Hopping Green & Sams

Attorneys and Counselors

June 7, 2006

BY HAND-DELIVERY

Blanca Bayó
Director, Division of Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399

Re: Docket No. 060007-EI

Dear Ms. Bayó:

On behalf of Progress Energy Florida, Inc. (PEF), I enclose for filing in the above docket the original and fifteen (15) copies of two pages that were revised in Exhibit No. __ (DJR-1) to the testimony of Daniel J. Roeder filed on March 31, 2006. The two pages should be inserted into the Exhibit as a replacement for pages 34 and 41.

By copy of this letter, the enclosed documents have been furnished to the parties on the attached certificate of service.

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning it to me. If you have any questions regarding this filing, please give me a call at 425-2346.

Very truly yours,

Carolyn S. Raepple

Counsel for PROGRESS ENERGY FLORIDA, INC.

cc: Certificate of Service

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that true and correct copies of the documents described above in Docket No. 060007-EI have been furnished by hand-delivery (*) or regular U.S. mail to the following this _1st_ day of June, 2006.

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Another potential disadvantage of an SCR is that in addition to promoting the reaction of NOx with ammonia, the catalyst also promotes the formation of SO_3 from the SO_2 that is present in the combustion gasses. SO_3 can cause corrosion of the ductwork and components downstream of the SCR, and can cause a visible plume from the chimney. The amount of SO_3 formed by the SCR is dependent on the SO_2 levels in the combustion gasses (which in turn is dependent on the sulfur levels in the fuel being burned), and the composition of the catalyst materials. To control SO_3 emissions, catalyst materials with low SO_2 to SO_3 conversion rates can be specified during the design and procurement phase of an SCR project. Other technologies available to control SO_3 emissions include wet ESPs and systems that inject chemicals (such as ammonia or alkali sorbents) into the furnace. Chemical injection systems are generally considered to be the more cost effective choice, however as engineering of SCRs for Crystal River has not advanced to the point of determining the levels of SO_3 emissions that would be expected, no technology has been selected, and no costs included as yet, for SO_3 mitigation.

Summary of NOx Control Technology Options

The following table summarizes reduction capabilities and costs of potential NOx control technologies for PEF's Crystal River coal-fired units and Anclote Units 1 and 2.

Table 5-1. Summary of NOx Control Technology Options

	LNB	LNB/ CCOFA	LNB/ SOFA	LNB/ ROFA	LNB/ BOFA	SNCR	SCR
NOx Reduction %							
Crystal River 1	Installed	Installed	N/A	N/A	N/A	20	90
Crystal River 2	Installed	Installed	N/A	N/A	N/A	20	90
Crystal River 4	25	N/A	N/A	N/A	N/A	20	90
Crystal River 5	25	N/A	N/A	N/A	N/A	20	90
Anclote 1	N/A	27	38	32	20	N/A	90
Anclote 2	N/A	27	38	32	20	N/A	90
Capital Cost ($Millions)							
Crystal River 1	Installed	Installed	N/A	N/A	N/A	5.8	59.1
Crystal River 2	Installed	Installed	N/A	N/A	N/A	5.9	72.4
Crystal River 4	5.6	N/A	N/A	N/A	N/A	7.4	99.8
Crystal River 5	5.6	N/A	N/A	N/A	N/A	7.4	99.1
Anclote 1	N/A	2.3	5.0	12.5	4.3	N/A	69.0
Anclote 2	N/A	2.3	5.0	12.5	4.3	N/A	69.0
O&M Cost ($Millions/Yr, levelized, 2005$)							
Crystal River 1	Installed	Installed	N/A	N/A	N/A	0.2	0.7
Crystal River 2	Installed	Installed	N/A	N/A	N/A	0.2	0.8
Crystal River 4	0	N/A	N/A	N/A	N/A	0.2	1.1
Crystal River 5	0	N/A	N/A	N/A	N/A	0.2	1.1
Anclote 1	N/A	0.04	0.04	0.15	0.06	N/A	1.0
Anclote 2	N/A	0.03	0.03	0.15	0.06	N/A	0.9
Consumables Cost ($Millions/Yr, levelized, 2005$)							
Crystal River 1	Installed	Installed	N/A	N/A	N/A	1.3	0.7
Crystal River 2	Installed	Installed	N/A	N/A	N/A	1.5	0.9
Crystal River 4	0	N/A	N/A	N/A	N/A	3.2	2.0
Crystal River 5	0	N/A	N/A	N/A	N/A	3.1	2.0
Anclote 1	N/A	0	0	0	0	N/A	0.2
Anclote 2	N/A	0	0	0	0	N/A	0.2

The other configuration evaluated utilizes a pulse jet fabric filter (PJFF) in lieu of the COPAC system described above. The air-to-cloth ratios utilized in the PJFF are those proven in numerous applications. Utilization of these proven ratios results in a larger and more costly fabric filter.

The cost estimates for the Crystal River units are shown in Table 6-3.

Table 6-3. Estimated Costs of TOXECON Systems

	CR1		CR2		CR4		CR5	
Fabric Filter Type	COPAC	PJFF	COPAC	PJFF	COPAC	PJFF	COPAC	PJFF
Filter equipment cost	8,666	18,296	10,320	21,786	14,897	31,450	14,124	29,818
PAC Injection ($6/kw)	2,460	2,460	3,060	3,060	4,842	4,842	4,530	4,530
ID Fan, Motor, Electrical, Foundation and Ductwork	168	168	260	260	651	651	570	570
Indirect Costs	8,309	8,309	9,921	9,921	14,445	14,445	13,675	13,675
Total Cost	19,603	29,232	23,560	35,027	34,836	51,388	32,899	48,592

Operating and maintenance costs are broken down into three categories: sorbent costs, fixed costs, and sorbent disposal costs. Total O&M costs are estimated to be $0.70 per megawatt-hour (MWh) for the COPAC system and $1.20 per MWh for the PJFF system.

Because the COPAC system is estimated to be the lower cost system capable of achieving 75 percent removal efficiency, it is the system assumed to be installed in the analysis described in Chapter 12.

Concrete-safe Sorbents

The costs of sorbents that will not negatively impact the sale of combustion products (concrete safe sorbents) were estimated. Mercury control sorbents that do not impact the salability of fly ash are still in the development stage. The current assumption is that the sorbent costs will be twice that of the standard PAC and that removal efficiencies will be 20 percent less than standard PAC. Since these sorbents are still in the developmental phase, their performance and costs could vary greatly from those estimated here.

The capital costs associated with a concrete-safe sorbent system is estimated to be $12 per kilowatt, the same as the PAC injection system described above. The O&M costs for a concrete-safe sorbent system are estimated to be $0.90 per MWh, which includes a sorbent cost that is twice the cost of activated carbon.