BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

DIRECT TESTIMONY OF

PATRICIA Q. WEST

ON BEHALF OF

PROGRESS ENERGY FLORIDA

DOCKET NO. 050007-EI

SEPTEMBER 8, 2005

Q. Please state your name and business address.

A. My name is Patricia Q. West. My business address is 100 Central Avenue, St. Petersburg, Florida, 33701.

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

A. I am employed by the Environmental Services Section of Progress Energy Service Company, LLC. ("Progress Energy" or "Company") as Manager of Competitive Commercial Operations / Energy Supply Florida. In that position, I have responsibility for the implementation of compliance strategies pertaining to new regulatory requirements for energy supply facilities in Florida.

Q. Have you previously filed testimony before this Commission in connection with Progress Energy Florida's Environmental Cost Recovery Clause?

A. Yes, I have.

Q. Have your duties and responsibilities remained the same since you last filed testimony in this proceeding?

A. No. Due to organizational changes within Progress Energy, I have been reassigned to focus on the environmental matters affecting all power generating facilities in Florida. These responsibilities include development of budgets, cost estimates, and implementation of compliance strategies.

Q. What is the purpose of your testimony?

A. This testimony provides estimates of the costs that will be incurred in the year 2006 for environmental programs that fall within my responsibilities. These programs include the Pipeline Integrity Management Program (Project 3), Above ground Storage Tanks Secondary Containment Program (Project 4), and the Phase II Cooling Water Intake 316(b) Program (Project 6) previously approved by the Commission in 2003 and 2004, as well as additional programs for which the Company requested approval this year.

Q. Please identify the additional programs within your responsibility for which the Company is seeking approval.

A. In May 2005, the Company filed a petition in Docket No. 050316-EI requesting approval of a new environmental program for cost recovery through the ECRC. That program, entitled the Clean Air Interstate Rule (CAIR) and Clean Air Mercury Rule (CAMR) program (Project 7), is being implemented in order to comply with new requirements established by the U.S. Environmental

Protection Agency ("EPA") in new rules codified as 40 CFR 25, 162 (CAIR) and 40 CFR Part 60 Subpart Da and 40 CFR Part 60, Subpart HHHH (CAMR).

In addition, through my August 8, 2005 testimony, the Company requested approval of three additional environmental programs for cost recovery through the ECRC in this docket. These programs include the Arsenic Groundwater Standard Program (Project 8), the Groundwater Reclassification Program, and the Underground Storage Tanks Program (Project 10). As discussed below, the Company is withdrawing its request for approval of the Groundwater Reclassification Program at this time.

Q. What costs do you expect to incur in 2006 in connection with the Pipeline Integrity Management Program (Project 3)?

A. For 2006, we estimate that Progress Energy will incur a total $717,000 in O&M and $95,000 in capital expenditures to comply with the Pipeline Integrity Management ("PIM") regulations (49 CFR Part 195) and the Company's PIM Plan. These figures include: PIM Program Administration ($237,000 O&M) and the cost of integrity risk reduction projects ($480,000 O&M; and $95,000 capital). The integrity risk reduction projects include items such as corrosion repairs, smart pig validation, inadequate cover restoration, traffic protection of above ground valve operators near a busy highway, and pressure control upgrades.

Q. What steps is the Company taking to ensure that the level of expenditures for the Pipeline Integrity Management Program is reasonable and prudent?

A. As services are required to comply with the PIM regulations and the Company's PIM Plan, Progress Energy will identify qualified suppliers of the necessary services. Where possible, competitive bidding will be used to select the lowest cost supplier.

Q. What costs do you expect to incur in 2006 in connection with the Aboveground Storage Tank Secondary Containment Program (Project 4)?

A. Progress Energy is currently estimating $1,263,000 in capital expenditures in 2006. These costs are for the double-bottoming of storage tanks and installation of double-walled piping at the Avon Park, Intercession City, Bayboro, Suwannee, and Turner Combustion Turbine sites. An estimated $5,000 in O&M expenditures are expected for project management support from contractors. This work will be performed in accordance with Rules 62-761.510(3)(d), F.A.C., Table AST U(1), and 62-761.510 (3)(d), F.A.C., Table AST U(2)(a).

Q. What steps is the Company taking to ensure that the level of expenditures for the Aboveground Storage Tank Secondary Containment Program is reasonable and prudent?

A. As services are required to comply with the Aboveground Storage Tank regulations, Progress Energy will identify qualified suppliers of the necessary services. Where possible, competitive bidding will be used to select the lowest cost supplier.

Q. What costs do you expect to incur in 2006 in connection with the Phase II Cooling Water Intake Program (Project 6)?

A. Progress Energy is currently estimating $1,466,749 in O&M expenditures in 2006. These costs include conducting field studies at the Anclote, Bartow, Crystal River, and Suwannee sites as part of the Comprehensive Demonstration Studies. These estimated costs also include $338,775 associated with the work that was deferred from 2005 into the 2006 work plan as discussed in my testimony filed on August 8, 2005. During the latter part of the year engineering technology evaluations are expected to begin.

Q. What steps is the Company taking to ensure that the level of expenditures for the Phase II Cooling Water Intake Program is reasonable and prudent?

A. As services are required to comply with the Phase II Cooling Water Intake Program, Progress Energy will identify qualified suppliers of the necessary services. Where possible, competitive bidding will be used to select the lowest cost supplier.

Q. You mentioned that the Company has filed a petition for approval of the Company's new program designed to achieve compliance with the new CAIR and CAMR rules. Please provide an overview of those rules.

A. The U.S. Environmental Protection Agency (EPA) formally promulgated the CAIR rule on May 10, 2005, and the CAMR rule on May 18, 2005. See 70 Fed. Reg. 25162 (May 12, 2005) (CAIR) and 70 Fed. Reg. 28606 (May 18, 2005)

(CAMR). CAIR imposes significant new restrictions on emissions of sulfur dioxide ("SO_2") and nitrogen oxides ("NO_x") from power plants in 28 eastern states, including Florida,. The rule restricts emissions in two phases for both pollutants. During the first phase for SO_2 (2010-14), region-wide SO_2 emissions from power plants will be capped at approximately 3.6 million tons per year. In the second phase (2015 and beyond), the region-wide cap will be approximately 2.5 million tons per year. Region-wide NO_x emissions from power plants will be capped at 1.5 million tons per year during the first phase (2009-14) and 1.3 million tons during the second phase (2015 and beyond). According to EPA, the phase II caps represent a 73 percent emission reduction for SO_2 and a 65 percent reduction for NO_x when compared with 2003 levels.

The CAIR rule apportions region-wide SO_2 and NO_x emission reduction requirements to the individual states. The rule further requires each affected state to revise its State Implementation Plans ("SIP") by September 2006 to include measures necessary to achieve its emission reduction budget within the prescribed deadlines for phase I and phase II. States must achieve the required emission reductions by requiring power plants to participate in an EPA-administered interstate cap-and-trade system that caps emissions in the two stages outlined above, or by establishing alternative measures.

Under EPA's "cap-and–trade" program, EPA will allocate each power plant owner a certain number of "allowances" each year for SO_2 and NO_x. Beginning in 2009 for NO_x and 2010 for SO_2, at the end of each year, the power plant

owner must hold one NO_x allowance for each ton of NO_x emitted, and two SO_2 allowances for each ton of SO_2 emitted. In 2015, the SO_2 allowance requirement will be increased to 2.86 for each ton of SO_2 emitted. When a power plant owner, like PEF, projects emissions in excess of the number of allowances it will be allocated under the new caps, the owner can either reduce emissions to ensure that annual emissions of each pollutant do not exceed the number of allowances held at the end of that year for each pollutant, or it must obtain additional allowances from other allowance holders in the CAIR region to make up any deficiency between the number of allowances it holds and the number of tons emitted from its units.

EPA adopted the CAMR rule at essentially the same time as the CAIR rule because SO_2 and NO_x emissions controls also can reduce mercury emissions; thus, according to EPA, the coordinated regulation of mercury, SO_2, and NO_x allows mercury reductions to be achieved in a cost effective manner. Much like the CAIR Rule, the CAMR rule employs a cap on total mercury emissions from coal-fired power plants in order to achieve significant emissions reductions. Mercury emissions from new and existing coal-fired utility units will be capped at specified, nation-wide levels. The first phase cap of 28 tons per year will become effective in 2010 and a second phase cap of 15 tons per year will become effective in 2018. According to EPA, the 2018 cap reflects a level of mercury emissions reduction that exceeds the level that would be achieved solely as a co-benefit of controlling SO_2 and NO_x under CAIR.

Like the CAIR rule, the CAMR rule allows states to achieve the required reductions by joining an EPA-managed cap-and-trade program for electric coal-fired power plants, or by imposing specific control requirements to ensure that the required emissions reductions are achieved. Under the EPA-managed cap-and-trade program, facilities would demonstrate compliance with the standard by holding one allowance for each ounce of mercury emitted in any given year. Allowances would be readily transferable among all regulated facilities.

Q. Please describe the Company's plan for complying with the CAIR and CAMR Rules.

A. In anticipation of the CAIR and CAMR rules, PEF has considered numerous options for reducing emissions and/or trading allowances in order to develop the most cost-effective, company-wide compliance strategy. Because SO_2 and NO_X controls also are effective in reducing mercury emissions, PEF is developing an integrated compliance strategy for the CAIR and CAMR rules. PEF continues to analyze numerous compliance options, including changes in fuel types and quality, operational restrictions and unit retirements, repowerings, installation of pollution control technology, and allowance trading. Based on the analyses performed to date, regardless of the compliance program ultimately chosen by the State of Florida, PEF likely will need to install emission controls on several of its electric generating units in order to achieve compliance. Such controls likely will include flue gas desulfurization ("FGD") for SO_2 emissions, selective catalytic reduction ("SCR") and low NO_x burners ("LNBs") for NO_x emissions,

and some combination of FGD, SCR, LNB, and/or particulate controls (e.g., electrostatic precipitators or "ESPs") for mercury emissions.

Q. Are you familiar with the requirements that environmental costs must meet to be eligible for recovery through the ECRC?

A. Yes. The general requirements are that all expenditures must have been prudently incurred after April 13, 1993; all activities must be legally required to comply with a governmentally imposed environmental requirement which was created, or whose effect was triggered, after the company's last test year on which rates are based; and none of the expenditures are being recovered through some other cost recovery mechanism or through base rates.

Q. Does the new CAIR- CAMR program qualify for cost recovery under these criteria?

A. Yes. The new program is being implemented in response to new environmental requirements which were created, or whose effect was triggered, after the minimum filing requirements (MFRs) were submitted in the Company's last rate case, Docket No. 000824-EI, and were not included in the MFRs submitted in the current rate case before this Commission in Docket No. 050078-EI. None of the costs of the three new programs are being recovered through base rates or any other cost recovery mechanism. PEF is seeking recovery of costs incurred after the date of the filing of its Petition on May 24, 2005.

Q. What costs do you expect to incur in 2006 in connection with the CAIR / CAMR Program (Project 7)?

A. PEF anticipates spending approximately $52,964,514 on CAIR/CAMR compliance projects. These projects include the following:

- Crystal River Unit 4 SCR System: design, engineer and begin procurement of equipment and initial construction of an SCR system for reducing NO_x emissions from Unit 4's flue gasses by approximately 90%. While primarily for reducing NO_x emissions for compliance with the CAIR, the SCR will also oxidize mercury in the flue gasses, which will allow the FGD system to more efficiently remove the mercury, as is required by the CAMR. This system is expected to begin operation in the Spring of 2008. Approximately $17.6 Million is expected to be spent on this project in 2006.
- Crystal River Unit 5 FGD System: design, engineer and begin initial procurement of equipment and initial construction of an FGD system for reducing SO_2 emissions from Unit 5's flue gasses by approximately 97%. While primarily for reducing SO_2 emissions for compliance with the CAIR, the FGD will also remove mercury from the flue gasses for compliance with the CAMR. This system is expected to begin operation in the Spring of 2009. Approximately $22.0 Million is expected to be spent on this project in 2006.
- Crystal River Unit 5 SCR and Crystal River Unit 4 FGD Systems: As Crystal River Units 4 and 5 are nearly identical; much of the design and engineering work for the FGD and SCR systems will be common to both units. However, with in-service dates of Spring, 2009 for the Unit 5 SCR and Fall, 2009 for the

Unit 4 FGD, initial design work for both of these systems will also commence in 2006, along with some of the initial construction work on the Unit 4 FGD. Approximately $4.1 Million is expected to be spent on these projects in 2006.

- Anclote Unit 1 NOx Reduction Projects: NO_x reductions at the Anclote oil-fired units are expected to be part of the CAIR compliance plan. To take advantage of a planned maintenance outage on Anclote Unit 1 in the Fall of 2006, it is anticipated that a Low-NO_x burner system and some form of Overfire Air system will be installed on this unit. Studies are currently underway in 2005 to determine the technologies to be installed, and it is anticipated that approximately $9.1 Million will be spent for NOx reduction equipment at Anclote in 2006.
- Combustion Turbine Projects: The CAIR rule requires that forty-four emission sources associated with thirty-one of PEF's combustion turbine units must install new Predictive Emission Monitoring Systems. In 2006, test ports will be installed to facilitate the necessary testing. The cost for this work is estimated at approximately $200,000. Costs for subsequent years' activities have not been established but will include contractor costs for performance of the tests, data analysis and reporting. Regulatory citations for this requirement are: 40 CFR 96.104(a), Annual NO_x Program; 40 CFR 96.204(a), Annual SO_2 Program; and, 40 CFR 96.304(a), NO_x Ozone Season Program.

Q. What steps is the Company taking to ensure that the level of expenditures for the CAIR / CAMR Program is reasonable and prudent?

A. This is being addressed in two ways. An initial screening of technology and fuel choice options indicated that the projects being undertaken would be cost effective in complying with the preliminary CAIR and CAMR that were published in 2004. Subsequent to this initial screening and the March, 2005 issuance of the final CAMR and CAIR (with its shorter time frame and fewer allowances for NO_x than in the preliminary rule), more in-depth analyses are currently in progress to confirm these options and "fine tune" the overall compliance strategy for PEF.

Secondly, utilization of the "Alliance" that was established by Progress Energy Carolinas for compliance with the North Carolina Clean Smokestacks Act is expected to result in lower project costs than would otherwise be achievable. This Alliance, comprised of an Engineering Firm, a Scrubber Equipment Supplier, and a Construction Firm, has already demonstrated the ability to design, engineer and construct these types of projects in as cost-effective, or more cost-effective a manner, than similar projects at other utilities. Furthermore, the Alliance partners have experience at PEF's electric generating units and are available to perform this work for PEF. Also, it is expected that with the similarity in size between North Carolina units and the Crystal River units, there will be savings associated with being able to utilize engineering and design information that has been developed by the Alliance Partners for the North Carolina projects and to take advantage of "quantity discounts" with many of the major equipment vendors. And finally, PEF will use additional qualified contractors where needed.

Q. What costs do you expect to incur in 2006 in connection with the Arsenic Groundwater Standard Program (Project 8)?

A. Progress Energy is estimating O&M expenditures of approximately $50,000 for compliance activities associated with this program. These costs may include analytical testing and consultant costs associated with development of compliance strategies. These strategies will depend upon analytical results and discussions with FDEP.

Q. What steps is the Company taking to ensure that the level of expenditures for the Arsenic Groundwater Standard Program is reasonable and prudent?

A. As services are required to comply with the new Arsenic standard, Progress Energy will identify qualified suppliers of the necessary services. Where possible, competitive bidding will be used to select the lowest cost supplier.

Q. Does Progress Energy still seek approval of the Groundwater Reclassification Program?

A. No. The Company's request for approval of the Groundwater Reclassification Program was premised on new requirements that the Company expected the Florida Department of Environmental Protection (FDEP) to impose in the renewal of the industrial wastewater permit for the Crystal River Plan. Based on recent discussions with FDEP, it does not appear the renewal permit will include the new requirements that we had anticipated. For that reason, the Company is

withdrawing its request for approval of this Program. However, the Company reserves the right to seek approval in the future if the renewal permit or subsequent permits include new environmental requirements.

Q. What costs do you expect to incur in 2006 in connection with the Underground Storage Tanks Program (Project 10)?

A. Progress Energy is currently estimating $300,000 in capital expenditures in 2006. These costs are for the removal and replacement of four tanks: two at the Crystal River coal-fired plant ($200,000), and two at the Bartow oil-fired plant ($100,000). This work will be performed in accordance with Rule 62-761.510(5).

Q. What steps is the Company taking to ensure that the level of expenditures for the Underground Storage Tanks Program is reasonable and prudent?

A. As services are required to comply with the Underground Storage Tank regulations, Progress Energy will identify qualified suppliers of the necessary services. Where possible, competitive bidding will be used to select the lowest cost supplier.

Q. Does this conclude your testimony?

A. Yes it does.