

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

\_\_\_\_\_  
In re: Petition for increase in rates by  
Progress Energy Florida

Docket No. 090079-EI

Submitted for filing: March 20, 2009

**DIRECT TESTIMONY  
OF  
SASHA WEINTRAUB**

**On behalf of Progress Energy Florida**

DOCUMENT NUMBER DATE

02420 MAR 20 09

FPSC-COMMISSION CLERK

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**SASHA WEINTRAUB**

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**I. INTRODUCTION AND SUMMARY.**

**Q. Please state your name and business address.**

**A.** My name is Sasha A. J. Weintraub. My business address is 410 South  
Wilmington Street, Raleigh, North Carolina, 27601.

**Q. By whom are you employed and in what capacity?**

**A.** I am employed by Progress Energy Carolinas, Inc. (“PEC”) as Vice President  
Fuels and Power Optimization.

**Q. What are your duties and responsibilities in that position?**

**A.** I am responsible for the procurement of coal, natural gas, and fuel oil for the  
Progress Energy Florida, Inc. (“PEF” or the “Company”) and PEC generation  
fleet. I am also responsible for portfolio management and short term power  
trading for both PEF and PEC. In addition, I am responsible for the Company’s  
coal, natural gas, and fuel oil price forecasts used for fuel filings and resource  
planning purposes in connection with the Company’s Ten Year Site Plan filings  
each year.

**Q. Please describe your educational background and professional experience.**

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1 A. I have a Bachelor of Science (“BS”) degree in Engineering from Rensselaer  
2 Polytechnic Institute, I have a Master's in Mechanical Engineering from  
3 Columbia University, and I have a Ph.D. in Industrial Engineering from North  
4 Carolina State University. From February of 2003 until June of 2005 I was the  
5 Director of Coal Marketing and Trading for Progress Fuels Corporation, a  
6 former subsidiary of Progress Energy. Before assuming my current position, I  
7 was the Director of Coal Procurement for PEF and PEC.

8  
9 **Q. Have you previously testified before the Florida Public Service**  
10 **Commission?**

11 A. Yes. I have previously testified for PEF in a proceeding involving coal  
12 procurement for two of PEF’s coal-fired units. I also testified for PEF in the  
13 Company’s need determination proceeding for Levy Units 1 and 2.

14  
15 **Q. What is the purpose of your testimony?**

16 A. The purpose of my testimony is to explain the Company's fuel price forecasts  
17 and inventory target levels.

18  
19 **Q. Have you prepared exhibits to your testimony?**

20 A . Yes. I sponsor the following exhibits, which are attached to my prefiled  
21 testimony:

- 22 • Exhibit No. \_\_\_ (SAW-1), a list of the Minimum Filing Requirements  
23 (MFR) schedules I am sponsoring or co-sponsoring;  
24 • Exhibit No. \_\_\_ (SAW-2), the Company’s fuel price forecast;  
25 • Exhibit No. \_\_\_ (SAW-3), the Company’s fuel inventories;



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following fuels:

- Coal - 1.3% sulfur (2.1 lbs SO<sub>2</sub>/MMBtu) and a weighted average of 0.7% and 2.9% sulfur (1.2 and 5.0 lbs SO<sub>2</sub>/MMBtu)
- Residual/Heavy/No. 6 Oil - 1.0% and 1.34% sulfur (1.1 and 1.5 lbs SO<sub>2</sub>/MMBtu)
- No. 2/Light/Distillate Oil - 0.0015 lbs SO<sub>2</sub>/MMBtu and 0.5 lbs SO<sub>2</sub>/MMBtu
- Natural Gas

**Q. Turning now to the individual fuels included in the forecast, will you please explain why PEF's forecast reflects two different coal price projections?**

A. PEF's forecast reflects different coal prices because the Company utilizes different grades of coal at its Crystal River Plant. Specifically, Crystal River Units 1 & 2 burn coal with an approximate 2.1 lbs. SO<sub>2</sub>/MMBtu and Crystal River Units 4 & 5 burn coal with an approximate 1.2 lbs. SO<sub>2</sub>/MMBtu. In the latter part of 2010, Crystal River Units 4 & 5 will be capable of burning higher sulfur coal (5.0 lbs. SO<sub>2</sub>/MMBtu) due to the installation of wet scrubber flue gas desulfurization (FGD) systems. Different grades of coal are sold at different prices in the market. Thus, the Company must forecast prices for each of the different grades of coal it plans to utilize at its Crystal River Plant. The spot market commodity price projection shown for Crystal River Units 4 and 5 on Exhibit \_\_\_ (SAW-2) is the weighted average price for 2010 of the low and high sulfur coals.

**Q. What factors are taken into account in developing the Company's coal**

1 **price forecast?**

2 A. The Company's coal forecast is impacted by a variety of factors, including the  
3 source of the coal, the varying type and quality characteristics, forecasted burn  
4 requirements, price and volume commitments under existing contracts, the  
5 forecasted market and conditions for spot purchases, and transportation costs to  
6 the point of use.

7 Most of the coal currently consumed at PEF's generating plants is mined  
8 in the Central Appalachian region and South America. In the future, the  
9 addition of wet scrubber FGD systems to comply with environmental  
10 regulations will allow the Company to further diversify its fuel portfolio and  
11 procure coal from other regions, such as the Illinois Basin. The Company  
12 calculates the volume of coal needed to fulfill the burn requirements at the  
13 Crystal River Units. The Company then reviews the price and volume  
14 commitments in its current coal contracts. If further volume is needed, the  
15 Company utilizes the market for spot purchases to fulfill this requirement. This  
16 analysis results in an overall commodity price forecast that includes the  
17 expected mix of contract and spot market coal. The Company also prepares a  
18 separate transportation price forecast for both water and rail transport. The  
19 delivered price of coal shown in the MFRs represents the sum of the  
20 commodity and transportation price forecasts.

21

22 **Q. Focusing next on oil prices, please explain why several different prices**  
23 **have been projected in the Company's study for oil.**

24 A. The Company procures and burns different qualities of oil. The 1.0% sulfur  
25 residual oil is currently used by the Company at the Suwannee River steam

1 plants. The Anclote steam plant can use up to an annual maximum of 1.5%  
2 sulfur residual oil. The different grades of No. 2 oil are used at PEF's  
3 combustion turbines for generation and at steam plants for start-up. Like coal,  
4 different grades of oil are sold at different market prices based on type and  
5 quality. Accordingly, the Company forecasts each of them separately.

6  
7 **Q. Other than the type of oil, what are the key assumptions that affect the**  
8 **price forecast for oil?**

9 A. The projected oil prices are based on estimates of the contract prices for oil,  
10 spot prices of oil, and the cost of delivery to PEF's plant locations. The fuel oil  
11 prices all assume bulk, waterborne deliveries to the West Coast Florida  
12 Terminal used by the Company indexed to U. S Gulf Coast market prices. As  
13 in the case of coal, transportation costs to individual plants are forecasted  
14 separately and are added to the commodity prices to produce a delivered price  
15 forecast for each site.

16  
17 **Q. How is the price of natural gas forecasted?**

18 A. The natural gas forecast is based on the contract structures and estimates of spot  
19 market prices expected to be in effect during the forecast period for the cost of  
20 the fuel into the pipelines which deliver it into Florida. Transportation costs,  
21 including fixed demand charges and variable transportation charges to specific  
22 plants, are forecasted separately.

23  
24 **III. FUEL INVENTORIES**

25 **Q. Which of these fuels does the Company keep in inventory?**

1 A. As shown in Exhibit No. \_\_\_\_ (SAW-3), the fuels currently maintained in  
2 inventory are coal, natural gas, residual oil and No. 2 oil. The Company also  
3 maintains nuclear fuel in inventory, as reflected in MFR B-16.  
4

5 **Q. What is the objective of the Company's fuel inventory target levels for coal,  
6 natural gas, residual oil, and No. 2 oil?**

7 A. The Company's objective in establishing fuel inventory target levels is to  
8 maintain fuel inventories that ensure a competitively priced, reliable and secure  
9 fuel supply to support the economic dispatch and operation of the Company's  
10 generation fleet. In determining adequate inventory levels, the Company  
11 considers several factors, including:

- 12 1. Projected system fuel requirements and costs based on the system  
13 constraints and estimated demand;
- 14 2. Fuel storage, transportation source and flexibility, and fuel handling  
15 capabilities;
- 16 3. Lead times to secure supply and deliver to on-site and off-site  
17 inventory locations under different market and operating conditions;
- 18 4. Potential delays and interruptions in fuel supply caused by events  
19 outside the control of the Company; and,
- 20 5. Current and future fuel market conditions.

21  
22 **Q. Would you describe generally the procedure followed in establishing the  
23 Company's fuel inventory target levels?**

24 A. Using the factors identified above, target inventory levels are evaluated for each  
25 fuel type both on a total system basis and for each generating facility. Actual

1 inventory levels are monitored daily. Inventory targets are reviewed and  
2 revised as necessary when warranted by changes in unit availability, dispatch  
3 economics, and transportation or logistics constraints. The target levels are  
4 used as inputs to the Company's financial model for the projection of fuel  
5 expense and inventory balances.

6  
7 **Oil Inventory**

8 **Q. How were the oil inventory target levels identified in this case developed?**

9 A. The inventory target level for each generating plant that uses oil as a primary or  
10 back-up fuel was established by the process that I have described. In  
11 establishing these targets, the Company also considered the storage capacity at  
12 each plant site, the source of the fuel oil supply, the amount and location of  
13 off-site storage leased by PEF, expected plant burn requirements, the specific  
14 delivery modes used to deliver fuel oil to each plant, and fuel supply risks that  
15 the Company cannot control. Based upon this analysis, the Company  
16 established the inventory target levels for oil that are recorded in the MFRs.  
17 The system target levels are also shown by oil type in Exhibit No. \_\_ (SAW-3).

18  
19 **Q. What is PEF's inventory plan for residual oil?**

20 A. The Company's residual oil inventory plan is to maintain the level of oil  
21 necessary to provide for the reliable and economic operation of its generating  
22 units. Generation facilities that run on residual oil are critical to maintain the  
23 Company's overall system reliability. The Company projects an average of  
24 approximately 745,000 barrels of residual oil in inventory in 2010, as reflected  
25 in Exhibit No. \_\_\_\_ (SAW-3). This amount is made up of approximately

1 650,000 barrels (18.2 days at full burn) for Anclote and approximately 95,000  
2 barrels (14.9 days at full burn) for Suwannee. These amounts are consistent  
3 with the inventory levels the Company has been maintaining for Anclote and  
4 Suwannee; however, the system-wide residual fuel inventory for 2010 is lower  
5 than recent levels due to the repowering of the Bartow oil-fired plant with  
6 natural gas by June 1, 2009.

7  
8 **Q. What is PEF's inventory plan for No. 2 fuel oil?**

9 A. The Company's No. 2 fuel oil inventory plan is to maintain the level of oil  
10 necessary to provide reliable supply for its peaking facilities and adequate back-  
11 up fuel supply for its combined cycle ("CC") units. The Company has added  
12 several new intermediate CC units to the system since the Company's last fuel  
13 inventory levels were approved, including the repowered Bartow Plant which is  
14 scheduled for commercial operation by June 1, 2009. These units run mostly  
15 on natural gas, but use No. 2 oil as a back-up fuel.

16 The Company projects to average approximately 1,106,700 barrels of  
17 No. 2 oil inventory in 2010, as reflected in my Exhibit No. \_\_ (SAW-3).

18 Approximately 60% to 65% of the inventory (660,000 to 720,000 barrels) will  
19 be stored at the Company's ten separate CT peaking unit sites. An additional  
20 218,000 barrels will be stored at the Hines and Bartow CC unit sites as back-up  
21 fuel to natural gas. The Company projects storing approximately 15,000 barrels  
22 at the Crystal River and Anclote sites as start-up fuel for the steam generators.  
23 Finally, 150,000 to 210,000 barrels will be stored at the Martin Storage facility,  
24 which is a storage facility for which PEF contracts at the Port of Tampa. The  
25 total amount of No. 2 fuel oil inventory is consistent with the amount the

1 Company has been maintaining, when adjusted for the additional No. 2 back-up  
2 fuel required for the repowered Bartow plant.

3  
4 **Q: Why is it important that the Company maintain adequate oil inventory at**  
5 **each separate plant site?**

6 A. PEF's oil peaking units are critically important to maintain reliable operations  
7 during peak demand periods. They are also necessary to provide generation  
8 when unplanned supply curtailments occur and unforeseen generation events  
9 impact the Company's other baseload and intermediate generation units. For  
10 example, unscheduled outages at either of the major coal-fired units, the nuclear  
11 unit, or the large combined cycle natural gas facilities can cause significant  
12 variations in the amount of fuel oil burned. In addition, interruptions to the  
13 natural gas supply and/or higher than expected load requirements could result in  
14 the need to run the oil peaking units longer than expected.

15 Each site must have adequate onsite storage to ensure sufficient fuel  
16 supply during these times of need. Because the units are in different  
17 geographic locations, PEF's inventory plan must address inventory needs and  
18 storage capacity at each generating site. Inventory is not easily moved between  
19 CT unit locations. At the Intercession City site, PEF must maintain an inventory  
20 of two different grades of No. 2 fuel, since fuel oil is not interchangeable  
21 between all units at the site due to quality specifications and environmental  
22 permit requirements.

23 Typically it takes two to three weeks from the moment PEF places a  
24 delivery order for No. 2 fuel oil to the moment the oil reaches the site. Any  
25 number of events can interrupt the delivery of light oil. In particular, barge

1 delays due to potential or active storms, rough seas, and refinery outages can all  
2 affect product availability. For example, during the summer of 2008,  
3 Hurricanes Gustav and Ike resulted in the temporary closing of several  
4 refineries and ports and the interruption of PEF's normal shipments of No. 2  
5 oil. Without on-site storage, PEF would not be able to ensure the reliable  
6 operation of its peaking units during normal and contingency situations.  
7

8 **Q. Could PEF simply move fuel oil from one site to another if shipments to a**  
9 **particular site were delayed?**

10 A. No. Moving fuel oil between locations is not operationally practical or prudent.  
11 For example, the Company maintains approximately 240,000 barrels of No. 2  
12 oil inventory at the Intercession City combustion turbine site. PEF cannot rely  
13 on that inventory to readily fuel the CT units at Shady Hills, which are located  
14 some 85 miles away. The fuel oil would have to be trucked from Intercession  
15 City to Shady Hills, which takes time and money. Further, Intercession City  
16 has only one connection available to load trucks. Assuming that the  
17 Intercession City units did not need the oil to operate, and that trucks were  
18 available, it would take 274 truck loads to provide the 48,000 barrels to Shady  
19 Hills. At the rate of one truck per hour loading 24 hours a day, seven days per  
20 week, it would take 11 days to provide Shady Hills with 51 hours (or 2.1 days)  
21 of light oil supply. When the PEF Energy Control Center notifies the CT unit  
22 operators to begin generating electricity, these units must be ready at that  
23 moment and cannot wait for a shipment of inventory from another site. Thus, a  
24 sufficient amount of No. 2 oil inventory at each CT site is imperative.  
25

1 **Q. Why does the Company maintain an inventory of No. 2 oil at the Port of**  
2 **Tampa?**

3 A. PEF maintains storage at the Port of Tampa to reduce the significant logistical  
4 risk and time lag that exist for the Company in procuring and shipping No. 2 oil  
5 to its units when needed. Supplying fuel oil to PEF's plants has inherent risks  
6 due to the way the product is procured and transported to the state and  
7 ultimately to PEF's generating sites. The offsite storage provides a significant  
8 benefit to PEF as it gives the Company much greater flexibility to secure No. 2  
9 oil in advance and to schedule deliveries from suppliers at more regular  
10 intervals or with broader delivery windows. The availability of the off-site  
11 inventory increases supply security and reliability by allowing PEF to buy fuel  
12 oil over time, and to effectively schedule fuel deliveries to its generation fleet  
13 from the Port of Tampa inventory without being concerned with the timing of  
14 any one barge or series of barge shipments. This flexibility is even more  
15 important during extreme load events or during supply disruptions, when PEF  
16 could otherwise face both supply risks and transportation risks and delays.

17 The need for and value of this storage was evident after PEF struggled  
18 in 2005 to get and maintain sufficient fuel oil supply to our units in the face of  
19 significant delays caused by hurricanes, higher loads, and unexpected and  
20 unforeseen unit derates that put greater demand on our peaking units. In  
21 addition, during the 2008 hurricanes, when the refineries in the Gulf of Mexico  
22 closed, it was difficult to procure supplies of oil.

23 In addition to these supply and delivery risks, forecasting fuel oil burns  
24 at peaking units is more difficult than forecasting other fuels, such as coal and  
25 natural gas, which are used at base-load and intermediate plants. As such, PEF

1 must be prepared to deliver large quantities of fuel oil at any time to respond to  
2 load variation, unforeseen unit outages and other fuel events. The inventory of  
3 No. 2 oil at the Port of Tampa meets this objective.  
4

5 **Q. How does the State of Florida and the Company obtain its fuel oil?**

6 A. According to the Department of Environmental Protection's Florida Energy  
7 Plan released in January 2006, the State of Florida depends almost exclusively  
8 on other states and nations for supplies of oil and ranks first among all states in  
9 the amount of electricity produced from oil. Florida receives approximately 98  
10 percent of its fuel oil by sea via barge and tanker ships. Fuel oil is supplied by  
11 domestic and international refineries as well as the pipeline spur in Bainbridge,  
12 Georgia. PEF purchases its fuel oil from suppliers who have access to  
13 inventories, refineries, and terminals in the Gulf Coast, Midwest and West and  
14 transport the fuel oil to Florida and ultimately to PEF generation facilities via  
15 barge, pipeline, rail, and truck.

16 With respect to managing and meeting its No. 2 oil system generation  
17 and inventory requirements, PEF purchases No. 2 oil primarily under term  
18 agreements based on published market based indexes and utilizes leased off-site  
19 inventory at the Port of Tampa for delivery of No. 2 oil to its plant facilities by  
20 barge, pipeline, rail, and truck.

21 With respect to residual fuel oil, the Anclote plant is supplied via a 33.5  
22 mile oil pipeline which originates from dedicated inventory located at the  
23 Bartow plant site. The Bartow plant site has unloading facilities where residual  
24 fuel oil is delivered via barges which originate from the Gulf Coast. Residual  
25 fuel oil is delivered to the Suwannee plant by truck deliveries from terminals

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located in Florida and by rail from sources outside the state.

**Q. What impact do these fuel supply arrangements have on PEF's fuel inventory management?**

A. Fuel oil deliveries must be managed and arranged in advance given the relatively long lead times to obtain the fuel supply and transport it to PEF's facilities. In addition, PEF faces significant risks to the timely delivery of fuel oil. These include rail congestion, strikes, flooding, fogs, river flooding, tropical storms, hurricanes, refinery outages, and equipment breakdowns. All of these factors can increase the time from when an order is placed for delivery of fuel oil to when it reaches the site. The farther the supply point is from the delivery point, or the more variables that exist, the longer the time period could be for delivery. As noted above, barge shipments were significantly impacted as a result of the hurricanes in 2005. This also occurred during the hurricanes in 2008. In addition, the amount of fuel oil that is available can be impacted as a result of sustained refinery outages in the Gulf Coast.

**Q. How do the residual and No. 2 oil inventory target levels compare with the Commission's guidelines established in Order No. 12645 in Docket No. 830001-EU?**

A. As can be seen in Exhibit No. \_\_\_ (SAW-4), PEF's residual and No. 2 oil inventory targets exceed the guidelines.

**Q. Please explain why the residual and No. 2 oil inventory levels exceed the guidelines.**

- 1 A. For all the reasons discussed above, sound fuel management practices require  
2 PEF to maintain oil inventory levels that exceed the 1983 guidelines. The  
3 factors supporting the fuel inventory levels above the guidelines include:
- 4 • the difficulty in predicting fuel oil needs due to the fact that oil-fired  
5 combustion turbine units are called on both during periods of peak demand  
6 and in the event of unplanned outages or derates of intermediate or baseload  
7 units;
  - 8 • the diverse geographic location of the generating sites, and the  
9 impracticality of transferring fuel between those sites, which necessitates  
10 maintaining inventory at a variety of locations;
  - 11 • the fact that units at a large generating site may have different fuel quality  
12 requirements, which requires the Company to maintain inventories of  
13 multiple grades of fuels at a single site;
  - 14 • the relatively long lead time to obtain fuel supplies or to replenish  
15 inventories due to the fact that PEF, like other Florida utilities, must import  
16 virtually all of its fuel oil from sources outside the State; and
  - 17 • the risk of supply curtailments or transportation delays posed by hurricanes  
18 and tropical storms which can impact both PEF's service territory as well as  
19 fuel handling facilities along the Gulf coast.

20  
21 If PEF fails to maintain fuel oil inventories at the planned levels, it exposes the  
22 Company and its customers to fuel cost, operations, and reliability risks. These  
23 risks include buying much more expensive oil, running out of fuel oil prior to  
24 shipments arriving, buying more expensive purchased power, and putting the  
25 power grid at greater risk due to fuel shortages. The Company needs fuel

1 inventory levels above the guideline amounts not only to support the projected  
2 burn levels, but also to effectively manage a secure and reliable supply of fuel  
3 for normal and contingency circumstances.  
4

5 **Q. Is it speculative to plan for the contingency events you describe?**

6 A. Absolutely not. Experience shows how critical the steam and peaking units,  
7 and thus the oil inventory levels, can be. In 2005, the effects of Hurricanes  
8 Katrina, Rita, and Wilma disrupted coal barge shipments into Crystal River and  
9 decreased the supply of natural gas from the Gulf of Mexico. In addition,  
10 because these storm events interrupted the delivery of oil shipments to the  
11 various oil plants, PEF relied solely on on-site inventory for days. These fuel  
12 supply disruptions were coupled with higher load requirements due to warmer  
13 weather, as well as an unexpected de-rate at Crystal River 5, a coal-fired unit.  
14 The combination of these events resulted in the inventory levels for Anclote  
15 dropping to 6.4 days (based on the units running at full load). After these  
16 events, the Company decided to target, and has generally targeted to maintain,  
17 an inventory level of approximately 18 days of full burn for the Anclote plant.

18 To further illustrate this risk, if there are prolonged natural gas  
19 curtailments and/or fuel oil delivery delays, PEF may have to solely rely on its  
20 No. 2 fuel oil inventory at its large combustion turbine sites and at its  
21 intermediate natural gas generation sites. If this were to occur, the Intercession  
22 City, Debary and Hines sites, which maintain PEF's largest on-site inventories,  
23 have on average only 104 hours of inventory, meaning those units could only  
24 operate 4.3 days. It is thus imperative for the Company to have sufficient  
25 inventory levels of oil to adequately protect its ratepayers in the event of supply

1 interruptions.

2

3 **Coal Inventory**

4 **Q. How does PEF develop its coal inventory levels?**

5 A. PEF uses its fuel inventory objectives and procedures to maintain coal  
6 inventories at optimum levels consistent with operational and financial  
7 considerations. For coal inventory, additional considerations include potential  
8 supply problems with mining sources, barge transportation, and rail  
9 transportation. The storage capacity available near New Orleans (International  
10 Marine Terminal or "IMT") and at the United Bulk Terminal ("UBT") is also a  
11 consideration when evaluating coal inventories at Crystal River. In addition,  
12 the Crystal River coal inventory levels are affected by the risk that hurricanes  
13 and tropical storms in the Gulf of Mexico pose to the supply of coal to the site.

14

15 **Q. Can you provide any specific examples to illustrate the impact that**  
16 **hurricanes can have on coal inventory levels at PEF?**

17 A. Yes. The 2005 hurricane season, which I described above in connection with  
18 oil inventories, also severely impacted coal inventories at Crystal River, where  
19 all PEF's coal-fired generating units are located. Coal can be delivered by rail  
20 or barge to Crystal River, but the majority of coal is delivered by barge.  
21 Domestic barge coal comes down the Mississippi River on river barges, and is  
22 then loaded onto Gulf barges at one of two terminals for shipment across the  
23 Gulf of Mexico. All the coal PEF purchases from South America are shipped  
24 across the Gulf of Mexico as well.

25

During 2005, hurricanes in the Gulf of Mexico prevented coal barges

1 from being delivered into Crystal River, causing inventory levels at Crystal  
2 River to drop significantly. Generally the Company targets coal inventory  
3 levels equal to 45 days of running the plants at full capacity. As can be seen in  
4 Exhibit No. \_\_ (SAW-5), by December 2005, the Company's inventory levels  
5 dropped to 22 days for all four Crystal River units. In the last four months of  
6 the year, PEF burned more coal than was delivered to the site.

7  
8 **Q. Has the Company seen any interruptions in coal deliveries since 2005?**

9 A. Yes, the summer of 2008 was particularly challenging in terms of obtaining  
10 timely coal shipments. First, an oil spill in the Mississippi River interrupted  
11 shipments of barge coal. Then Hurricanes Gustav and Ike, while they  
12 fortunately did not directly impact PEF's service territory, did prevent barges  
13 from crossing the Gulf of Mexico. In addition, congestion on the railroads can  
14 also interrupt or delay coal deliveries. In September 2008, coal inventory levels  
15 at Crystal River fell to 22 days (at full burn), as compared to the target of 45  
16 days.

17  
18 **Q. What is the Company's projected coal inventory for 2010?**

19 A. For 2010, the Company projects to average 360,000 tons of coal inventory at  
20 Crystal River 1 & 2, 600,000 tons of coal inventory at Crystal River 4 & 5, and  
21 827,200 tons of coal either in transit or at off-site storage, as reflected in my  
22 Exhibit No. \_\_ (SAW-3).

23  
24 **Q. How do the coal inventory target levels compare with the guideline**  
25 **established in Order No. 12645 in Docket No. 830001-EU?**

1 A. As can be seen in Exhibit No. \_\_\_\_ (SAW-4), PEF's coal inventories exceed the  
2 guideline established in 1983. The on-site inventory levels are consistent with  
3 the target of 45 days at full burn that we have attempted to maintain since our  
4 experience with supply interruptions during the 2005 hurricane season. The off-  
5 site inventories are larger than we have maintained in recent years. The increase  
6 in off-site inventories is required to support fuel switching to higher sulfur  
7 coals, such as Illinois Basin coal, in 2010 in response to the installation of  
8 scrubbers at Crystal River Units 4 & 5. The Company will begin building an  
9 off-site inventory of higher sulfur coal in 2009. At the same time, we need to  
10 maintain an inventory of lower sulfur coal to support plant operations until the  
11 scrubbers have been installed and tested, and the change-over to higher sulfur  
12 coal can be completed in late 2010.

13  
14 **Natural Gas Inventory**

15 **Q. Is there a target inventory level for natural gas in the Commission's**  
16 **guidelines established in Order No. 12645 in Docket No. 830001-EU?**

17 A. No, there is no Commission guideline for natural gas inventory levels.

18  
19 **Q. What natural gas inventory does the Company maintain?**

20 A. As shown on Exhibit No. \_\_\_\_ (SAW-3), the Company maintains a total of  
21 1,250,000 MMBtu's of contracted natural gas inventory. This contracted for  
22 inventory level was established in accordance with the Company's objectives  
23 that I have previously described. The natural gas inventory level is represented  
24 by contracts that began in May of 2008, in which PEF leases natural gas storage  
25 capacity from two companies for a total of five years. The first contract is with

1 Bay Gas Storage Company for high deliverability natural gas storage from an  
2 onshore salt cavern facility in Mobile, Alabama with capacity of 500,000  
3 MMBtu's. The second contract, with SG Resources Mississippi, L.L.C.  
4 ("SGR"), permits PEF to store up to 750,000 MMBtu's at SGR's onshore salt  
5 cavern facility in Greene County, Mississippi.

6  
7 **Q. What are the reasons to maintain an inventory of natural gas?**

8 A. PEF contracted for this natural gas storage for a few key reasons. First, PEF  
9 has a growing portfolio of natural gas-fired generation. Approximately 47  
10 percent of actual generation from PEF's owned generation in 2010 is expected  
11 to come from combined cycle or combustion turbine units fueled by natural gas.  
12 Thus it is increasingly important that PEF has a secure and reliable natural gas  
13 supply to support its natural gas generation needs. Diversifying its flowing  
14 supply and providing for back-up are both essential components of the  
15 Company's strategy to meet this need. The contracted storage will increase the  
16 reliability of gas supply by providing backup supply in emergency conditions.  
17 For example, PEF withdrew gas from storage to meet system needs when  
18 normal gas supplies were disrupted by hurricanes in 2008. Under the storage  
19 contracts, PEF has the capability to withdraw the storage gas at the rate of  
20 125,000 MMBtu/day over a 10-day period. This can meet a portion of the  
21 Company's natural gas requirements when supplies are curtailed. Second,  
22 natural gas storage can be used to manage price risk. For example, because  
23 PEF has natural gas in storage, it may be able to minimize fuel costs by  
24 utilizing storage gas versus buying from the market when the market price is  
25 higher than its average cost of gas in storage. Finally, the storage capacity can

1 provide PEF more opportunities to manage daily and monthly pipeline  
2 imbalances.

3

4 **Q. In your opinion, are PEF's projected fuel inventory levels appropriate?**

5 A. Yes. For all the reasons I have discussed, I believe that maintaining these fuel  
6 inventory levels is reasonable and prudent, and in the best interest of the  
7 Company and its ratepayers.

8

9 **Q. Does this complete your testimony?**

10 A. Yes, it does.

Docket No. 090079-EI  
Witness: WEINTRAUB  
Exhibit No. \_\_\_\_\_ (SAW-1)

MINIMUM FILING REQUIREMENT SCHEDULES  
Sponsored, All or In Part, by Sasha Weintraub

<u>Schedule</u>	<u>Schedule Title</u>
B-16	Nuclear Fuel Balances
B-18	Fuel Inventory by Plant
G-6	Interim Fuel Inventory by Plant

COAL  
COMMODITY PRICE PROJECTIONS  
\$/Ton

	C.R. 1& 2 <u>(12,000 Btu/lb)</u>	C.R. 4& 5 <u>(11,680 Btu/lb)</u>
2010	92.20	85.10

OIL GULF COAST  
COMMODITY PRICE PROJECTIONS  
\$/Barrel

**Residual Fuel Oil**  
(6.510 MMBtu/Bbl)

	<u>1.1 lbs SO2/MMBtu</u>	<u>1.5 lbs SO2/MMBtu</u>
2010	88.96	87.52

**Light Oil**  
(5.796 MMBtu/Bbl)

	<u>0.5 lbs SO2/MMBtu</u>	<u>0.0015 lbs SO2/MMBtu</u>
2010	127.78	124.73

Docket No. 090079-EI  
Witness: WEINTRAUB  
Exhibit No. \_\_\_\_ (SAW-2)  
Page 3 of 3

NATURAL GAS HENRY HUB  
COMMODITY PRICE PROJECTIONS

\$/MMBtu

2010            9.35

Docket No. 090079-EI  
Witness: WEINTRAUB  
Exhibit No. \_\_\_\_ (SAW-3)

FUEL INVENTORY TARGET LEVELS 2010

	<u>Quantity</u>
1) Coal CR1 &2	360,000 Tons
2) Coal CR 4&5	600,000 Tons
3) Off-Site/In Transit Coal	867,200 Tons
4) Heavy Oil	745,000 Bbls
5) Light Oil (inc. off-site)	1,106,700 Bbls
6) Natural Gas Off-Site Storage	1,250,000 MMBtu

Docket No. 090079-EI  
Witness: WEINTRAUB  
Exhibit No. \_\_\_\_ (SAW-4)

COMPARISON OF FULLY ADJUSTED  
FUEL INVENTORY VERSUS FPSC GUIDELINES

Coal

FPSC Guideline: 90 days projected burn: 1,382,000 tons based on 2010 projected burn  
Progress Energy Florida Target: 1,827,200 tons

Residual/Heavy/No. 6 Oil

FPSC Guideline: 45 days at projected burn: 231,000 barrels based on 2010 projected  
burn

Progress Energy Florida Target: 745,000 barrels

No. 2/Distillate/Light Oil

FPSC Guideline: 30 days burn at the highest average monthly rate during the most  
current and five year period: 301,743 barrels (8/05)

Progress Energy Florida Target: 1,106,700 barrels

2005 INVENTORY PLAN(ACTUAL) - CRYSTAL RIVER 1&2 AND 4&5

2005 PLANT:	Jan 05	Feb 05	Mar 05	Apr 05	May 05	Jun 05	Jul 05	Aug 05	Sep 05	Oct 05	Nov 05	Dec 05	2005 Totals
<b>CR 1&amp;2</b>													
Burn	175,773	126,165	197,667	184,416	164,844	192,599	145,877	147,089	179,010	193,752	199,772	208,593	2,115,557 Sum
Rcpts (Rtble Tns Undr Ctrct)	231,801	112,249	166,506	166,624	190,776	198,852	189,279	205,643	126,031	178,038	168,664	169,041	2,101,504 Sum
Ending Inventory	232,587	218,671	187,510	169,718	195,650	202,241	245,643	304,197	251,218	233,504	202,391	162,839	2,17,181 Avg
Days Inv @ 100%	31	30	25	23	26	27	33	41	34	32	27	22	29 Avg
<b>CR 4&amp;5</b>													
Burn	342,742	327,065	234,137	302,021	343,997	328,840	396,403	398,473	341,918	364,160	377,405	375,978	4,133,139 Sum
Rcpts (Rtble Tns Undr Ctrct)	209,517	279,700	338,677	333,772	380,402	315,306	351,473	395,216	397,733	304,253	335,429	322,359	3,963,837 Sum
Ending Inventory	308,248	260,883	365,423	397,174	433,579	420,045	375,115	371,858	427,673	367,766	325,790	272,171	360,477 Avg
Days Inv @ 100%	25	21	29	32	35	34	30	30	34	29	26	22	29 Avg
<b>TOTALS</b>													
Burn	518,515	453,230	431,804	486,437	508,841	521,439	542,280	545,562	520,928	557,912	577,177	584,571	6,248,696 Sum
Rcpts (Rtble Tns Undr Ctrct)	441,318	391,949	505,183	500,396	571,178	514,158	540,752	600,859	523,764	480,291	504,093	491,400	6,065,341 Sum
Ending Inventory	540,835	479,554	552,933	566,892	629,229	622,286	620,758	676,055	678,891	601,270	528,181	435,010	577,658 Avg
Days Inv @ 100%	27	24	28	28	31	31	31	34	34	30	26	22	29 Avg