisite” for creation of an LEO, the Court considered the actions of other state utility commissions.<sup>9</sup> The Pennsylvania

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<sup>4</sup> *American Paper Institute, Inc. v. American Electric Power Service Corporation*, 461 U.S. 402, 406, 103 S.Ct. 1921, 1925 (1983) (citing 45 Fed.Reg. 12214 (Feb. 15, 1980)).

<sup>5</sup> *Id.* at 461 U.S. 402, 416, 103 S.Ct. 1921, 1929 (1983) (footnote 9).

<sup>6</sup> *American Electric Power Service Corporation v. Federal Energy Regulatory Commission*, 675 F.2d 1226, 1235, 219 U.S.App.D.C. 1, 10 (1982).

<sup>7</sup> *Id.*

<sup>8</sup> *South River Power Partners v. Pennsylvania Public Utility Commission*, 696 A.2d 926, 931 (1997) (footnote 6).

<sup>9</sup> *Id.* at 930-31.

Court considered that in New Hampshire, the State Supreme Court found “that a legally enforceable obligation was created when the utility filed a rate petition accompanied by an interconnection agreement signed by the small power producer.”<sup>10</sup> The rate petition demonstrated that most of the common developmental issues had been addressed, that there was a reasonable expectation the QF would be able to provide energy to the utility by the date specified in the rate filing, and that the QF possessed sufficient economic resources to ensure the project’s viability.<sup>11</sup> The Pennsylvania Court also considered that in Oklahoma an LEO was not established because the QF had failed to perform certain key steps. The QF never presented a contract to the Commission for consideration, it did not enter into a contract for “construction, operation and maintenance of the proposed project, and did not attempt to obtain a contract for the purchase of natural gas.”<sup>12</sup> After considering these other states’ findings, the Pennsylvania Court upheld the viability requirement set forth by the Pennsylvania Public Utilities Commission.<sup>13</sup> It found that a legally enforceable obligation did not exist:

at a time during serious negotiations between parties (whether at the time of agreement in principle on price or otherwise) *when the QF has not yet obligated itself to deliver power and remains free to walk away from the negotiations without any liability.*<sup>14</sup>

Several factors were taken into account by the Pennsylvania Court when analyzing whether a QF met the viability prerequisite. The viability prerequisite analysis focused on the (1) assets, liabilities, and net worth of the QF; (2) whether a written partnership or limited partnership agreement had been created; (3) whether there are current or past employees of the facility; (4) whether the QF had been associated with any other power production projects; (5) whether the QF had applied for, or obtained the necessary permits and approvals for the project; (6) whether the QF had engaged any consultants in preparations for applying for the necessary permits and approvals; and (7) whether the QF had consulted with any lending institutions in regards to receiving financing for the project.<sup>15</sup>

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<sup>10</sup> *Id.* at 931 (citing *Appeal of Public Service Company of New Hampshire*, 130 N.H. 285, 239 A.2d 275 (1988)).

<sup>11</sup> *Id.*

<sup>12</sup> *Id.* at 931 (citing *Smith Cogeneration Management, Inc. v. Corporation Commission and Public Service Company of Oklahoma*, 863 P.2d 1227 (Okla. 1993)).

<sup>13</sup> *Id.* at 930.

<sup>14</sup> *Id.* (emphasis in the original).

<sup>15</sup> *Id.*

PEC explained in its Reply Comments, that currently, when determining whether an LEO exists in North Carolina, the Commission relies upon “(1) when [the QF] committed to sell its generation and (2) when [the QF] had certificates of public convenience and necessity.”<sup>16</sup> In an order on arbitration issued by the Commission, the “commitment to sell” criteria was addressed by stating that “[a] ‘legally enforceable obligation’ does not require a signed contract, but the QF must be ready, willing and able to sign a contract.”<sup>17</sup> However, this Commission did not clarify what factors contribute to the determination that a QF is “ready willing and able to sign a contract,” or specify any limitation on the pendency of such determination once it is established.

PEC then concluded that in order to prevent *post hoc* justifications of when a “commitment to sell” is made, it is appropriate to incorporate a viability criterion into the determination of the date of the LEO to prevent a QF from unfairly locking in avoided cost rates that do not accurately reflect the costs the utility expects to avoid during the period the QF supplies electricity to the utility. According to PEC, this will, in turn, ensure that a “just and reasonable” rate is established consistent with PURPA regulations.

The United States Supreme Court’s analysis of what is “just and reasonable” to the retail consumer in the *American Paper Institute* case is based upon the assumption that the consumer is not being harmed through the relationship with the QF. However, this is not always the case. Currently in North Carolina QFs are able to lock in higher rates, without any definite obligation to proceed, to the detriment of a utility’s customers. The Commission has previously acknowledged that “these proceedings ha[ve] shown that a utility’s filing of a proposal to lower its avoided cost rates sometimes prompts QFs to try to ‘lock in’ at the higher, current rate before the Commission acts.”<sup>18</sup> Under the current framework, QFs are essentially given a free option at a higher rate and have no obligation to proceed unless they feel the market conditions are favorable.

Such a freedom to walk away from negotiations without obligations was precisely the danger the Pennsylvania Utility Commission was defending against in the *South River* case. By amending the current analytical framework to incorporate a criterion which tracks that of the Pennsylvania ‘viability prerequisite,’ the Commission will protect the interest of the ratepaying public.

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<sup>16</sup> *EPCOR*, Docket No. E-2, Sub 966 at 10.

<sup>17</sup> *In the Matter of Economic Power & Steam Generation v. Virginia Electric and Power Co.*, Docket No. SP-467, Sub 1 at 8.

<sup>18</sup> *In the Matter of Biennial Determination of Avoided Cost Rates for Electric Utility Purchases for Qualifying Facilities*, Docket No. E-100, Sub 74 at 2.

The Commission finds that incorporating a “viability prerequisite” standard will ensure that a utility and its customers will be in the same or similar positions as they would have been were they not required to purchase from the QFs, which is entirely consistent with the Supreme Court’s interpretation of the “just and reasonable” standard. Specifically, for purposes of establishing an LEO and the corresponding avoided cost rates, the QF must be ready, willing and able to enter into a contract within twelve months. By incorporating this “viability prerequisite” standard, the Commission properly and fairly balances the competing interests of encouraging QF operation and protecting the State’s electric customers.

### **DISCUSSION AND CONCLUSIONS FOR FINDING OF FACT NO. 7**

The evidence to support this finding of fact is found in the Initial and Reply Comments of the Public Staff and PEC.

In the Public Staff’s March 1, 2011 Comments they explained that PEC’s avoided energy rates in this proceeding were calculated using the same methodology as in previous proceedings and found that the inputs used in the model are reasonable for the determination of PEC’s avoided energy costs. (This methodology uses the PROSYM production simulation model.) However, the Public Staff expressed concerns with the exclusion of start costs in the output data used to calculate the on-peak and off-peak marginal energy costs that underlie PEC’s avoided energy costs.

The Public Staff recommended that the Commission order PEC to re-file its avoided energy costs using the Total System Cost output data in PROSYM (which includes start costs) for all four proposed avoided energy rates (i.e., variable, five-year, ten-year and 15-year). In PEC’s Reply Comments filed on April 4, 2011, PEC stated that it did not object to the Public Staff’s recommendation and submitted Revised Attachments 1 and 2, which were black-lined and clean copies, respectively, of its proposed CSP-27 Rate Schedule. PEC indicated that Revised Attachment 1 and Revised Attachment 2 should replace the original attachments which were included with PEC’s November 1, 2010 Initial Statement and Exhibits in this docket. The revised schedules reflect PROSYM Total System Cost output data including start costs, as proposed by the Public Staff.

No other party submitted comments on this issue. The Commission finds that PEC’s Revised Attachments 1 and 2 address the Public Staff’s concerns and are approved.

## **DISCUSSION AND CONCLUSIONS FOR FINDINGS OF FACT NO. 8**

The evidence to support this finding of fact is found in the Initial Comments of PEC.

PEC proposed several ministerial changes to its Terms and Conditions for the Purchase of Electric Power are reasonable and should be approved. No other party objected to PEC's proposed revisions. Therefore, the Commission finds PEC's proposed changes reasonable and they are approved.

## **DISCUSSION AND CONCLUSIONS FOR FINDINGS OF FACT NO. 9**

The Commission makes the following conclusions with respect to the proposed schedules and standard contract terms and conditions:

The rate schedules proposed in this proceeding by PEC in its November 1, 2010 filing as revised by its April 4, 2011 revisions should be approved. PEC's proposed several ministerial changes to its Terms and Conditions for the Purchase of Electric Power are reasonable and should be approved. PEC shall continue to use the Standard Contract Form as approved by the Commission in Docket No. E-100, Sub 117. Such rate schedules and standard contract terms and conditions shall go into effect 10 days after the date of this order.

IT IS, THEREFORE, ORDERED as follows:

1. That PEC and Duke shall offer long-term levelized capacity payments and energy payments for 5-year, 10-year, and 15-year periods as standard options to (a) hydroelectric QFs owned or operated by small power producers as defined in G.S. § 62-3(27a) contracting to sell 5 MW or less capacity and (b) non-hydroelectric QFs fueled by trash or methane derived from landfills, swine waste, poultry waste, solar, wind, and non-animal forms of biomass contracting to sell 5 MW or less capacity. The standard levelized rate options of 10-years and 15-years should include a condition making contracts under those options renewable for subsequent term(s) at the option of the utility on substantially the same terms and provisions and at a rate either (1)

mutually agreed upon by the parties negotiating in good faith and taking into consideration the utility's then avoided cost rates and other relevant factors or (2) set by arbitration. PEC shall offer its standard 5-year levelized rate option to all other QFs contracting to sell 3 MW or less capacity;

2. That PEC and Duke shall offer QFs not eligible for the standard long-term levelized rates the following three options if PEC or Duke has a Commission-recognized active solicitation underway: (1) participating in PEC's or Duke's competitive bidding process, (2) negotiating a contract and rates with PEC or Duke, or (3) selling energy at PEC's or Duke's Commission-established variable energy rate. If PEC or Duke does not have a Commission-recognized active solicitation underway, PEC or Duke shall offer QFs not eligible for the standard long-term levelized rates the options of contracting with PEC or Duke to sell power (1) at the variable energy rate established by the Commission in these biennial proceedings or (2) at negotiated rates. If PEC or Duke does not have a solicitation underway, such negotiations will be subject to arbitration by the Commission at the request of either party to determine PEC's or Duke's actual avoided cost, including both capacity and energy components, as appropriate; however, the Commission will only arbitrate if the QF is prepared to commit its capacity to PEC or Duke for a period of at least two years. In either case, whether there is an active solicitation underway or not, QFs not eligible for the standard long-term levelized rates have the option of selling into the wholesale market. The exact points at which an active solicitation shall be regarded as beginning and ending for these purposes shall be determined by motion to, and order of, the Commission. Unless there is such a Commission order, it will be assumed that there is no solicitation underway. If the variable energy rate option is chosen, the rate may not be locked in by a contract term, but shall instead change as determined by the Commission in the next biennial proceeding;

3. That a performance adjustment factor of 2.0 shall be utilized by PEC and Duke for their avoided cost calculations for hydroelectric facilities with no storage capability and no other type of generation;

4. That a performance adjustment factor of 1.2 shall be utilized by PEC and Duke for their avoided cost calculations for all QFs in this proceeding, except hydroelectric facilities with no storage capability and no other type of generation;

5. That in order to appropriately balance the Commission's duty to both encourage qualifying facilities and ensure that a utility's avoided cost rates are just and reasonable to an electric utility's consumers and are in the public interest, when a QF seeks to sell energy to a utility pursuant to a legally enforceable obligation, in determining the date of the legally enforceable obligation, the Commission is establishing a "viability prerequisite" standard pursuant to which the QF must demonstrate that it is in fact ready, willing, and able to enter into a contract with the utility within twelve months before any LEO can exist; and

6. That PEC should use the Total System Cost output data in its PROSYM production simulation model (which includes start costs) for all four proposed avoided energy rates (i.e., variable, five-year, ten-year and 15-year); and

7. The rate schedules proposed in this proceeding by PEC in its November 1, 2010 filing as revised by its April 4, 2011 filing are approved. PEC's proposed several ministerial changes to its Terms and Conditions for the Purchase of Electric Power are approved. PEC shall continue to use the Standard Contract Form as approved by the Commission in Docket No. E-100, Sub 117. Such rate schedules and terms and conditions shall go into effect 10 days after the date of this order.

ISSUED BY ORDER OF THE COMMISSION.

This the \_\_\_\_ day of \_\_\_\_\_, 2011.

NORTH CAROLINA UTILITIES COMMISSION

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Gail L. Mount, Deputy Clerk

STATE OF NORTH CAROLINA  
UTILITIES COMMISSION  
RALEIGH

DOCKET NO. E-100, SUB 127

BEFORE THE NORTH CAROLINA UTILITIES COMMISSION

In the Matter of )  
Biennial Determination of Avoided Cost )  
Rates for Electric Utility Purchases from )  
Qualifying Facilities - 2010 )

CERTIFICATE OF SERVICE

I, Len S. Anthony, hereby certify that the foregoing Reply Comments of Progress Energy Carolinas, Inc. has been served on all parties of record either by hand delivery or by depositing said copy in the United States mail, postage prepaid, addressed as follows this the 29<sup>th</sup> day of April, 2011:

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PROGRESS ENERGY CAROLINAS, INC.

  
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