FLORIDA POWER & LIGHT COMPANY DOCKET NO. 110007-EI ENVIRONMENTAL COST RECOVERY CLAUSE FPL SUPPLEMENTAL CAIR/CAMR/CAVR FILING APRIL 1, 2011

Per Order No. PSC-11-0083-FOF-EI, issued on January 31, 2011, the discussion below provides FPL's current estimates of project activities and associated costs related to its Clean Air Interstate Rule (CAIR), Clean Air Mercury Rule (CAMR) and Clean Air Visibility Rule (CAVR)/ Best Available Retrofit Technology (BART) Projects.

CAIR Compliance Project Update:

St. Johns River Power Park (SJRPP) Selective Catalytic Reduction Systems (SCR) and Ammonia Injection Systems — The construction and installation of SCR and Ammonia Injection Systems on SJRPP was accomplished in 2009 with the controls on both units being placed into service in 2010. The total CAIR capital cost for installation of the SCR and Ammonia Injection System for FPL's ownership share of SJRPP is \$55.3 million.

Estimated CAIR O&M expenses for 2011 are \$1.405 million and estimated annual O&M expenses beginning 2012 are approximately \$1.165 million (FPL 20% ownership). Ongoing O&M activities for the SCR include incremental operating staff, ammonia consumption, maintenance of the SCR ammonia injection skid and SCR auxiliary equipment.

Scherer SCR and Wet Flue Gas Desulfurization (FGD) - Current capital cost estimates for the installation of the FGD, Scrubber and SCR with Ammonia Injection System on Scherer Unit 4 is \$369.2 million. The construction of plant infrastructure required for the reagent supply has been completed and waste by-product removal from the emission controls being implemented at Plant Scherer is currently underway and FPL's share of the costs for those facilities needed for support of Unit 4 are included in the project costs. Unit specific engineering and design work on the FGD and SCR for Unit 4 was completed in 2008 and procurement of materials needed for the construction of the equipment began in 2009. Construction is currently underway as foundation work for the FGD and SCR and the foundation for the new chimney for output from the FGD were completed in 2008.

Project work accomplished in 2009 included: delivery and initial installation of SCR structural steel; delivery and installation of SCR ammonia storage facility; initial construction of FGD chimney liner and absorber foundation activities; Scherer common FGD facility work including limestone handling prep equipment, tanks, piping, and electrical; and initial construction activities for FGD gypsum waste disposal facility. The 2010 project work included the erection of the scrubber vessel and stack/liner. Unanticipated, persistent inclement weather increased the original planned construction schedule. Project work in 2010 also included the SCR support structure and Unit 4 FGD absorber vessel. Additionally, construction was substantially completed in 2010 for SCR and FGD project common

COM 5
APA |
CCR > 7
GCL |
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facilities (e.g., unloading and storage facilities for ammonia and limestone and limestone grinding facilities). FPL estimates its share of the Scherer Unit 4 CAIR capital costs to be \$97.4 million in 2011 and \$29.4 million in 2012. FPL has preliminarily estimated annual O&M for operation of the SCR, FGD, and common plant facilities supporting the controls at \$3.5 million for 2012 when the FGD and SCR are projected to be in-service. O&M activities for the SCR include incremental operating staff, ammonia consumption, maintenance of the SCR ammonia injection skid and SCR auxiliary equipment. O&M activities for the FGD include limestone consumption, limestone and by-product handling operation, FGD operations, FGD tower and auxiliary equipment maintenance.

800 MW unit cycling project – Mr. LaBauve introduced this project in his September 1, 2006 testimony and subsequently provided an estimate for implementation of the projects with a total capital cost of \$104.8 million. FPL had originally planned completion of the 800 MW unit cycling project in 2010 at the Martin and Manatee Plants utilizing existing planned outage windows to complete project work. As a result of changes to the Manatee Unit 2 outage schedule to accommodate system load requirements, completion of remaining boiler and associated drain work was postponed to 2011. Project work completed at the Martin and Manatee Plants for 2010 included major boiler, turbine and balance of plant initiatives.

800 MW unit cycling project total capital costs to date are \$113.6 million and total O&M expenses to date are \$3.6 million. There are six remaining tasks for the completion of the 800 MW cycling project. Planned work for 2011 includes the Super Heat (SH) Spray Upgrade, Extraction Control/Mass Blowdown on Manatee Unit 2, and the implementation of rotor stress monitors on all four 800 MW units. FPL plans to complete the remaining boiler work at Manatee Unit 2 during a planned fall 2011 outage. For 2011, FPL projects a capital cost of \$1.6 million and an O&M expense of \$500 thousand. FPL plans to complete the project work at the Manatee and Martin plants in 2011 with an estimated total project cost of \$115.2 million in capital costs and \$4.1 million in O&M expenses. Decreases to the capital project costs from the prior estimate are primarily the result of lower than originally projected costs for the rotor stress monitors. Increases to the O&M expenses were primarily a result of reclassification of project removal work from capital to O&M.

Rule Challenge — On July 11, 2008 the United States Circuit Court of Appeals for the District of Columbia (the Court) issued an opinion vacating the United States Environmental Protection Agency's (EPA) CAIR. On December 23, 2008, the Court issued an opinion on rehearing of the July 11 decision and remanded CAIR to the EPA without vacatur, instructing EPA to remedy the CAIR flaws in accordance with the Court's July 11 opinion. This results in CAIR remaining in effect in its current form until it is revised for the July 11 opinion. On September 23, 2009, FPL filed a petition with the EPA to expedite rulemaking for the rewrite of the CAIR rules. As a result of EPA's inaction regarding fuel adjustment factors, FPL filed a Writ of Mandamus on December 18, 2009 asking the Court to force EPA to remove the fuel adjustment factors. On January 5, 2010, the Court ordered EPA to respond to FPL's Writ of Mandamus by January 26, 2010. The Court denied FPL's Writ of Mandamus on February 2, 2010. On July 6, 2010 EPA published its proposed Clean Air Transport Rule (CATR) to replace the CAIR rule that had been remanded to EPA by the

Court. EPA has published subsequent Notices of Data Availability (NODAs) and has stated that they intend to publish a final rule by the end of spring 2011. While FPL believes that EPA's proposed CATR addresses the issues raised by FPL in our legal challenges, until a final rule is published it is not known whether the changes will be included. The CATR proposes to replace the existing CAIR with new SO2 and NOx programs that will begin on January 1, 2012.

<u>Continuous Emissions Monitoring System (CEMS) Plan for Gas Turbines (GT)</u> - The Low Mass Emitting (LME) CEMS have been installed, tested, and are now in operation at the Fort Myers, Port Everglades, and Fort Lauderdale Gas Turbine Parks, as required by the CAIR.

FPL has projected O&M expenses of \$5,000 per year that will be required for routine maintenance of these CEMS systems. It should be noted that the LME option is available for a GT only if its emissions remain under EPA-prescribed thresholds. If any GT emits more than 50 tons of NOx or 25 tons of SO2 in a given calendar year, the testing for that GT will be required every year, instead of every five years. That would increase the testing costs for non-qualifying GTs to \$65,000 per year, along with \$5,000 per year for maintenance.

Purchases of allowances - To comply with the CAIR Ozone Season NOx program requirements, FPL purchased CAIR allowances that were needed for compliance at a total cost of \$98,325 for compliance year 2009. The 855 CAIR Ozone season allowances, in addition to the 12,418 allowances allocated to FPL by the EPA, were needed to comply with CAIR requirements for fossil generating unit emissions during the May through September 2009 Ozone Season. As a result of the lower than previously projected system load, and changes in FPL's generation plan mentioned above, FPL had sufficient allowances for compliance with the 2010 CAIR NOx Ozone Season and has sufficient allowances for compliance with the CAIR 2010 NOx Annual programs without purchasing additional allowances. Future purchases of allowances will be made as needed for compliance with the annual and ozone season NOx requirements. While FPL has received allocations to its existing CAIR fossil generating units, FPL has projected, but does not know precisely, the number of allowances it will be allocated under the CAIR NOx Annual and Ozone Season new source set-aside program for the West County Energy Center generating units. EPA, in its newly proposed CATR, proposed an allocation method which would allocate to FPL insufficient allowances for compliance with FPL's projected emissions for both the ozone season and annual NOx programs. However, in the January 7, 2011 NODA, EPA proposed two additional allocation methodologies which FPL believes will provide sufficient allowances for compliance with CATR.

Actual CAIR capital costs through 2010 were \$408.1 million.

CAIR CAPITAL COST ESTIMATES (\$Millions)			
PROJECT	2011	2012	TOTAL PROJECT
SJRPP-	0.0	0.0	55.3
SCR/Ammonia			
Injection System			
Scherer-SCR/FGD	97.4	29.4	369.2
800 MW Unit	0.2	0.0	58.4
Cycling - Martin			
800 MW Unit	1.4	0.0	56.8
Cycling - Manatee			
CEMS at GTs	Capital project	Capital project	Capital project
	completed	completed	completed
Allowances	N/A	N/A	N/A

Actual CAIR O&M expenses through 2010 are \$7.1 million.

CAIR O&M EXPENSE ESTIMATES (\$Millions)			
PROJECT	2011	2012	TOTAL PROJECT
SJRPP-	1.405	1.165	1.165 (2012+ annual
SCR/Ammonia			operating costs are
Injection System			on-going)
Scherer-SCR/FGD	0	3.5	3.5 (2012+ annual
			operating costs are
			on-going)
800 MW Unit	0	0	2.10
Cycling – Martin			
800 MW Unit	0.05	0	1.96
Cycling – Manatee			
CEMS at GTs	0.005	0.005	0.005 (2011+ annual
			operating costs are
			on-going)
Allowances	0	0	N/A

CAMR Compliance Project Update:

On March 15, 2005, EPA issued the Clean Air Mercury Rule to permanently cap and reduce mercury emissions from coal-fired power plants for the first time. In response to the EPA CAMR, the Georgia Environmental Protection Division (EPD) promulgated two major rules to implement mercury reductions within Georgia: a rule to adopt the CAMR federal mercury cap and trade program: Rule 391-3-1-.02(15) – "Georgia Mercury Trading Rule" and a Georgia state specific Multipollutant Rule: Rule 391-3-1-.02(2)(sss) – "Multipollutant Control for Electric Utility Steam Generating Units" which became effective June 1, 2008. The Multipollutant Rule was promulgated to specify the implementation of specific air pollution control equipment for reductions in mercury (Hg), sulfur dioxide (SO2), and nitrogen oxides (NOx) emissions from identified coal-fired Electric Generating Units (EGUs) within Georgia. Section 4(i) of the Multipollutant Rule requires that Scherer Unit 4 may not be operated after April 30, 2010, unless it is equipped and operated with sorbent injection and a baghouse for the control of Hg emissions.

On February 8, 2008, the United States District Court of Appeals ruled that EPA's Delisting Rule for mercury emissions from coal-fired EGUs utility boilers and the CAMR were unlawful and vacated both rules. On October 28, 2009, EPA published its proposed consent decree with respect to the "American Nurses Association, et al v. EPA" Clean Air Act citizen suit. The consent decree establishes a timeline for EPA's proposal of MACT standards for coal- and oil-fired electric utility steam generating units with a proposed rule no later than March 16, 2011 and a final rule no later than November 16, 2011. In December 2009, EPA approved an Information Collection Request (ICR) requiring all coal- and oil-fired electric utility steam generating units to submit emissions data and for a specified list of affected units to perform fuel sampling and stack emission testing of Hazardous Air Pollutants (HAPs). Data collected in the ICR will be used in setting MACT standards of performance for coal- and oil-fired electric utility steam generating unit emissions of HAPs. In Order No. 09-0795-FOF-EI issued November 18, 2009, the Commission approved a new ECRC project for recovery of costs for compliance with the ICR in 2010.

Installation of the Hg controls, and associated continuous Hg emission monitoring that would have been needed to comply with the CAMR requirements remain necessary to comply with the requirements of the Georgia Multipollutant Rule; therefore installation of Hg controls on Plant Scherer Unit 4 must continue. The vacatur of CAMR does not change the compliance obligations at Plant Scherer, including FPL's share of Unit 4. FPL anticipates that controls being installed at Plant Scherer for Hg control will be needed to comply with the monitoring and reporting requirements. This will ultimately be required in order to remain in compliance with monitoring of the final MACT rule expected in late 2011. Specifically, FPL will comply with the Hg reduction requirements of the Georgia Multipollutant Rule by using the following projects identified previously under CAMR:

- 1. Installation of Fabric Filter Baghouse and Mercury Sorbent Injection System on Scherer Unit 4 (completed 2010).
- 2. Installation of HgCEMS on Scherer Unit 4 (completed 2009).

3. Installation of HgCEMS on SJRPP Units 1 & 2 (completed in 2008 prior to the EPA decision and certification testing and operation have been delayed until the monitoring requirements begin for Hg MACT compliance).

Construction work completed in 2009 for the Scherer Unit 4 Hg controls included completion of the structural components, fabric filter assembly, and major electrical components at a cost of \$44.6 million for 2009. Total capital costs to date for the CAMR project are \$105.9 million. Projected annual O&M associated with operation of the Hg controls includes purchase of new sorbent, disposal of spent sorbent, replacement of filter bags, and maintenance activities associated with the baghouse and sorbent injection system, and the maintenance costs associated with FPL's share of the Hg CEMS. FPL's cost associated with the installation of Hg CEMS at SJRPP represented a total capital cost of \$ 0.4 million. Projected CAMR O&M expenses for plant Scherer are \$4.0 million annually beginning in 2011 primarily for purchase and disposal of sorbents and replacement of bags.

On March 16, 2011 EAP published its proposed Air Toxics Rule in response to the vacatur of the CAMR and De-Listing Rules. EPA's proposed Air Toxics Rule sets limits on emissions of Toxic Metal Hazardous Air Pollutants (HAPs), including Mercury, limits on emissions of acid gasses, and work practice standards for emissions of Organic HAPs. FPL is currently evaluating compliance requirements and potential impacts to operation of its coal-fired generating units. Preliminary review of data indicates that Plant Scherer Unit 4 will comply with the proposed emission limits using the installed baghouse-sorbent injection system following completion of the SCR and FGD installation currently underway to comply with the Georgia Multipollutant Rule. FPL believes that the mercury emission limits in the proposed Air Toxics Rule will likely require installation of baghouse-sorbent injection on the SJRPP units as would have been the case under CAMR. There is currently insufficient test information from the units to determine whether any additional controls may be needed to comply with the proposed Air Toxics Rule. FPL is evaluating the need for additional testing that may be required to determine an appropriate compliance plan.

Actual CAMR capital costs through 2010 are \$105.9 million.

CAMR CAPITAL COST ESTIMATES (\$Millions)			
PROJECT	2011	2012	TOTAL PROJECT
SJRPP-Mercury CEMS	0	0	0.4
Scherer-Sorbent Injection/Baghouse/ Mercury CEMS	0.2	0.0	106.0

Actual CAMR O&M expenses through 2010 are \$1.6 million.

CAMR O&M EXPENSE ESTIMATES (\$Millions)			
PROJECT	2011	2012	TOTAL PROJECT
SJRPP-Mercury CEMS	0	0	0.0
Scherer-Sorbent Injection/Baghouse/ HgCEMS	4.0	4.0	4.0 (2011+ annual operating costs are on-going)

CAVR / BART Project Update:

FPL successfully concluded negotiations with the Florida Department of Environmental Protection (FDEP or the Department) regarding Turkey Point Units 1 & 2 in February 2009, with the Department accepting FPL's proposed plan to comply with the BART requirements under the Regional Haze program. FPL and the FDEP agreed on the following compliance options for particulate and opacity control under BART:

- 1. installation of modern multi-cyclone separators;
- 2. switching to a lower sulfur fuel (from 1.0% to 0.7%);
- 3. adoption of a lower Particulate Matter (PM) emission limit from 0.1 lb./mmbtu to 0.07 lb/mmbtu;
- 4. conducting a fuel additive test program with the goal of a further PM reduction to 0.05 lb/mmbtu, if feasible; and
- 5. accepting a steady-state opacity limit of 20% based on an annual average for 99% of the annual steady-state operating periods.

The projected cost of this Emission Reduction Strategy is estimated to be \$7.3 million Capital with \$1.9 million increased O&M per year. FPL will not include recovery of these costs under the ECRC.

FDEP issued the final permit for compliance with BART on April 14, 2009 completing the BART project. The required implementation date will not be until December, 2013. In order to minimize the effect on total system load and availability, installation will be conducted using a staged approach, with work done during the unit's planned outages currently scheduled between now and 2013.

In addition to the compliance requirement under the BART rule, FDEP's Regional Haze Rule 62-296.341, Reasonable Progress Control Technology (RPCT), requires that an electric utility unit which had a "Significant Contribution to Regional Haze" as evidenced by SO2 emissions in 2002 address visibility impacts to the Class 1 areas. FDEP has identified six FPL generating units which had been determined to be subject to the RPCT requirements: Turkey Point Units 1 & 2, Port Everglades Units 3 & 4, and Manatee Units 1 & 2.

FPL will need to address the RPCT requirements through submittal of an air construction permit that evaluates the RPCT factors for each of the six generating units. The permit application must be submitted no later than January 31, 2012. In compliance with the RPCT requirements, the FDEP must issue the final air construction permits implementing the applicant's RPCT proposal no later than December 31, 2017. FPL plans to begin analysis and evaluation in 2012 for the RPCT factors for the affected generating units once the State of Florida has received approval from EPA.

EPA has told FDEP that it will not approve Florida's Draft CAVR State Implementation Plan (SIP) primarily due to the FDEP Reasonable Progress Control Technology (RPCT) Rule which uses a permit application process that EPA finds unacceptable. FDEP has indicated that it will withdraw the RPCT Rule from the FAC and delete the RPCT provision from the SIP. FDEP contends that visibility improvements at Florida's Class 1 Areas will meet the Reasonable Progress glide slope in 2018 by way of existing air rules promulgated previously. Therefore, no additional rulemaking and subsequent controls will be needed for CAVR. FDEP expects to remove the RPCT rule (62-296.341, F.A.C.) after other Southeast states receive SIP approval in the spring of 2011.

Actual CAVR capital costs through 2010 are \$0.

Actual CAVR O&M expenses through 2010 are \$0.041 million. FPL has projected a preliminary estimated O&M total cost of \$0.030 million in 2012 for the required RPCT analysis of the six generating units.

CAVR/BART O&M EXPENSE ESTIMATES (\$Millions)			
PROJECT	2011	2012	TOTAL PROJECT*
Reasonable Process Control Technology	0	.030	0.070

^{*} Through 2012