BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition for rate increase by Progress Energy Florida, Inc.	Docket No. 090079-EI Submitted for filing: March 20, 2009

DIRECT TESTIMONY OF

DAVID SORRICK

On behalf of Progress Energy Florida

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DAVID SORRICK

I. Introduction.

Q. Please state your name and business address.

A. My name is David Sorrick. My business address is 299 First Avenue North, St. Petersburg, Florida 33701.

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

A. I am employed by Progress Energy Florida in the capacity of Vice President Power Generation – Florida ("PGF").

Q. What are the duties and responsibilities of your position with PEF?

A. As Vice President of PEF's Power Generation organization, my responsibilities include overall leadership and strategic direction of PEF's power generation fleet including 18 steam units and 46 simple cycle CT units which employ over 700 people and provide more than 9,400 nominal MW of total winter generation for PEF customers.

In this position, it is part of my responsibility to develop and implement strategic and tactical plans to operate and maintain the generation fleet, recommend major modifications and additions to the fleet, and recommend retirement of generation facilities. I am also responsible for budget allocation decisions that determine funding levels within the fleet utilizing the allocated budget for PGF. My duties further include workforce planning and staffing, major maintenance programs strategy and implementations, outage and project management, and support services for the fleet. My responsibilities also include organizational alignment and design. This includes the review and analysis of the organizational structure within PGF and making the appropriate changes to optimize the organization. I am also responsible for the conduct of continuous business improvement within PGF. These efforts are focused on the review of current business processes and making appropriate changes to them in an effort to make the organization function more efficient. I am also engaged in efforts to attract, hire and retain employees across PGF.

Q. Please describe your educational background and professional experience.

A. I earned a Bachelor of Science degree in Engineering from the University of Tennessee at Chattanooga in 1986 and an MBA from University of South Florida in 2006. I am also a Registered Professional Engineer and Licensed Electrical Contractor (inactive) in the state of Florida.

I have over 20 years of power plant and production experience in various engineering, supervisory, managerial and executive positions at Progress Energy managing Combustion Turbine (CT) Operations, Fossil Steam Operations, and CT Services as well as new plant construction. While at Progress Energy, I have managed new unit construction, start-up, and commissioning of major combustion turbine installations and retrofits at our Intercession City and Debary sites. In addition, I have managed new unit projects from construction to operations and I have extensive contract negotiation and management experience with Progress Energy and General Electric. I also have extensive bargaining unit management and negotiation experience. My prior experience also includes nuclear engineering positions at Tennessee Valley Authority and project management experience with General Electric.

II. Purpose and Summary of Testimony.

Q. What is the purpose of your direct testimony?

A. I appear on behalf of PEF to support the reasonableness of its power operation costs reflected in the Company's Minimum Filing Requirements ("MFRs").

Q. Have you prepared any exhibits to your testimony?

A. Yes, I have prepared or supervised the preparation of the following exhibits to my direct testimony:

- Exhibit No. __ (DS-1), a list of the MFR schedules I sponsor or co-sponsor; and
- Exhibit No. __ (DS-2), Tables: Power Plant Performance – Combined Cycle ("CC") Equivalent Availability Factor, Fossil Equivalent Availability Rates, CC Equivalent Forced Outage Rate, Fossil Equivalent Forced Outage Rates and Simple Cycle Starting Reliability.

In addition, I am co-sponsoring a portion of the Fossil Dismantlement Cost Study attached as an exhibit to Peter Toomey's testimony, specifically Section 7 of that study. These exhibits, and the portion of the Fossil Dismantlement Cost Study that I sponsor, are true and accurate.

Q. Do you sponsor any schedules of the Company's Minimum Filing Requirements (MFRs)?

A. I sponsor or co-sponsor the MFR schedules listed on Exhibit No. ___ (DS-1). These schedules are true and correct, subject to their being updated in the course of this proceeding.

Q. Please summarize your testimony.

A. The Power Generation organization's mission is to provide safe, environmentally responsible, reliable, and competitively priced power to our customers.

PEF's capital ($134 million) and O&M ($175 million) expenditures for power plant generation support Progress Energy's "Balanced Solution" initiative. PEF is committed to maintaining the existing generation fleet by making investments in these plants to ensure they run efficiently while meeting the highest standards of safety and environmental stewardship. PEF is also committed to pursuing options for building new, state-of-the-art plants, such as the new Bartow Combined Cycle units, while at the same time delivering superior performance from our existing fleet. Because power plants take many years to plan and build, PEF is engaged in careful planning and prudent investment today to make sure we are ready for the future. PEF's long term strategy is designed to deliver reliable, affordable power with less dependence on foreign fuel and for a cleaner environment. The Bartow Repowering project is an example of successfully fulfilling this strategic objective. PEF is further committed to provide the infrastructure necessary to minimize power outages and to ensure that our power plants are reliable. PEF's generation fleet in

Florida continues to operate at high levels of performance while integrating new fleet additions, like the Hines 3 and Hines 4 Power Blocks, and minimizing production costs. This performance is made possible through the implementation of effective maintenance and human performance programs that facilitate the prioritization of work activities. These programs are aimed at optimizing planned outage activities and minimizing unplanned outages and will be further discussed later in my testimony.

PEF has provided and continues to provide, superior performance from its generation fleet while balancing costs with the multiple challenges and requirements facing the Power Generation Florida (PGF) organization. PGF's capital and O&M revenue requirements are reasonable and prudent, and should be approved.

III. PEF's Generation Fleet.

Q. Please describe PEF's generation fleet.

A. PEF's generation fleet consists of 12 fossil steam units, 5 combined cycle units (not including the new Bartow units), 1 cogeneration unit and 46 simple cycle combustion turbine units. PEF's generation fleet can produce approximately 9,400 megawatts of power. The fleet provides safe and reliable power to PEF's customers 365 days a year.

Q. Has PEF added additional megawatts since January 1, 2005?

A. Since 2005, PEF has continued to grow its generation fleet in order to meet increasing demand. In response to this increase in load, PEF added Hines Power

Block 3 (PB3), a 570 MW combined cycle power block in November of 2005. Moreover, in December of 2007, PEF added Hines Power Block 4 (PB4), a 517 MW combined cycle power block.

Q. Are there any other plants that will be placed in service before the test year?

A. Yes. PEF is scheduled to bring the Bartow Combined Cycle plant on line by June 1, 2009. This state of the art plant is a repowering project that will replace the existing Bartow Steam plant, which consists of three heavy oil units which came on-line between 1958 and 1963. The new Bartow Combined Cycle facility consists of four combustion turbines (CTs) and four heat recovery steam generators (HRSGs) feeding one steam turbine -- a 4x4x1 configuration -- capable of producing a combined approximate 1,279 MW, or an increase of approximately 827 MW over the existing site capacity. The project design includes auxiliary duct firing for the HRSGs, steam power augmentation for the CTs, by-pass stack dampers on the CTs and ultra-low NOx burners and state of the art pollution control equipment. These design features provide maximum output and system dispatch flexibility. PEF has entered into a contract with Gulfstream Natural Gas System for the firm pipeline transportation needed to support operation of the plant. The transmission and substation improvements needed to integrate the repowered plant into the electric grid and handle the increased MW output will also be in-service by June 1, 2009. The total capital cost of the project, including generation, transmission, and AFUDC, is $800.2 million.

Q. What are the benefits of the Bartow repowering project?

A. The analysis performed at the study phase in 2005 and 2006 showed that repowering the Bartow plant was the most cost-effective option to provide additional capacity by summer 2009 in order to meet PEF's 20 percent minimum reserve margin obligation. Based on that analysis, the repowering provides $171 million net present value (NPV) of after-tax cash flow savings and avoids the need for a capacity purchase in the summer of 2009, the Hines 5 combined cycle unit, and CTs originally planned for 2010 and 2012. Other benefits of the project include: reduced plant start-up time and increased dispatch flexibility; its location near the Pinellas County load center reduces loading on existing transmission used for importing power into the area; the project reduces site emissions, including a 98% reduction in SO_2 and reduced levels of NOx, enabling PEF to meet CAIR requirements without installing costly Selective Catalytic Reduction equipment at the Anclote Plant; and it allows the Company to take advantage of existing site assets and further avoids the need to develop a new site in the area.

Q. Does the addition of generation units to PEF's system increase PEF's generation fleet capital and operation and maintenance costs?

A. Yes. Fleet growth has been and continues to be a significant cost driver for the Company. Fleet growth drives cost increases in two distinct ways: 1) through plant base budget increases; and 2) through major maintenance budget increases. When a new unit has been added to the fleet, costs associated with staffing the plant to perform routine operations and maintenance of the plant is covered by the plant's base budget increase. The types of incremental costs being incurred include labor, materials, and permit fees among other costs. As new equipment is added to the fleet and begins operations, maintenance is required to keep the equipment in good repair. The frequency and cost of this major maintenance depends upon the type of equipment and how it is operated. Examples of major maintenance work include: combustion turbine combustion inspections, hot gas path inspections, and major inspections. This work also includes steam turbine outages, generator outages, and boiler outages.

Q. What does it take to operate and maintain PEF's generation fleet?

A. The operation and maintenance of PEF's generation fleet requires substantial human and financial resources. PGF employs over 700 employees to operate and maintain the fleet. These employees have a wide range of diverse skills and experience sets. These include managers, engineers, technical specialists, craft employees, finance professionals, safety professionals and administrative staff. It takes each of these employees performing their job duties well in order to operate and maintain the fleet in the most cost effective manner possible.

The operation and maintenance of the fleet also requires substantial O&M and capital funding. This funding can be divided into two primary categories of work: 1) base budgets and 2) outage & project budgets. The base budgets include funding for all of the routine activities for each plant and the support of centralized groups for each plant. Examples of base budget items include base labor, tools, materials required for routine activities, plant environmental permits, basic utility services and other such costs. The outage and project budgets include all major maintenance activities and non-routine projects that improve unit operating reliability or efficiency. Examples include combustion turbine major maintenance, steam turbine outage work, generator major maintenance work, minor construction projects and other projects of this type.

Q. What is PGF's maintenance philosophy?

A. By their very nature, electrical and mechanical equipment require periodic maintenance in order to maintain their reliability, efficiency and usefulness. The bulk of the generation-producing equipment is no different. Just as an automobile requires varying degrees of maintenance at different intervals, combustion turbines, steam turbines, boilers, generators and other significant pieces of equipment require different inspections, repairs, refurbishments and replacement of components on periodic intervals. PGF weighs several factors in the scheduling and execution of our major maintenance program.

First among these is the "tiering" strategy of our generation assets. Each unit is classified by fuel cost, unit efficiency (heat rate), size of output, impact to the transmission system reliability and strategic importance to determine the unit's tier. There are 3 total tiers. Tier 1 primarily consists of base loaded units; tier 2 is primarily comprised of intermediate and gas-fired simple cycle combustion turbine units, while tier 3 units are more typically simple cycle CT units utilizing fuel oil.

Second, the manufacturer's recommended maintenance intervals are used as a guideline when planning the major maintenance expenditures of the department.

There are three distinct maintenance intervals for a combustion turbine. Each of these intervals is driven by actual unit performance (unit starts or actual hours operated). In order of increasing expense, they are:

1. Combustion Inspection - this is the major maintenance activity performed on the combustion components of the unit (burners, transition pieces, combustion liners, etc.). This is the most frequent maintenance performed.
2. Hot Gas Path Inspection – this is the maintenance activity that includes all elements of the combustion inspection work scope plus activities performed on the power turbine components of the unit (blades, vanes, diaphragms, etc.).
3. Major Inspection – this is the maintenance activity that includes all elements of the combustion inspection, hot gas path inspection, plus activities performed on the compressor section of the unit.

The steam turbine fleet also has two major maintenance cycles based on periodicity and the operational profile. The first is Turbine Valve Outage, which typically occurs every three years and includes major maintenance activities on the turbine control valves, main and reheat steam valves. The other maintenance cycle is Major Turbine Outage, which typically occurs every 9-12 years depending on the unit type. It includes the activity performed during the turbine valve outages plus the disassembly of the turbine for inspection and repairs of the internal components.

The steam boilers, generators and other plant equipment also have periodic maintenance requirements that have recommended maintenance intervals associated with them.

Third, a system operating forecast is utilized to estimate unit operational hours and unit starts. This data allows comparisons between a given unit's expected operational parameters and that unit's position in the maintenance schedule.

The actual material condition of the equipment is also taken into consideration. This condition assessment is made by inspections, operating data analysis, past equipment history, predictive maintenance techniques (specifically oil analysis, vibration and thermography) and industry knowledge.

Finally, all of the information above is compiled and analyzed in an effort to identify and prioritize maintenance requirements for any given unit in any given year for business planning purposes. These maintenance requirements are then prioritized with other projects in the given year the maintenance is required. Funding decisions are made based upon budget targets assuming the methodology explained above.

IV. Power Operations Performance.

Q. Please explain the operating performance of PEF's generation fleet.

A. All segments of PEF's steam fleet have performed well since 2005. The fleet's Equivalent Availability ("EA") rates have compared favorably to the industry and have generally exceeded the NERC average EA rates for coal, oil, and combined cycle units. The EA metric is a measure of a unit's availability over the course of a year. Higher EA rates compared to industry averages, which is the case for PEF's coal, oil, and gas-fired combined cycle units, indicates PGF generation is typically available when needed to meet increasing customer demand. As a result, PEF's generation fleet can be efficiently committed to meet load, therefore, providing customers with an optimized fuel cost. See pages 4 and 5 of Exhibit No. __ (DS-2).

The PEF fleet has also outperformed the NERC average with respect to Equivalent Forced Outage Rates ("EFOR") over the same time period. EFOR is an industry measurement of how often a unit is off-line due to an unexpected or forced condition. The lower the EFOR, the higher percentage of time the unit is available. This availability allows PEF to again optimize its unit dispatch to meet load and subsequently minimizes fuel cost impacts to the customer. In particular, the combined cycle fleet outperformed the industry average EFOR by almost 4.5%. See page 3 of Exhibit No. __ (DS-2). The coal & oil fleet also outperformed the industry by achieving a combined EFOR that was less than half the industry average for similar type units. See page 2 of Exhibit No. __ (DS-2). These results are indicative of an effective major maintenance program.

PEF's simple cycle fleet has demonstrated extremely high levels of starting reliability since 2005. In fact, starting reliability levels have exceeded 99.5% over the last 4 years. See page 1 of Exhibit No. __(DS-2). Between 2005 and 2007, the fleet was called upon to start an average of over 5,200 times per year. PGF has maintained this starting reliability performance across the entire fleet even though the average age of the fleet is over 29 years old. This performance is indicative of an effective preventive maintenance program at each plant. For example, regular proactive maintenance performed on plant instrumentation, pumps, motors, etc. will allow the plant maintenance staff to discover and correct problems before the units are committed for system needs. These actions will make the units more likely to start successfully when called upon.

Q. How do PEF's customers benefit from this positive operating performance?

A. Positive fleet operating performance enables PEF to minimize fuel cost. These fuel cost savings are realized by ensuring that units with the lowest average fuel cost are available to meet customer demand. Otherwise, units with higher average fuel costs must be committed or potentially higher priced purchased power scheduled to meet demand which, in turn, increases the customers' overall fuel bill. Therefore, the reliability of the generating units with lower average fuel costs is very important to minimizing fuel costs to our customers. Moreover, unit reliability increases the probability that generation is available during times of lower customer demand to enter the off-system sales market and further offset customer fuel costs.

Increased levels of operating performance also enhance system reliability by providing PEF's Energy Control Center ("ECC") more reliable generation alternatives to address system contingencies. In day-to-day operation of the interconnected system, ECC is tasked with ensuring that grid instability will not occur as a result of the loss of a transmission element or generator. Increased unit reliability reduces the number of contingencies a transmission operator must mitigate. In addition, the loss of a transmission element can result in the overload of subsequent transmission lines. In such situations, generation units can be brought on to relieve adverse line loading. Failure of a unit to respond when called upon may result in a requirement for the ECC to initiate more drastic measures (e.g. load reduction).

Q. How has PEF achieved its positive operating performance?

A. PEF focuses on operational efficiencies and performance improvements in order to maximize the benefits from its generation fleet. PEF invested substantial dollars since 2005 targeting projects and work that improved unit flexibility, increased unit capacity, and increased unit reliability. Examples of these projects and work include:

- Fleet Major Maintenance Program. PGF's major maintenance program is designed to enhance the fleet's reliability through the proactive performance of major maintenance activities. Each unit in the fleet has regularly scheduled major maintenance requirements based on the amount of operating hours, number of unit starts, condition assessment of the equipment, or other operational parameters. The majority of the PGF annual project budget is spent on major maintenance activities. The PGF major maintenance program is designed to invest O&M and capital dollars to optimize the fleet. For example, we have a process in which an entire set of operating parts is replaced during an outage with a set of spares. The unit is returned to service and the set of parts removed from the unit are sent for repair. This facilitates less outage time and more operating availability. These parts repairs extend the beneficial use of most unit parts over several cycles of unit operation, thus prolonging their useful life.

- Hines Power Block 4 Combustion Optimization Package. This project, completed in 2007, increased the capacity of the Hines Power Block 4 by 14 MW. Installation of the combustion optimization package also allows PGF to monitor combustion dynamics for gas turbines in order to lower combustion part wear. PGF expects this monitoring capability to reduce future parts' repair costs.
- Crystal River 2 Boiler Pressure Parts Replacement. In the spring of 2007, Boiler Pressure Parts replacement work at Crystal River Unit 2 was performed in order to reduce unplanned outage time due to tube leaks. As a result of the CR2 replacement project, EFOR has improved from a rate of 6.45% in 2006 to 5.55% in 2007 and 2.78% in 2008. The improved EFOR for CR2 means greater unit availability when it is most economical to dispatch CR2 to meet load, thus, minimizing customer fuel costs.
- Hines Low Load Carbon Monoxide (LLCO) Modification. In 2008, PGF negotiated and executed gas turbine mechanical retrofits and control changes on Hines Power Block 2 in order to allow lower load operation at Hines which prevents having to cycle off units or reduce load on less expensive units. The modification is expected to decrease fuel costs for the fleet in 2009 and beyond.
- Tiger Bay Combustion Turbine Rotor Replacement. The original rotor for this unit was nearing end of life due to design limitations. This rotor was replaced in 2008 with a rotor of improved design which increased capacity of the power block by 9 MW. This work means this unit provides even more power at a more efficient fuel cost to meet customer load.

- Hines Gas Blending Station. In 2007, PEF installed a state of the art gas blending station at the Hines Energy Complex to allow blending of gas supplies between FGT and Gulfstream. This allows flexibility to achieve fuel savings and increases the reliability of plant capacity to meet load in the event one source of gas supply is interrupted.
- Aeroderivative Modular Maintenance. PEF purchased several spare engine modules in 2005 to minimize downtime during engine overhauls. As a result of this strategy, PGF has increased aeroderivative fleet availability. This strategy has allowed PGF to utilize modules from different engines to expedite the units' return to service from scheduled outages. PGF's aeroderivative fleet is primarily used to provide fast start/black start capabilities to the PEF system. These units are versatile and provide significant system reliability benefits. Specifically, these units represent the primary mitigation measure for responding to interruptions on the system, such as the loss of a transmission line or the loss of a generating unit. Because they can be started so quickly, they provide needed generation when such events occur.
- Anclote 2 Major Turbine Outage. In 2006, PEF replaced the low pressure feed water heaters, one row of turbine blades, and the high and intermediate pressure packing strips at Anclote 2. These replacements improved turbine efficiency. Installation of a debris filter system also improved condenser cleanliness resulting in improved turbine efficiency. These efficiency improvements resulted in lower costs for Anclote 2 for each hour of operation.
- Anclote Cooling Towers. The concrete cooling towers at the Anclote facility were replaced with corrosion resistant fiberglass structures which reduce the amount of

chloride attack from the salt water environment they are in. This reduces maintenance requirements and thus reduces future maintenance costs.

- Anclote Fuel Flexibility. At Anclote units 1 and 2, modifications to the bottom ash hoppers of the boilers and changes to the operational procedures now enable the plant to burn a combination of No. 6 oil and natural gas. This modification can reduce fuel costs for running the plant, and provides additional flexibility when choosing fuels.

Many of these projects are on-going and will continue to yield unit performance benefits for customers in 2010 and beyond.

Q. Has the Company undertaken any other initiatives to improve the operating performance of its generation fleet?

A. Yes. In addition to major projects, PGF has invested in several initiatives and programs that are aimed at improving fleet equipment performance and/or workforce performance. Some of these include:

- Operations Excellence Program. The purpose of the Operations Excellence Program ("OEP") is to develop and maintain a highly skilled operational workforce. The OEP is an effort to rapidly develop qualified employees while preserving and disseminating the experiential knowledge of our current experienced employees.
- Simulators. PEF utilizes simulators in the execution of the OEP. Simulators that replicate facility operation provide continuing training for existing operating personnel. Infrequently performed tasks can be practiced, thus increasing skills and reducing potential errors. The simulators also can be used for troubleshooting actual

unit controls utilizing "what if" scenarios and locating logic and control problems in the actual plant system they simulate. Finally, simulators can be used to verify procedure and plant modification changes.

- Automated Training Manager ("ATM"). The ATM module is a web-based learning management system that provides web-based training, electronic skill signoffs, progression tracking, trainee profiles, and supervisor mentoring functions. The ATM allows users to self-enroll in selected technical or required regulatory courses. It also allows supervisors to assign site-specific qualification criteria and course materials to their direct reports. ATM also provides administrative tools for reporting and tracking opportunities to monitor an employee's progress in their training assignments.
- Human Performance Improvement. The Human Performance Improvement Program ("HPI") efforts involve error reduction training at all levels in the organization. The primary goal of the program is to eliminate those errors that result in Significant Human Performance Events, which are defined as any event resulting from human error that results in any of the following events: (1) an OSHA recordable or lost time injury; (2) asset damage in excess of $25,000; (3) significant environmental impact; (4) significant loss of power generation capability; or (5) an event deemed by management to be significant by virtue of the value of lessons learned. Since the inception of the HPI program in 2001, the number of human performance events has declined considerably. For example, from 2003 to 2008 PGF reduced significant events from 153 to 26 resulting in an 83 percent reduction.

This program has allowed PGF to improve in the areas of safety and operational performance.

- Apprentice Program. The Apprentice Program provides structured training to increase the capabilities of new craft employees entering the work force. The program includes the following positions: Operators, Mechanics, Electricians, Instrumentation and Control Technicians, Laboratory Technicians, and Combustion Turbine Maintenance Operators. The program provides final assessment of qualification levels for apprentices to become Journeymen and provides a cost effective mechanism for training new employees to equip them with the skills and knowledge needed in today's workforce.

These are on-going initiatives and programs that continue in 2010 and beyond to provide efficient workforce performance for the ultimate benefits of customers through lower capital and O&M costs.

Q. Please describe any PEF Power Generation organizational changes and associated benefits since 2005.

A. Over the past three years, PEF's Power Generation Group has re-aligned resources in order to more effectively operate and maintain the fleet of assets. In 2006 PEF implemented the Crystal River Maintenance Organization ("CRMO"). CRMO's purpose is to coordinate and perform maintenance activities across the Crystal River Fossil site. These activities include normal preventative maintenance, corrective maintenance, and equipment outage response. This realignment has resulted in efficiency gains, enhanced forced outage response which minimizes impacts to EFOR, and overtime savings. The overtime savings alone have been estimated at nearly $1 million. This money has been reinvested into additional maintenance activities.

In addition to the organizational changes made at Crystal River, PGF executed a consolidation strategy starting in 2007 focused on integrating fossil and CT operations organizations. The results of this integration to date include the elimination of four plant manager positions as well as two service manager positions. These consolidations were accomplished by using attrition and redeploying resources to other areas of the Company.

Q. Has the Power Generation group been able to sustain a good safety record while improving performance?

A. Yes. At PEF, safety is the highest priority in every task we perform and is an integral part of our decision making process. PEF is committed to a healthy and injury-free workplace. PGF is also committed to the safety of our employees, families, customers, contractors, visitors and the communities in which we operate. In 2005, PGF incurred five OSHA recordable injuries which was Top Quartile Performance for EEI utilities. In 2006, twelve workplace injuries occurred. As a result of this increase, the Company did not achieve top quartile performance for 2006. Therefore, Progress Energy took action and launched a "Zero in on Safety" Campaign that focuses on eliminating accidents and injuries from the work place. The campaign focuses on personal accountability, job hazard recognition and mitigation, and active caring and peer coaching. Furthermore, the campaign emphasizes that whatever the nature of the work, the first and most important outcome is that employees sustain zero injuries in the preparation and completion of their tasks. Subsequently, workplace injuries in 2007 declined to nine. This performance represented a return to top quartile. In 2008, PGF again improved safety performance by reducing the number of workplace injuries to seven. PGF's goal is zero accidents in the work place and we will continue to work toward that goal.

Q. Please explains PGF's approach to environmental performance.

A. PGF takes its environmental responsibilities very seriously. PGF measures and tracks environmental performance through a mechanism called the PGF Environmental Index ("EI"). This metric is comprised of performance standards representing compliance to air and water permit compliance, and total waste generation. For example, exceedances on real time air emission limits, any amount of oil spilled in state waters or generation of hazardous waste all adversely impact the index. PGF's overall performance with respect to the EI has exceeded targets since 2005. The environmental index measures performance on a scale from 1.0 to 5.0 with 5.0 being the highest level. A rating of 4.0 is defined as good and a rating of 5.0 is defined as outstanding and should only be reached by achieving stretch goals and demonstrating high levels of environmental performance in all areas. PGF has consistently exceeded the goal of 4.0. Over the last 3 years, PGF's performance against the index has averaged 4.63. This indicates a strong commitment to environmental stewardship by consistently adhering to permit conditions and, in many cases, performing better than permitted requirements. Compliance and good stewardship are the cornerstones of our environmental programs.

Q. Has the Company efficiently managed its costs in achieving the positive operating performance of its generating fleet?

A. Yes. Since 2006, PEF has invested nearly $220 million in capital improvements to our fossil steam, CT and CC plants. The majority of these capital improvements include major maintenance on gas turbines, steam turbines, boilers, generators and other balance of plant equipment. In addition to maintenance capital, investment has also been made in unit uprates and fuel flexibility modifications. Specific projects include replacement of the Anclote Cooling Towers, multiple pressure parts replacements in several fossil plant boilers, condenser replacement projects, Crystal River coal yard improvements, as well as turbine parts replacements and refurbishments. By choosing those projects that deliver the most benefits in terms of unit reliability, fuel savings, and increased efficiencies, the Company has made the most of its capital and O&M dollars for the generation fleet.

<u>V. Major Maintenance Outages.</u>

Q. Please describe PEF's planned outages since 2005.

A. Planned maintenance outages are performed to address known equipment issues in an effort to increase unit availability and reliability and/or to reestablish unit capabilities. Since January 2005, a total of 120 planned outages greater than one week in duration have been performed across the PGF fleet. These outages were performed on a wide range of equipment including steam turbines, combustion turbine engines, generators, boilers, heat recovery steam generators, and miscellaneous balance of plant equipment. PGF utilizes a maintenance planning procedure using actual equipment condition, unit operational missions, and original equipment manufacturer ("OEM") recommendations regarding maintenance intervals. PGF seeks to execute planned outages in the most cost effective manner possible.

Q. Have any unplanned outages occurred since 2005?

A. Yes, unfortunately unplanned outages are bound to happen because of the number, type, and vintage of the generation fleet that PGF operates. The effectiveness of avoiding unplanned outages, however, is measured by EFOR. PGF has outperformed the NERC average with respect to EFOR, thus, demonstrating that PGF has effectively avoided and managed unplanned outages on its system. See pages 2 and 3 of Exhibit No. __ (DS-2).

Since 2005, PGF has incurred 40 unplanned outages of one week or greater in duration. Only 7 of the 40 unplanned outages occurred on a steam unit (coal, oil or combined cycle). The remaining 33 unplanned outages occurred on various simple cycle CT units, predominantly the older units in the fleet. This performance indicates that the major maintenance planning methodology has been effective in minimizing forced outages on the base load and intermediate load segments of the fleet.

PGF's excellence in avoiding unplanned outages and managing them when they cannot be avoided is demonstrated by PGF's record regarding FRCC Reserve Sharing Group (RSG) reserve calls from 2005 to 2007. Typically, reserve calls are initiated by RSG members upon an unplanned loss of generation in excess of 200 MWs. PGF represents about 25 percent of the state's generation capacity. However, PEF was responsible for only about 12 percent of the FRCC reserve calls from 2005 through 2007.

PGF will continue to work towards improving EFOR across the entire fleet by proactively performing major maintenance activities. These maintenance requirements continue to increase as PEF's fleet continues to grow.

VI. Generation Fleet Revenue Requirements.

Q. What are the Company's generation capital and O&M expenditures for 2010?

A. The Company needs $134 million in capital and $175 million for O&M expenses for generation for the test year 2010.

Q. How do the Company's O&M expenditures compare to others in the industry?

A. Industry benchmarks indicate that PGF is performing extremely well as compared to other generating fleets in the industry. The Non-fuel O&M dollars per MWh for the Oil-fired steam and Combined Cycle fleet is in top quartile. Non-fuel O&M represents the O&M costs without the costs associated with fuel. The Non-fuel O&M dollars per KW for our Oil-fired Steam, Combustion Turbine and Combined Cycle fleet are also well below the industry averages. This is based on the GKS

Gold benchmarking study that was produced in 2008 which includes 2005 through 2007 data.

Q. Are the Company's O&M revenue requirements within the Commission benchmark?

A. No. Despite best efforts from the PGF management team, there is a $53.1 million variance between the costs to operate and maintain the fleet and the Commission benchmark target amount. There are various reasons why the generation revenue requirements are above the benchmark amount. One reason is that labor and material escalations have increased the costs to perform unit operations and maintenance, but the work must be done despite these increasing costs. To illustrate, approximately $7.3 million of additional employees, flyash disposal costs, and maintenance work associated with boiler waterwall replacements, boiler circulating pumps, circulating water pump system repairs, generator stator rewedge, and other boiler repair work in the pendant reheat section of these units must be completed despite increasing costs to ensure the continued efficient operation of these base load units. Simply put, additional O&M expenditures are necessary to perform essential routine and major maintenance activities.

Fully 85 percent of the $53.1 million variance in PEF's O&M costs from the benchmark target cost, however, is attributable to O&M requirements that have nothing to do with the mere escalation in costs over time that the benchmark test using the Consumer Price Index (CPI) captures and measures PEF's costs against. These are (1) additional maintenance requirements for fleet growth from new generation of $21.3 million with an offsetting retirement of a unit ($7.2 million), (2) additional, combined outage projects of $15.1 million, (3) incremental security costs of $1.9 million, and (4) major maintenance and other miscellaneous cost increases of $14.7 million for the CC and CT fleet driven by the unique mechanical and operational characteristics of these units.

More specifically, the new generation portion of the variance is due to the addition of two power blocks at the Hines Energy Complex ("HEC"), as well as the addition of the Bartow Combined Cycle plant. These units were not online in 2006, which is the base year against which the Commission benchmark is measured, and, therefore, the O&M costs associated with these additional generation units are fairly outside the scope of the costs the benchmark test is intended to address.

To illustrate, the additional Hines power blocks require higher staffing levels and an increase in maintenance projects outlays, resulting in an increase of approximately $10.1 million. In addition, with the Bartow Combined Cycle plant coming online in June 2009, there will be higher staffing and maintenance needs for 2010, the unit's first full year of operation. This represents an additional $6.6 million of costs over 2006 benchmark levels. The first scheduled outage for Bartow will take place in 2010, pursuant to the Bartow Long-Term Service Agreement ("LTSA"). The LTSA benefits PEF by providing more protection for key components and less financial exposure to unexpected events that would otherwise result in additional costs to the Company. The maintenance work in 2010 under the LTSA is estimated at $4.6 million. Finally, because the Bartow Steam facility will be retired in 2009, the Company will save approximately $7.2 million due to reduced staffing. The net impact represents $21.3 million of the benchmark variance.

Another major driver of the variance is additional, combined outage projects. PEF will be adding major Clean Air equipment, Flue Gas Desulferization Systems ("FGD") and Selective Catalytic Reduction ("SCRs"), to Crystal River Unit 4 during an extended outage in the Spring of 2010. To take advantage of this lengthy outage, PEF has scheduled the Unit 4 major boiler and turbine maintenance outages during the same outage. PEF would normally schedule these maintenance outages in the normal course of its operations but PEF decided to accelerate them to capture synergies in outage costs with the outage for the FGD and SCR work as well as minimize lost generation by doing the work while the plant is already down. This represents a significant cost savings to customers in replacement fuel costs, because additional future outages will be reduced in scope and duration, and the corresponding replacement of generation with higher average costs during those future outages will be reduced or avoided. To achieve these efficiency and potential fuel savings benefits, however, the combined outage work must be done in 2010 with the resulting $15.1 million variance from the benchmark.

Additionally, $1.9 million of the variance is attributed to incremental security costs, which were previously recovered through the Capacity Cost Recovery clause in the year incurred. These costs are now included in base rates for 2010.

The final driver of the O&M variance is associated with maintenance of PEF's CT and CC units in its existing fleet. Approximately $14.7 million of the variance is the result of various maintenance projects for these units. Specifically, approximately $4.7 million is estimated for major maintenance projects at various CT plants, including: rotor inspections and rotor out work for the various Debary, Rio Pinar, and Turner units; combustion inspections for Debary Units 2 to 5; hot gas path inspections for Debary units 7 and 9; and a major inspection for Turner unit 3. The Hines Energy Complex and Tiger Bay units have approximately $4.7 million worth of projects associated with Hines Power Blocks 1 and 2 and Tiger Bay. The type of work includes the removal of the Combustion Turbine rotor, inspection and repair of the combustion part, inspection and repair of the power turbine components and repair work on other balance of plant components. Additionally, there is approximately $5.3 million budgeted for emerging equipment issues and parts repairs. This funding would be used for forced outage repairs or to take advantage of opportunities to enhance the fleet.

Q. Do you believe the Commission O&M benchmark test accurately reflects the Company's experience with maintenance of CT and CC generating units?

A. No, I do not. For power plant O&M, as I explained previously, the Commission O&M benchmark test uses the CPI to escalate costs and therefore assumes that all O&M costs will increase at the same rate. This may be a reasonable assumption for some O&M costs but it is not appropriate for maintenance of generating units like CTs and CCs, which are impacted by how often the units are started, how long the units run, and other factors regarding how the system is operated.

Unlike the maintenance associated with fossil steam generating units, which have conventional turbines and therefore more readily anticipated maintenance needs, maintenance of CT and CC units is dynamic and dependent on unit operations. The combustion turbines in these units are high performance engines, and their maintenance needs are heavily impacted by their usage. The fossil steam plants, because they are either base load or intermediate plants, tend to run more predictably and more often. Conversely, the usage rates of CTs and CCs can vary dramatically. The Commission O&M benchmark test, therefore, simply does not and cannot capture the dynamic nature of the ever-changing maintenance needs of the CT and CC units. PEF prudently considers whether to bring these units down and perform maintenance on them based on all these unique mechanical and operational characteristics as well as the continued benefit to customers to continue to operate the units to get the most value from them. Accordingly, the Commission benchmark test is an inappropriate mechanism to evaluate the O&M costs attributable to the CC and CT units in PEF's existing fleet.

Q. Why does PEF need the capital investment and O&M expenses in generation that it requests?

A. PEF needs the capital investment and O&M expenses to reliably and efficiently operate the generation equipment. For example, PEF's capital investment includes approximately $25 million to upgrade the turbines at Crystal River Unit 4 during the extended outage in 2010. This upgrade will result in the production of an additional 14 MWs of base load capacity from an existing unit for the benefit of the Company's customers. The Company further needs the requested capital and O&M investment to continue the maintenance programs I described earlier that have produced proven results in generation unit availability and efficiently, providing customers with the continuing fuel savings benefits of a generation system that is efficiently dispatched to meet their energy needs. Simply put, the capital investment and O&M expenses the Company requests are needed so that we can continue to efficiently and reliably operate our generating fleet.

Any reduction in the maintenance capital and O&M activities that we need means the overall cost to the customer will increase. Undoubtedly, if the Company's needs are not met, tough choices will have to be made and deferred maintenance may occur. Deferred maintenance can be more expensive than planned maintenance due to more extensive repair requirements on the components because of longer run cycles. Deferred maintenance also reduces the flexibility of the generation fleet to take advantage of the daily energy spot market in Florida which can reduce the overall fuel cost to the customer by realizing off-system sales. Further, forced outages may occur more frequently and forced outages are typically more expensive than planned outages in terms of capital and O&M costs and higher fuel costs. Proper capital investment in and maintenance of the equipment and systems is essential for continued safe operations of the equipment.

Q. Are the Company's generation capital and O&M revenue requirements reasonable and prudent?

A. Yes. PEF's long term generation strategy is designed to deliver reliable, affordable power with less dependence on foreign fuel from cleaner power sources. PEF is committed to provide the infrastructure necessary to minimize power outages and to ensure that our power plants are reliable, efficient, and meet or exceed environmental requirements. PEF has provided and will continue to provide superior performance from its generation fleet while balancing costs and expenses with the multiple challenges and requirements facing the Power Generation organization but PEF must be provided the necessary capital and O&M resources to do so.

PEF's generation capital and O&M revenue requirements will allow us to continue to provide that superior performance and they are therefore reasonable and prudent, and should be approved.

VII, Fossil Dismantlement Cost Study

Q. Please describe PEF's Fossil Dismantlement Cost Study filed as an exhibit to Mr. Toomey's testimony.

A. PEF commissioned Burns and McDonnell to prepare a fossil dismantlement study to determine the ultimate cost to dismantle and decommission the Company's fossil power plant fleet. Burns and McDonnell is a nationally recognized consulting firm with extensive expertise in preparing studies, such as the one commissioned by PEF. A copy of the fossil dismantlement study is contained in Section 7 of Mr. Toomey's Exhibit No. ___ (PT-10).

Q. Does this conclude your direct testimony?

A. Yes.

MINIMUM FILING REQUIREMENT SCHEDULES
Sponsored, All or in Part, by David Sorrick

Schedule	Schedule Title
B-7	Plant Balances by Account and Sub-Account
B-8	Monthly Balances Test Year – 13 Months
B-9	Depreciation Reserve Balances by Account and Sub-Account
B-10	Monthly Reserve Balances Test Year – 13 Months
B-12	Production Plant Additions
B-13	Construction Work in Progress
B-24	Leasing Arrangements
C-6	Budgeted Versus Actual Operating Income and Expenses
C-9	Five Year Analysis – Change in Cost
C-15	Industry Association Dues
C-16	Outside Professional Services
C-33	Performance Indices
C-35	Payroll & Fringe Benefit Increases Compared to CPI
C-36	Non-Fuel Operation and Maintenance Expense Compare to CPI
C-37	O&M Benchmark Comparison by Function
C-38	O&M Adjustments by Function
C-39	Benchmark Year Recoverable O&M Expenses by Function
C-41	O&M Benchmark Comparison by Function
C-43	Security Costs

Table 1: PGF Simple Cycle Starting Reliability							
	2002	2003	2004	2005	2006	2007	YTD July 2008
Avon Park Plant	100.0%	100.0%	100.0%	100.0%	99.2%	99.2%	98.3%
Bartow Peaker Plant	100.0%	98.6%	99.8%	100.0%	99.8%	99.3%	100.0%
Bayboro Plant	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
DeBary Plant	100.0%	99.3%	99.4%	99.2%	99.5%	99.7%	99.1%
Higgins Plant	98.7%	94.9%	98.4%	99.0%	100.0%	100.0%	100.0%
Intercession City Plant	99.5%	99.4%	99.5%	99.6%	99.3%	99.8%	99.4%
Rio Pinar	100.0%	98.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Suwannee Peaker Plant	99.7%	99.8%	99.8%	100.0%	100.0%	99.4%	100.0%
Turner Plant	98.2%	99.1%	99.2%	99.4%	99.4%	94.6%	100.0%
PEF Simple Cycle Total	99.6%	99.2%	99.5%	99.6%	99.6%	99.5%	99.5%
NERC Average - Gas Turbine	**96.8%**	**96.9%**	**97.0%**	**97.0%**	**97.9%**	**98.3%**	**NA**
Difference	**2.8%**	**2.3%**	**2.5%**	**2.6%**	**1.7%**	**1.2%**	**NA**

Table 2: Coal and Oil-fired Steam Equivalent Forced Outage Rates					
	2004	**2005**	**2006**	**2007**	**YTD July 2008**
Crystal River 1	3.72%	3.09%	4.23%	4.77%	2.89%
Crystal River 2	3.42%	10.27%	6.45%	5.55%	3.94%
Crystal River 4	4.60%	2.63%	2.98%	1.24%	2.67%
Crystal River 5	2.05%	2.04%	3.88%	1.04%	5.76%
PEF Coal	3.39%	4.10%	4.18%	2.56%	3.96%
NERC Avg. - Coal-Fired	**6.43%**	**6.78%**	**6.50%**	**7.33%**	**NA**
Anclote 1	2.67%	3.19%	2.06%	2.27%	0.86%
Anclote 2	1.21%	2.58%	2.70%	0.29%	0.35%
Anclote Plant	1.99%	2.89%	2.40%	1.27%	0.60%
Bartow 1	0.24%	0.89%	4.38%	5.47%	13.00%
Bartow 2	0.41%	0.23%	1.90%	13.64%	22.59%
Bartow 3	1.57%	2.96%	9.14%	10.71%	2.37%
Bartow Plant	0.87%	1.52%	6.20%	9.89%	9.09%
Suwannee 1	1.52%	0.00%	0.35%	0.00%	1.71%
Suwannee 2	0.00%	0.09%	0.24%	0.37%	0.16%
Suwannee 3	3.68%	9.26%	8.34%	9.32%	0.00%
Suwannee Plant	2.22%	5.39%	5.24%	5.46%	0.43%
PEF Oil	1.69%	2.63%	3.68%	3.81%	2.93%
NERC Avg. - Oil-Fired Steam	**26.74%**	**18.70%**	**21.65%**	**9.23%**	**NA**
PEF Fossil Steam Total *(coal & oil fired)*	2.73%	3.55%	4.01%	3.02%	3.62%
NERC Avg - Fossil Steam All Fuel Types	**8.14%**	**7.70%**	**7.59%**	**7.71%**	**NA**

Table 3: Combined Cycle Equivalent Forced Outage Rate					
	2004	2005	2006	2007	2008
Hines 1	0.47%	2.27%	6.76%	2.40%	0.72%
Hines 2	2.37%	0.97%	1.16%	0.24%	0.27%
Hines 3*	NA	NA	5.62%	0.22%	0.07%
Hines 4**	NA	NA	NA	NA	1.07%
Hines Total	**1.44%**	**1.58%**	**4.59%**	**0.74%**	**0.52%**
Tiger Bay	**4.87%**	**4.74%**	**3.15%**	**35.11%**	**42.54%**
University of Florida	**5.16%**	**0.75%**	**0.69%**	**1.63%**	**0.60%**
PEF CC	**2.12%**	**1.93%**	**4.31%**	**5.03%**	**3.53%**
NERC Average - Combined Cycle	**8.74%**	**8.00%**	**7.92%**	**8.66%**	**NA**

*Hines 3 began commercial operation in November 2005

Table 4: Coal and Oil-fired Steam Equivalent Availability Rates					
	2004	**2005**	**2006**	**2007**	**YTD July 2008**
Crystal River 1	80.25%	90.45%	93.19%	81.43%	89.09%
Crystal River 2	85.48%	79.63%	86.42%	76.14%	92.39%
Crystal River 4	91.00%	89.85%	91.51%	93.82%	92.64%
Crystal River 5	94.33%	90.85%	85.58%	91.14%	92.16%
PEF Coal	89.12%	88.15%	88.86%	87.20%	91.86%
NERC Average - Coal-Fired	**84.82%**	**85.44%**	**85.55%**	**83.72%**	**NA**
Anclote 1	95.68%	92.64%	85.13%	88.23%	95.95%
Anclote 2	84.60%	88.50%	80.86%	92.49%	76.98%
Anclote Plant	90.15%	90.57%	83.00%	90.38%	86.39%
Bartow 1	92.98%	88.94%	91.09%	90.03%	77.57%
Bartow 2	96.52%	92.99%	96.44%	80.28%	78.25%
Bartow 3	89.62%	70.96%	84.10%	82.92%	85.57%
Bartow Plant	92.38%	81.76%	89.31%	84.15%	81.43%
Suwannee 1	92.75%	76.61%	81.91%	53.62%	91.37%
Suwannee 2	94.97%	98.85%	81.34%	99.00%	47.56%
Suwannee 3	83.70%	84.73%	78.55%	52.43%	92.20%
Suwannee Plant	88.22%	85.99%	79.92%	62.92%	82.32%
PEF Oil	90.59%	87.71%	84.47%	86.21%	84.66%
NERC Average - Oil-Fired Steam	**76.42%**	**78.15%**	**80.27%**	**84.39%**	**NA**
PEF Fossil Steam Total *(coal & oil-fired)*	89.73%	87.96%	87.05%	86.80%	88.94%
NERC Average - Fossil Steam All Fuel Types	**84.82%**	**85.44%**	**85.55%**	**84.75%**	**NA**

Table 5: Combined Cycle Equivalent Availability Factor				
	2004	2005	2006	2007
Hines 1	81.74%	90.65%	85.09%	75.49%
Hines 2	93.95%	90.44%	91.53%	90.23%
Hines 3*	NA	NA	92.55%	87.75%
Hines 4**	NA	NA	NA	NA
Hines Total	**88.17%**	**90.54%**	**89.90%**	**84.69%**
Tiger Bay	**89.31%**	**95.32%**	**96.51%**	**66.47%**
University of Florida	**84.55%**	**91.78%**	**89.00%**	**86.16%**
PEF CC	**88.22%**	**91.39%**	**90.66%**	**82.68%**
NERC Average - Combined Cycle	**85.82%**	**87.31%**	**87.54%**	**86.73%**

*Hines 3 began commercial operation in November 2005

**Hines 4 began commercial operation in December 2007