

#### DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND LITIGATION OFFICE 720 KENNON STREET SE ROOM 136 WASHINGTON NAVY YARD DC 20374-5051 09 DCT 15 MM 11: 33

October 15, 2009

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Office of Commission Clerk Florida Public Service Commission 2540 Shumard Oak Boulevard Tallahassee, Florida 32399-0850

Dear Sir or Madam:

Enclosed please find the original and seven copies of the Department of the Navy's Posthearing Brief in the above-referenced Docket.

Sincerely,

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Encl: Posthearing Brief CC: Service list as set forth in Certificate of Service

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## CERTIFICATE OF SERVICE DOCKET NO. 090079-EI

I hereby certify that a true copy of the foregoing COVER LETTER AND PREHEARING

STATEMENT OF THE DEPARTMENT OF THE NAVY REPRESENTING ALL

FEDERAL EXECUTIVE AGENCIES has been furnished by U.S. Mail on the 15<sup>th</sup> day of

October, 2009.

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Dated October 15. 2009

## **BEFORE THE**

### FLORIDA PUBLIC SERVICE COMMISSION

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In Re: Petition for Rate Increase by Progress Energy Florida, Inc. Docket No. 090079-EI

### **OPENING BRIEF OF**

## DEPARTMENT OF NAVY

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FPSC-COMMISSION CLERK

#### **BEFORE THE**

### FLORIDA PUBLIC SERVICE COMMISSION

In Re: Petition for Rate Increase by Progress Energy Florida, Inc.

Docket No. 090079-EI

### **OPENING BRIEF OF DEPARTMENT OF NAVY**

Progress Energy Florida, Inc. (PEF) is proposing to modify the method that is utilized to allocate fixed production plant costs to the various retail rate classes. PEF is proposing to allocate fixed production costs using the 12 CP and 50% AD method. (Transcript 1517).

Historically, the Florida Public Service Commission (Commission) has utilized the 12 monthly coincident peaks and 1/13<sup>th</sup> weighted average demand (12 CP and 1/13<sup>th</sup> AD method) method to allocate fixed production costs. Under the 12 CP and 1/13th AD method, approximately 12/13 or 92% of the production fixed costs are allocated on the basis of the 12 monthly coincident peak demands and 1/13 or approximately 8% of the fixed production costs are allocated on the class average demands. It is important to note that the average demand and energy are equivalent (Transcript 1562-3). The Commission still requires utilities to file the results of a cost of service study using the 12 CP and 1/13<sup>th</sup> AD method as part of its Minimum Filing Requirements. Under PEF's proposed method, 50% of the fixed production costs are allocated on energy as opposed to 8% as previously authorized by the Commission.

#### REQUIRED SUMMARY STATEMENT OF ISSUES

**Issue 90:** What is the appropriate Cost of Service Methodology to be used to allocate base rate and cost recovery costs to the rate classes?

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\*Summer/winter coincidence peaks should be used to allocate fixed production costs. If the Commission elects not to utilize a summer/winter peak coincident peak allocation the results of the cost of service study that utilizes a 12 coincident peak study with a 1/13 weighted to energy should be used.\*

**Issue 91:** If the Commission approves a cost allocation methodology other than the 12 CP and 1/13th Average Demand, should all cost recovery factors be adjusted to reflect the new cost of service methodology?

\*Yes. The cost allocation methodology approved by the Commission should primarily be utilized to allocate any increase in this proceeding \*

**Issue 92**: How should any change in revenue requirements approved by the Commission be allocated among the customer classes?

\*The Commission should utilize the result of a retail class cost of service study as a primary factor to allocate any changes in the revenue requirement among the customer classes.\*

Issue 111: What are the appropriate energy charges?

\*The energy charges should be designed to collect only those costs that fluctuate with kWh usage. \*

Issue 112: What are the appropriate demand charges?

\*Demand related or fixed costs should be recovered through the demand charges.\*

### **Recommendation**

The Department of Navy (DoN) opposes PEF's recommendation to allocate fixed production costs using the 12 CP and 50% AD method. The DoN's preferred method for allocating fixed production costs utilizes a combination of the summer/winter coincident peaks. The fixed production costs, which are at issue here, do not vary with the level of generation or

sales to customers. That is, the vast majority of these costs are fixed and PEF will incur these costs regardless of the energy output of its various generation units. PEF must build capacity or acquire resources under contract to meet its anticipated firm annual system peak demand plus a reserve margin. Therefore, a coincident peak allocation method is the most appropriate. However, if the Commission prefers to allocate a portion of the fixed production costs on an energy basis, the Commission should allocate production costs using the 12 CP and 1/13<sup>th</sup> AD method.

#### **PEF's Position**

PEF's support for changing the allocation method is that energy weighting only 8% of the fixed production costs under the 12 CP and 1/13<sup>th</sup> AD method gives too little recognition to energy's role in the generation facility planning process. PEF witness William C. Slusser, Jr., who supports the use of the 12 CP and 50% AD method, argues that a significant energy weighting in the allocation of fixed production capital cost is needed because higher upfront capital cost are incurred to achieve lower fuel cost. The lower cost of fuel from base load generating units is allocated to the rate classes on an average energy basis. Therefore, Mr. Slusser argues that a significant portion of production capacity cost should be proportioned in the same manner. For this reason, PEF is proposing that the Commission utilize the results of a 12 CP and 50% AD study to allocate production costs.

Mr. Slusser, in his direct testimony, determined the percentage of base load generation that PEF proposes to allocate on energy. To develop the energy-related portion of the fixed production costs, Mr. Slusser estimated the cost of the generation investment assuming it was entirely made in peakers. The results of this analysis indicate that the capital costs would have been approximately 50% lower if PEF would have invested only in peakers. As a result of this analysis, Mr. Slusser concludes that 50% of the fixed production cost are incurred to produce lower fuel costs and should be allocated on an energy basis.

### **Discussion**

The major flaws with the allocation method proposed by PEF are as follows:

- 1. PEF's application of the 12 CP and 50% AD method does not properly recognize the claimed benefits associated with lower fuel costs that are produced by base load generation. The fuel costs are allocated on the same per unit cost to all rate classes.
- 2. PEF's proposed allocation method oversimplifies the planning and decision process to construct base load capacity.
- 3. Under PEF's proposed allocation method, the coincident demand is double-counted.

The consequences and flaws of PEF's proposed allocation method can be viewed by simply looking at the impact on the various customer classes. During the cross-examination of Mr. Slusser by Commissioner Skop, Mr. Slusser acknowledged that the net effect of his proposed allocation method would substantially increase the cost to the Lighting class (Transcript 1610-11). Mr. Slusser also stated that the Lighting class load is seldom on at the time of the system peak (Transcript 1611). The net effect of PEF's proposed fixed production cost allocation method is that it significantly increases the fixed costs that are allocated to the Lighting class even though that class does not contribute to the system peak.

Mr. Slusser's Exhibit \_\_\_(WCS-4) shows the Lighting class allocation of fixed costs increases by 29.7% using the 12 CP and 50% AD method as opposed to the 12 CP and 1/13<sup>th</sup> method. A review of this exhibit also shows that PEF's proposed allocation of fixed production costs increases cost to all classes with the exception of the Residential class.

To further quantify the impact of PEF's proposed allocation on the various retail rate classes, DoN witness Mr. James Selecky performed an analysis where he determined the cost per

kW of production plant allocated to the various rate classes under the 12 CP and 50% AD method. Mr. Selecky developed the generation cost on a \$/kW basis for each customer class by dividing the net investment cost allocated to each class by the average of the 12 monthly peak demands used in cost allocation. The results of this analysis, which is shown in Table 1 below, shows the average cost per kW of the net production plant allocated to each customer class.

#### TABLE 1

Description	Total <u>Electric</u>	<u>Residential</u>	Gen Service <u>Non-Demand</u>	Gen Service <u>100% L.F.</u>	Gen Service <u>Demand</u>	Gen Service <u>Cut/Interrupt</u>	Lighting <u>Energy</u>
Cost per kW of Net Production Plant	\$340	\$313	\$341	\$429	\$375	\$411	\$1,416
Index	100	92	100	126	110	121	416

Under PEF's allocation method, the net cost per kW allocated to the Lighting class is \$1,416/kW while the total electric average cost is \$340/kW. Under PEF's allocation method, the cost per kW to serve the Lighting class is approximately four times greater than PEF's overall fixed capacity cost. This analysis clearly demonstrates that under PEF's cost allocation method, a customer class that has substantial off-peak usage and does not contribute to the system peak receives a disproportionate share of the fixed production cost. Finally, as will be discussed later, any customer class that has significant off-peak usage does not receive a lower per unit allocation of energy-related cost such as fuel. Energy-related costs are allocated on an average per dollar per kWh basis.

PEF's proposed allocation method significantly underweights the importance of the peak demands impact on the decision to build or purchase additional capacity. It is PEF's system peaks that caused the need for installing additional capacity and not off-peak energy usage. Under PEF's proposed allocation method, they're allocating significant costs to those classes that do not cause the need for new generation or capacity.

In order to provide reliable service, PEF must build capacity or acquire resources to meet its anticipated firm annual system peak plus a reserve margin. Mr. Slusser states that the peak is not driving the cost that PEF incurs to build base load capacity. Mr. Slusser indicates that the type of capacity that PEF builds is an economic decision. Capital dollars are spent in order to achieve the lowest cost by virtue of lower fuel cost or energy savings.

In practice, a utility seeks to minimize its total costs, which are comprised of production fixed costs and variable costs. That is, a utility spends more on fuel by using a peaker in order to save capital. However, that simplistic statement does not give the complete picture.

The basic idea is that utilities spend capital costs to save fuel costs but only if the fuel savings are expected to outweigh the additional capital costs. If the base load unit runs enough hours the additional capital costs will be more than offset by the lower fuel costs. The point at which the fuel savings of the base load plant just begin to offset the additional capital costs commonly is referred to as the "breakeven point." Of course, base load plants normally run well beyond their breakeven points. Therefore, if base load plants are operated efficiently and as planned, the total cost of base load generation on a per kWh basis generally is much less than the total cost of peaking generation.

The NARUC Cost Allocation Manual (Manual) alludes to this fundamental concept. The Manual states the following on this issue:

"The choice of unit depends on the energy load to be served. A peak load of relatively brief duration, for example, less than 1,500 hours per year, may be served most economically by a CT unit. A peak load of intermediate duration, of 1,500 to 4,000 hours per year, may be served most economically by a CC unit. A peak load of long annual duration may be served most economically by a baseload unit (Page 53)." (Direct Testimony of James T. Selecky, page 7.)

In its cost allocation, PEF ignores this concept. If the breakeven point between base load plant and peaking plant is, for example, 1,500 hours, PEF's method erroneously presumes that the energy consumed beyond 1,500 hours of operation contributes to the choice of the base load plant when in fact it does not. Once the base load plant is expected to run beyond the 1,500-hour mark any additional usage is irrelevant to the choice of base load plant and plays no role whatsoever in the inference of fixed costs. Therefore, total annual energy usage does not impact plant investment. However, load duration up to the breakeven point may influence the plant decision. Beyond the breakeven point, energy utilization is no longer a factor in the plant decision for selecting base load capacity or peaking capacity. PEF's proposed allocation method does not take this important fact into consideration.

On-peak usage drives the need for peaking capacity and it is off-peak usage that drives the need for base load generation. The method proposed by PEF is not only detrimental to customers whose usage is mostly off-peak but also over allocates costs to high load factor customers. This result is claimed to be fair by PEF because high load factors require more base load capacity and the capital cost of a base load unit is higher than the capital costs associated with a peaking unit with the same capacity rating. Base load plants do have above-average capital cost but they also have below-average operating cost relative to peaking units

The major problem with PEF's proposed allocation method is that it only addresses the capital side of the equation and completely ignores the fuel side. PEF's proposed production

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cost allocation is not symmetrical regarding the allocation of fixed and variable costs. Fuel costs are allocated based on average (Transcript 1568). That is, customers who use energy during the on-peak periods and customers who use energy during the off-peak periods have their fuel costs allocated on the same cents per kWh basis. To ignore the fuel cost differential creates a mismatch between the PEF's theory and application of that theory in allocating costs. If system planning principles are to be applied in determining the allocation of production costs, then it is logical and consistent to apply the same principles to the allocation of fuel expense.

A review of PEF's fuel cost by generation type clearly shows significant fuel cost differentials between peaking and base load units. DoN witness James T. Selecky prepared Exhibit No. JTS-2 that illustrates the average fuel cost of PEF's base, intermediate and peaking units for 2008. As the data shows, the fuel costs for the base, intermediate and peaking units are \$45.92 per MWh, \$101.52 per MWh and \$151.72 per MWh, respectively. PEF's proposed allocation does nothing to distinguish the allocation of fuel costs associated with operating various types of units. In fact, under PEF's proposed allocation method, each class would see the same average fuel cost.

PEF's proposed allocation method is flawed because it suffers from the double-counting problem by allocating the production plant costs partially on average demand and partially on coincident peak. Double-counting occurs because average demand is a component of the coincident peak demand. By allocating some of the fixed production plant costs on average demand and some to coincident peak, energy is counted twice – once by itself and the second time as a subset of the coincident peak. If year-round energy is analogous to the base load units, which supply capacity on a continuing basis throughout the year, then it follows that the intermediate and peaking units would be only utilized to meet system demands when they are in excess of the average year-round demand. Energy allocation advocates improperly allocate the cost of this additional capacity relative to the total coincident peak rather than the excess demand (Direct Testimony of FIPUG Witness Jeff Pollock, pages 19 and 20).

The Department of Navy contends that PEF's proposed fixed production cost allocation method is at the best incomplete. Since it ignores the fuel side of the equation, PEF has not thoroughly evaluated or studied its proposed allocation method. This concern is based in part on Mr. Slusser's cross-examination regarding the portion of testimony that he withdrew. During the cross-examination of Mr. Slusser, he indicated that he was striking his testimony which discussed the average and excess allocation method. Mr. Slusser's reasons for striking this testimony are as follows:

> "I was not as familiar with that method as I expected to be by the name that was given the method. The method is called average and excess demand. The method is described in the NARUC Cost Allocation Manual. I did find a number of utilities in the country that used the method, and there may be a presumption that it was a method that was heavily weighted average demand. Upon further review, after I filed this testimony, I found otherwise. I think the method is a misnomer and does not weight energy responsibility by the way the Company is wanting to weight it." (Transcript 1527)

If the average and excess demand method was not fully evaluated, why should the Commission believe that the 12 CP and 50% AD method was fully evaluated? DoN is, therefore, concerned that PEF has likewise not fully analyzed the method it is proposing in this proceeding since no weight was given to the allocation of the energy costs and only the fixed cost component was considered.

#### **Class Revenue Increase Allocation**

The DoN supports the allocation of any revenue increase based on the results of the cost of service study. In addition, the DoN supports PEF's proposal that no customer class' revenue increase should exceed 150% of the total percentage increase

However, any revenue increase that a rate class cannot absorb due to the 150% cap should be allocated to all other rate classes. For example, if a customer class is to receive a \$5 million increase based on cost of service, but because of the 150% limitation, the class will only receive an increase of \$3 million. The \$2 million shortfall should be allocated to all of the other customer classes based on the revenue increase each class is being allocated using cost of service studies.

## Summary

DoN opposes PEF's proposed method for allocating fixed production costs. The method as applied is incomplete at best, but more importantly does not reflect cost causation principles.

PEF's system winter and summer peak demands are the most prominent and, therefore, the most important in determining PEF's capacity needs. DoN witness James Selecky analyzed PEF's system peaks from 1999 through 2008 (Exhibit JTS-3). The results of this analysis clearly indicate that PEF's glow patterns remain very seasonal. Since the peak demand drive capacity additions, it is reasonable to use the average of the winter and summer peak demands for the purpose of allocating cost to customer classes. However, if the Commission prefers to allocate a portion of the fixed production costs on an energy basis, the results of the 12 CP and 1/13<sup>th</sup> AD allocation method should be used to allocate fixed production costs in this proceeding.

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Respectfully submitted,

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