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Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399

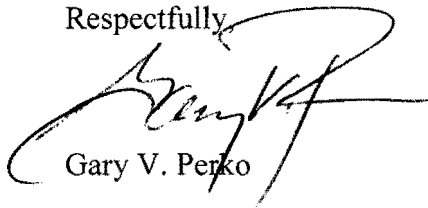
Re: Docket No. 120103-EI- Petition of Progress Energy Florida, Inc. to modify scope of existing environmental program.

Dear Ms. Cole:

On behalf of Progress Energy Florida, Inc. (PEF), I enclose for filing the original and five copies of PEF's responses to Staff's First Data Request in the above docket.

Please feel free to call me at (850) 425-2359 if you have any questions.

Respectfully,



Gary V. Perko

cc: Charles Murphy, Florida Public Service Commission
Diane Triplett, Progress Energy Service Company, LLC.

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**PROGRESS ENERGY FLORIDA INC.
RESPONSES TO STAFF'S FIRST DATA REQUEST**

1. Referring to PEF's responses to Staff 1st Set of Interrogatories, Nos. 2h and 8a, it appears that the fuel savings analysis of the Anclote units repowering project¹ was performed only for the period 2013 – 2018.

a. Is the remaining life of the Anclote Units 1 and 2, after the natural gas repowering, only 5 years?

RESPONSE: No

b. If the response to (a) is negative, what is the remaining life of the Anclote Units 1 and 2 after the repowering?

RESPONSE: The estimated remaining life of the two Anclote Units is not affected by the gas conversion project. Based on PEF's 2009 depreciation study, these units have remaining life through 2024.

c. What is the remaining life of the Anclote Units 1 and 2 prior to the repowering?

RESPONSE: See the answer to 1.b. above.

2. In paragraph 8 of PEF's petition, PEF indicated that the Company has considered three options for the Anclote units 1 and 2 to comply with the new MATS rule: (1) use emission controls (specifically Low NOx burners and electrostatic precipitator (ESP)); (2) repower with 100% natural gas; and (3) discontinuation of heavy fuel oil use without conversion. Please provide the following projected information for the Anclote units throughout their remaining lives:

a. Annual fuel savings of each of the units after its repowering;

RESPONSE: PEF did not calculate the annual fuel savings over the full remaining life of the units. PEF's study was focused on identifying the lowest cost option to meet compliance with the MATS rule. To this end, PEF's decision was primarily based on the lower capital cost of the conversion to natural gas firing compared to

¹ Please note that the Anclote conversion project does not involve a "repowering" as that term is typically used. "Repowering" projects typically involve an increase in efficiency or generation capacity through replacement of the boiler with a new steam-producing facility or installation of a new steam production process involving a combustion turbine and heat recovery steam generator. By contrast, the Anclote conversion project involves the conversion of existing oil-fired boilers, with limited natural gas capability, to 100% natural gas-firing capability.

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installation of emissions controls, with the recognition that this would also result in lower fuel costs. The fuel cost savings were evaluated only over the period 2013 – 2018 with a recognition that PEF may elect to pursue a combined cycle conversion of the facility later in the decade to meet future system power needs. As such, it was considered to be conservative to show the benefits only over the initial period. Additional fuel savings are expected to accrue over the longer term (compared to the continued operation on oil), but were not evaluated so that they would not be “double counted” in the event of a later decision to convert to combined cycle.

The fuel savings for the Ancloste units alone over the period evaluated are (values in \$,000):

	2013	2014	2015	2016	2017	2018
ANCLOTE 1	-6,852	5,094	4,598	11,395	10,656	13,908
ANCLOTE 2	3,133	-7,588	875	7,175	1,948	7,824
Total	-3,719	-2,495	5,473	18,570	12,604	21,733

b. Annual system fuel savings of the Ancloste units after repowering;

RESPONSE:

System Fuel Savings \$,000	2013	2014	2015	2016	2017	2018
Total	14,868	45,326	35,323	55,115	54,192	63,629

c. Revenue requirement of option (2), repowering the Ancloste Units;

RESPONSE: The tables below show the 2013-2018 revenue requirements and residential rate impacts associated with the Ancloste Gas Conversion (Option 2) and the addition of emission controls (Option 1). As PEF is required to comply with the new MATS regulation, there are no fuel savings associated with the scenario where emissions controls are added and the units continue to run on oil.

Anclote Gas Conversion

Year	2013	2014	2015	2016	2017	2018
Est. Ann. Rtl. Capital RR's (1)	5,326,302	16,693,970	15,664,950	14,499,697	13,334,441	9,097,013
Est. Ann. Rtl. Fuel/Production Savings	(4,709,506)	(26,742,494)	(22,008,052)	(40,963,375)	(41,979,904)	(53,867,384)
Total Change Retail RR's	616,796	(10,048,524)	(6,343,102)	(26,463,678)	(28,645,463)	(44,770,371)

Residential \$ / 1000 Kwh	2013	2014	2015	2016	2017	2018
Est. Ann. Capital Residential Rate Impact	0.14	0.45	0.41	0.38	0.34	0.23
Est. Ann. Fuel/Production Residential Rate Impact	(0.13)	(0.72)	(0.58)	(1.06)	(1.07)	(1.35)
Total Est. Residential Rate Impact	0.02	(0.27)	(0.17)	(0.69)	(0.73)	(1.12)

ESP & LNB Installation

Year	2013	2014	2015	2016	2017	2018
Est. Ann. Rtl. Capital RR's (1)	0	11,048,978	20,861,285	19,394,896	17,928,507	16,462,118
Est. Ann. Rtl. Fuel/Production Savings	0	0	0	0	0	0
Total Change Retail RR's	0	11,048,978	20,861,285	19,394,896	17,928,507	16,462,118

Residential \$ / 1000 Kwh	2013	2014	2015	2016	2017	2018
Est. Ann. Capital Residential Rate Impact	0	0.30	0.55	0.50	0.46	0.41
Est. Ann. Fuel/Production Residential Rate Impact	0	0	0	0	0	0
Total Est. Residential Rate Impact	0	0.30	0.55	0.50	0.46	0.41

(1) Analysis assumes a 5 year recovery period.

d. Customer bill impact (\$/1,000 KWh) of option (2), repowering the Anclote Units;

RESPONSE: Please refer to the response in Question 2c above.

e. Revenue requirement of option (1), deploying emission controls;

RESPONSE: Please refer to the response in Question 2c above.

f. Customer bill impact (\$/1,000 KWh) of option (1), deploying emission controls;

RESPONSE: Please refer to the response in Question 2c above.

g. Customer bill impact (\$/1,000 KWh) of option (3).

RESPONSE: Option 3 (discontinuation of heavy fuel oil use without conversion) was not considered a viable option to remain operationally compliant with MATS; therefore, no scenario modeling was performed.

3. If emission controls are installed on the Anclote units to comply with the MATS rule:

a. What would be the total capital costs?

RESPONSE: The total capital cost of the Low NOx Burners and the ESP is projected to be \$91.7 million. It should be recognized that this estimate was prepared in 2011 prior to the finalization of the MATS rule. Some additional elements including PM CEMS, acid gas monitoring and potentially some additional flue gas filtration may be required to reach full continuous compliance. These additional costs were not included in this estimate but would serve to make the gas conversion look even more favorable if included..

b. What would be the annual O&M costs?

RESPONSE: The additional O&M costs related to the controls were not evaluated in detail. In the initial review of the emissions control scenario, the modifications were not seen to pose significant additional O&M costs either for labor or materials. As noted in the response above, these analyses were performed before the promulgation of the final rule. It is anticipated that some additional actions might be required to achieve continuous compliance as specified in the final rule. Because the gas conversion had already been demonstrated to be the more cost effective option, these issues were not analyzed in detail.

c. What would be the in-service date of the retrofitted units?

RESPONSE: It was anticipated that the time period to complete the procurement and construction of the environmental controls would take approximately 30 months. One complicating factor that was identified, but not fully addressed is that installation of the controls would require an outage on both units of several months. Coordinating this outage with the ongoing outage at Crystal River 3 and potential outages at Crystal River units 1 and 2 for MATS compliance was considered a significant hurdle to completion of the control projects.

4. In its response to Staff's 1st Set of Interrogatories, No. 8c, PEF indicated that it would not be feasible to construct a combined cycle plant at the Anclote site to meet a 2015 in-service date to comply with MATS.

a. If a combined cycle plant were constructed at the Anclote site, when could it be in-service?

RESPONSE: Progress Energy uses a typical schedule of 66 months from project approval to project in service for combined cycle projects. An Anclote combined cycle conversion would be expected to take roughly this same length.

b. Referring to the 3-year compliance time frame discussed in paragraph 6 of PEF's petition, has the Company requested a waiver of this compliance time frame from the Environmental Protection Agency?

RESPONSE: PEF is still evaluating the need for an extension of the compliance time frame.

5. In its response to Staff's 1st Set of Interrogatories, No. 2h, PEF projected a \$250 million (nominal) fuel savings across the fleet during the period 2013 – 2018. In its response to Staff's 1st Set of Interrogatories, No. 8a, PEF also projected approximately a \$268 million (nominal) fuel savings for the same period. Please reconcile these two projections.

RESPONSE: In the response to number 2h, PEF was providing an approximate number which actual projected savings are expected to achieve. Specifically this response says "more than \$250 million". In the response to question 8a, PEF was providing specific projected savings. The value \$268 million shown in this response is a more precise projection of the savings. The two responses were intended to portray the same evaluation.

6. **Please refer to the Company's responses to paragraph 8 of PEF's petition, and to Staff's 1st Set of Interrogatories, Nos. 4 and 6.**

a. **Referring to paragraph 8 of the petition, is it correct that Low NOx Burners and an ESP are the most suitable emission controls to retrofit an oil or coal unit to comply with the MATS rule? If not, what other controls are available for PEF?**

RESPONSE: Low NOx burners and an ESP are considered to be the most suitable emissions controls for an oil fired unit such as the two Anclote units. These controls would not be adequate to achieve MATS rule compliance on a coal fired unit.

b. **In its response to Interrogatory No. 6, PEF reported that currently (May 2012) each of the Crystal River (CR) Units 1 and 2 is equipped with Low NOx burners and an ESP. In its response to Interrogatory No. 4, PEF indicated its evaluation of the MATS rule compliance for CR Units 1 and 2 "are focused on the feasibility, cost and constructability of environmental controls on the units relative to alternative power options." Please clarify to what kind of environmental controls PEF is referring in its response to Interrogatory No. 4.**

RESPONSE: Although a final design for the control systems necessary to achieve MATS compliance on Crystal River Units 1 and 2 is not complete, the primary components are considered to be selective catalytic reduction (SCR) and dry flue gas desulfurization (DFGD or dry scrubbing). It appears that some additional components may be required to achieve continuous compliance. These are under evaluation.

c. **Given the 3-year compliance time frame (paragraph 6 of the petition), please specify the most current plan that the Company is considering to bring CR Units 1 and 2 into compliance with the MATS rule.**

RESPONSE: As a part of its ongoing evaluation, PEF is considering both emissions control and unit retirement scenarios. Application for an extension of the compliance timeline is a consideration in these evaluations. At this time, PEF continues to review both alternatives.

7. **Why did PEF elect to petition for the Anclote repowering project to be recovered through the ECRC rather than through the Fuel cost recovery clause? Specifically, how is that decision impacted by each of the following?**

a. **"PEF is not aware of any instances in which Florida utilities have pursued an environmental compliance strategy involving a fuel conversion" and that "PEF has developed an innovative compliance strategy . . . by avoiding the need to install more-expensive emission controls while at the same time**

producing fuel costs savings.” (PEF’s response to Staff’s 1st Set of Interrogatories, No. 7);

b. “Environmental compliance costs” includes all costs or expenses incurred by an electric utility in complying with environmental law or regulations. (Section 366.8255(1)(d), Florida Statutes);

c. By Order No. PSC-94-0044-FOF-EI, the Commission specified that ECRC recoverable activities are those that are “legally required to comply with a governmentally imposed environmental regulation;”

d. It appears that the Anclote units repowering project can result in significant fuel savings and avoids the need to comply with an environmental rule, but the repowering project itself will not be required for compliance with any environmental rule.

RESPONSE: PEF respectfully disagrees with the suggestion that the Anclote conversion project is not required to comply with an environmental rule. PEF is undertaking the project for the specific purpose of complying with EPA’s new MATS rule, which unquestionably constitutes an “environmental law or regulation” as that term is defined in Section 366.8255, F.S. Like many, if not most, environmental regulations involving air emissions, the MATS rule imposes emission limits, but does not dictate how to comply. “[W]here a particular environmental requirement does not detail the specific means to comply with the requirement, the utility [is] impliedly required to comply in the most reasonable and cost-effective manner.” Order No. PSC-07-0783-FOF-EI, p.6 (Sep. 26, 2007). Based on this understanding, the Commission has approved a wide variety of emission-reducing activities, ranging from installation of pollution controls to unit retirements, as environmental compliance costs. See, e.g., Order No. PSC-02-1396-PAA-EI, p. 8 (Oct. 9, 2002) (finding that six specific activities, including emission controls and unit retirements constituted “environmental compliance costs”). In this case, PEF essentially has two options to comply with MATS at the Anclote Plant: install emission controls to meet the new emission limits for oil-fired units or discontinue oil-firing. As explained in PEF’s petition, converting the Anclote units to fire 100% natural gas is the most reasonable and cost-effective compliance option. While the potential to generate fuel savings is an added benefit, it does not detract from project’s purpose – to comply with MATS. Nor does the fact that compliance will be achieved by removing the units from the scope of the MATS emission limits. To conclude otherwise would be an exercise in semantics that contravenes the Commission’s long-standing policy, followed from the beginning of its administration of the ECRC, of applying the statute and its criteria “on a case-by-case basis, not formalistically, but with the flexibility to respond reasonably to complex and variable circumstances.” Order No. PSC-07-0499-FOF-EI, at p.6 (June 7, 2007) (citing Order No. PSC-94-0044-FOF-EI (Jan. 12, 1994)).

8. **Please explain why the proposed Anclote repowering project is the best option for PEF to bring Anclote Units 1 and 2 into compliance with the MATS rule given both the uncertainty of what PEF's final overall MATS compliance strategy will be (see PEF's response to Staff's 1st Set of Interrogatories, No. 4), and the outcome of potential litigation regarding the MATS rule.**

RESPONSE: The decision to move forward with the Anclote conversion project does not impact and will not be impacted by the compliance options ultimately selected for other PEF units. Unlike some air regulatory programs, such as CAIR, which incorporate allowance trading to allow utilities to achieve compliance on a system-wide basis, MATS imposes unit-specific standards. As noted in response to Staff Interrogatory No. 5, PEF has been evaluating compliance options for all affected units throughout the MATS rule development and finalization process. In light of persistently low near term gas prices relative to residual oil prices, PEF realized that a natural gas conversion at Anclote could provide an opportunity to achieve compliance and produce a concomitant fuel savings for PEF customers, with minimal disruption to fleet reliability (short outage periods). For that reason, PEF decided to move forward with the Anclote conversion while the evaluation process continues for other units. Due to the intricacies of the MATS requirements for coal-fired units and the fact that many important details of the MATS changed from the proposed rule to the final rule, compliance evaluations for PEF's coal-fired units are still ongoing. Although the final MATS rule has been challenged in federal court, the rule has not been stayed and PEF must move forward in developing and implementing its compliance strategy in order to meet the ambitious MATS compliance deadlines.