

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Environmental cost recovery clause.

DOCKET NO. 120007-EI

DATED: MAY 30, 2012

REDACTED

PROGRESS ENERGY FLORIDA'S RESPONSES TO STAFF'S FIRST SET OF INTERROGATORIES (NOS. 1-5)

PROGRESS ENERGY FLORIDA, INC. (PEF), pursuant to Rule 1.340, Florida Rules of Civil Procedure, hereby responds to Staff's First Set of Interrogatories (Nos. 1-5).

Responses

- 1. Referring to page 4, lines 10 - 12, of West's testimony, please explain why a lower number of recertification tests were performed in 2011.

Response: Fewer tests were performed in 2011 because two units were undergoing required maintenance and not available for testing. Testing was subsequently successfully performed in 2012.

- 2. Referring to page 5 of Exhibit WG-1 regarding Variance Report of O&M Activities, please explain in detail what caused the \$45,744, or 36%, variance in the activity No. 7.4 CAIR/CAMR Crystal River-A&G.

Response: Activity No. 7.4 CAIR/CAMR Crystal River – A&G are O&M costs associated with the direct chargeable hours of employees who support the clean air projects. These costs are not included in PEF's Base Rates. The \$45,774 or 36% variance is attributable to more time spent by employees in support of the clean air projects than expected in the 2011 Estimated/Actual Filing.

- 3. Please refer to page 3 of C. Zeigler's testimony filed April 2, 2012, and Exhibit WG-1 for the following questions:

- (a) Does the "Substation System Program" discussed on lines 1 – 12 refer to (i) the Transmission Substation (Project No. 1 on page 6 of Exhibit WG-1); (ii), the Distribution Substation (Project No. 1a on page 6 of Exhibit WG-1); (iii), both the Transmission Substation (Project No. 1) and the Distribution Substation; or (iv) something else. If something else, please identify.

Response: The Substation System Program discussed on lines 1 – 12 refer to both Projects 1 and 1a, Transmission Substation and Distribution Substation, respectively.

COM _____
 APA _____
 ECR I
 GCL _____
 RAD _____
 SRC _____
 ADM _____
 OPC _____
 CLK _____

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- (b) **Witness Zeigler testified (lines 4 – 5) that “[t]he project expenditure variance for the Substation System Program was \$1,620,074 or 20% higher than projected.” On page 5 of Exhibit WG-1, the Company indicated that the variance of Project No. 1 Transmission Substation Environmental Investigation, Remediation, and Pollution Prevention (EIRPP) is 25%, and the variance of Project 1a Distribution Substation EIRPP is 11%. Please reconcile these numbers.**

Response: The Substation System Program includes environmental remediation costs of both transmission and distribution substation sites. Exhibit WG-1 splits remediation costs by these types of sites. Project No. 1 is remediation costs associated with transmission substation sites. Project No.1a is remediation costs related to distribution substation sites.

The 20% Substation System Program variance that Mr. Zeigler refers to on lines 4 -5 of his Direct Testimony filed April 2, 2012, is a combined variance of Project No. 1 and Project No.1a environmental remediation costs on Exhibit WG-1 page 5. This variance is derived by adding Projects No. 1 and Project No. 1a YTD Actual costs of \$6,280,889 and \$3,600,115, and, Estimated Actual costs of \$5,009,189 and \$3,251,741, and calculating a variance using the combined totals. The combined total of the YTD Actual amounts is \$9,881,004. The combined total of the Estimated Actual amounts is \$8,260,930. The variance between these totals is \$1,620,074 or 20%.

Exhibit WG-1 shows the individual variances of Project No.1 and Project No.1a. The variance of Project No.1 of transmission substation environmental remediation costs is \$1,271,700 or 25%. The variance of Project No. 1a of distribution substation environmental remediation costs is \$348,374 or 11%.

- (c) **Please break down the amount of \$1,620,074 O&M cost variance (discussed on line 5) according to the major additional component activities and the associated costs incurred at each substation.**

Response: Environmental remediation activities at Central Florida, Kenneth and Wekiva substations primarily contributed to the O&M cost variance as shown below

Substation	Projected O&M Costs	Actual O&M Costs	Variance
Central Florida	\$11,000	\$1,332,410	\$1,321,410
Kenneth	\$889,000	\$1,035,229	\$146,229
Wekiva	\$25,000	\$160,093	\$135,093

Central Florida is a very large substation with extensive contaminated soil which was discovered when remediation activities began in 2009. Remediation work was scaled back in 2010 to further delineate the site, and continue with soil and ground water monitoring. When 2011 cost projections were made, PEF estimated O&M costs of \$11,000 for such assessment activities. During the course of 2011, however, a construction crew discovered additional contamination that needed to be excavated. Accordingly, the site was reprioritized and remediation crews returned to the site to remove this contaminated soil at a cost of \$1,332,410.

The variances at the Kenneth and Wekiva substations were due to more soil contamination than initially anticipated at these sites.

(d) Did PEF perform all the activities involved in the Transmission Substation EIRPP, Distribution Substation EIRPP, and Distribution System EIRPP?

Response: No. PEF contracted with five vendors to perform various activities associated with the Substation Assessment and Remediation Action Plan (SARAP). One provides geological expertise, two provide environmental remediation, one provides safety oversight and one provides thermal treatments for disposal of contaminated soil, oily water and debris.

(e) If the response to (d) is no, did PEF contract out all, or a portion of, the activities?

Response: PEF contracted all activities associated with substation remediation at the onset of the SARAP program to comply with the Florida Department of Environmental Protection's (FDEP) Consent Order in 2003. PEF did not have the internal resources to remediate 279 substations that were identified for environmental remediation.

(f) If the response to (e) is yes, has PEF issued any requests for proposals in order to retain the best contractor?

Response: Yes. PEF sent out bid proposals for SARAP work. Contractors were chosen based on their expertise, cost, efficiency and safety record.

(g) If the response to (e) is yes, does PEF retain a same contractor to perform the activities every year?

Response: Yes. PEF contracted a geological firm in 2003 as a result of the FDEP's Consent Order. This firm is highly reputable in the industry, and developed PEF's SARAP which was approved by the FDEP. This firm has been an integral part of PEF's success in complying with and completing the Consent Order.

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At the inception of the SARAP program in 2004, PEF had one remediation contractor and added another contractor in 2006. PEF also contracted for safety oversight over remediation work, and contracted with a thermal treatment facility for disposal of contaminated soil. PEF has kept the same contractors working on the program. These contractors have the expertise, knowledge, experience, and proven track record of providing remediation services in a safe and cost efficient manner. They have managed and followed all aspects of PEF's approved protocol with the FDEP. These contractors are familiar with PEF's policies and procedures, and continuously provide quality services in order to effectively meet PEF's SARAP obligations with the FDEP.

Please refer witness J. Swartz's testimony filed April 2, 2012, for questions 4 – 5.

4. Referring to page 3, lines 11 – 13, please provide detailed explanations regarding the "\$1,423,229 higher than expected costs for CAIR Crystal River Project 7.4-Energy." Please break down the amounts according to major components and activities of the project, and indicate the main causes associated with each cost increase.

Response: Please see the attached worksheet.

5. Please refer to line 15 on page 3 through line 2 on page 4 for the following questions:

- (a) What are the volumes (in tons) of gypsum that the FGDs at the Crystal River Power Plant (CR Plant) produced each year since the units were in-service?

Response:

Year	Tons
2009	1,702
2010	249,663
2011	450,309

Note: The tons in the chart above represent actual gypsum produced. The 478,792 tons referred to on Page 3, Line 21, of Jeff Swartz's April 2, 2012 Direct Testimony represent gypsum sold or disposed of in 2011.

(b) What were the "expenses for gypsum removal" (line 20 on page 3) incurred in each of the past years?

Year	A Sales	B Disposal	C Transportation
2009	Note 1	Note 1	Note 1
2010			
2011			

1
2

Note 1: PEF was in start-up of operating its scrubbers in 2009. Any gypsum that was produced as a by-product of the scrubber process was kept on PEF's storage pad and not sold that year. This gypsum was subsequently disposed of in 2010.

(c) What are the annual O&M costs associated with the disposal of the gypsum at the CR Plant In 2009, 2010 and 2011?

Response: O&M includes costs to load, transport and dispose of gypsum either to a third party or landfill facility. Please see the response to 5(b) above for transportation and disposal costs. With regard to loading costs, PEF has a combined contract for gypsum and limestone material handling services; however, gypsum handling costs are not separately itemized. These costs are estimated to be approximately \$93,600 per year.

(d) Please provide a general explanation of how PEF disposed of the gypsum produced at the CR Plant.

Response: Gypsum is conveyed to a storage pad and stacked out utilizing a radial stacker. A loader operator loads each truck with approximately 24 to 25 tons of gypsum. The gypsum is then transported the third party landfill for disposal.

(e) For 2009, 2010, and 2011, please indicate in each year how many tons, and the percentage of the total amount, of gypsum produced at the CR Plant were disposed (i) in an on-site storage facility, (ii) in an off-site landfill owned by PEF, (iii) in a third-party landfill, or (iv) by selling in the market for beneficial use.

Year	Tons	A Sold	B Percent Sold	C Disposal (Third Party Landfill)	D Percent Disposed
2009	1,702				
2010	249,663				
2011	450,309				

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2
3

- (f) **What were the typical tipping fees PEF incurred in 2011 for disposal of gypsum?**

Response: Please see the response to Question 5(b). Tipping fees are the disposal portion of gypsum removal expenses.

- (g) **What is the per mile cost per ton PEF incurred to transport gypsum to the disposal place(s)?**

Response: The cost to transport gypsum to the landfill facility is approximately \$0.10 to \$0.12 per ton-mile based on assumed load per truck and route taken.

- (h) **Referring to line 2 on page 4, please provide a detailed explanation of how the revenues generated by selling gypsum were distributed.**

Response: Revenues from the sale of gypsum, a by-product of the operation of the FGD systems, are credited to the ECRC. None of these revenues are in base rates.

- (i) **Referring to line 2 on page 4, please provide a detailed explanation of what caused the "suppressed market sales" and how PEF reacted on the changed market.**

Response: The suppressed market sales were directly caused by the national economic recession. Impacted markets from the on-going recession include cement, concrete and wallboard. Specifically, cement consumption in the U.S. fell to a 40 year low and was off more than 50% in the state of Florida alone. As a result, several of the cement kilns operating in Florida either reduced their operations or idled them all together. Wallboard production is mainly affected by the construction of new homes and overall "housing starts" fell to their lowest level in 50 years. As such, many of the wallboard manufacturers reduced operations to single shifts and idled additional production lines to minimize production. Additionally, many new facilities slated for construction were put on hold or terminated. The wallboard industry is the largest consumer of synthetic gypsum. Consistent with CAIR compliance deadlines and PEF's approved compliance plan, the Crystal River FGD systems came on line in 2009 and 2010 in the midst of this economic downturn. As a result, PEF entered the market at the height of the recession. Demand for synthetic gypsum was the lowest seen in decades and production not only outweighed demand but was expected to continue increasing.

Despite the declining markets, Progress Energy successfully identified a partner who could utilize all of Crystal River's synthetic gypsum production for the long term. Additionally, Progress Energy was able to identify and capture market share in the wallboard, cement and agricultural markets to bridge the gap between the start-up of the Crystal River scrubbers and the implementation of the longer term solution in 2013. As

such, Progress Energy's aggressive marketing strategies realized sales of more than 70% of the plant production during that period.

(j) To whom has PEF sold gypsum produced at the CR Plant in the past?

Response:



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(k) Does PEF have a plan in place to more aggressively market gypsum in 2012 and beyond?

Response: PEF continually evaluates, develops and implements marketing strategies that take advantage of all available outlets for synthetic gypsum. Specifically, PEF employs a comprehensive multi-tiered approach utilizing a combination of independent third-party marketing groups and internal sales and marketing resources in an attempt to maximize the opportunities for beneficial reuse. Through continual involvement in targeted commercial outlets and on-going evaluations of developing industries, Progress Energy is able to effectively identify and evaluate existing and emerging end-use markets to provide suitable beneficial reuse options for the Crystal River Energy Complex.

(l) Is there an on-site gypsum storage facility at the CR Plant?

Response: The Crystal River Plant has a small area for temporary storage of gypsum.

(m) If the response to (l) is affirmative, what is the size (in acres) and capacity (in tons) of the facility?

Response: The total capacity of the temporary storage area is approximately 32,000 tons or 1.3 acres. The facility reaches design capacity in approximately two to three weeks of production.

- (n) **If the response to (l) is affirmative, when was the storage facility built? What were the capital costs associated with the construction? What are the annual O&M costs for operating the facility?**

Response: The storage area was operational 11/26/09 at a capital cost of \$18.5M. The O&M costs are described in response to question 5(c) above.

- (o) **If the response to (l) is affirmative, in how many years will the facility reach its limit? What is the designed life of the facility?**

Response: The temporary storage area reaches its limits in two to three weeks. The designed storage limit is 32,000 tons.

- (p) **Does PEF own an off-site landfill for gypsum disposal?**

Response: No, PEF does not own an off-site landfill for gypsum disposal.

- (q) **If the response to (p) is affirmative, what is the size (in acres) and capacity (in tons) of the facility, and how far is it from the CR Plant?**

Response: N/A - PEF does not own an off-site landfill for gypsum disposal.

- (r) **If the response to (p) is affirmative, in how many years will the facility reach its limit? What is the designed life of the facility?**

Response: N/A - PEF does not own an off-site landfill for gypsum disposal.

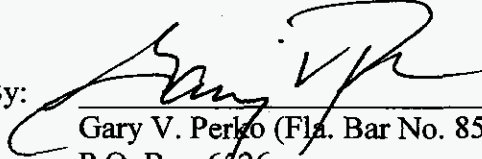
- (s) **Does PEF dispose of gypsum at a third-party landfill(s)? If so, how far away from the landfill is the CR Plant and what are the annual costs associated with the transportation of gypsum from the CR Plant to the landfill?**

Response: Yes, PEF has contracted with a third-party landfill to allow for disposal of any material that can't be beneficially reused. The Crystal River Energy Complex is located approximately 140 miles from the landfill. Transportation costs are outlined in the response to Question 5(b).

DATED this 30th day of May, 2012.

HOPPING GREEN & SAMS, P.A.

By:



Gary V. Perlo (Fla. Bar No. 855898)
P.O. Box 6426
Tallahassee, FL 32301
(850) 222-7500

Attorneys for Progress Energy Florida, Inc.

Docket No. 120007-EI
Staff 1st Set of Interrogatories
PEF's Response to Interrogatory #4
Reagent/By Product Variances

		Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	Actual	End of
		January 11	February 11	March 11	April 11	May 11	June 11	July 11	August 11	September 11	October 11	November 11	December 11	Period
		Total												
Expense Dr (Cr)														
a. 5020011	Ammonia Expense	386,148	272,242	329,813	331,400	303,028	365,735	385,006	403,853	281,229	246,773	206,406	199,468	3,711,100
b. 5020012	Limestone Expense	347,053	280,410	306,652	294,359	321,811	303,283	358,144	427,482	465,306	428,874	184,857	308,094	4,026,325
c. 5020013	Dibasic Acid Expense	0	0	0	0	0	0	0	0	0	0	5,281	3,245	8,527
d. 5020003	Gypsum Disposal/Sale	127,623	221,100	406,513	357,711	(82,572)	1,313,296	667,844	702,767	1,001,032	772,739	11,908	50,020	5,549,981
e. 5020014	Bottom/Fly Ash Reagents Expense	0	0	42,969	29,210	528	8,532	328,181	8,439	465	14,754	10,422	10,498	453,999
f. Other		860,823	773,753	1,085,947	1,012,680	542,795	1,990,846	1,739,175	1,542,541	1,748,032	1,463,140	418,874	571,326	13,749,932
Net Expense (C)														

		Actual	Actual	Actual	Actual	Actual	Actual	Estimated	Estimated	Estimated	Estimated	Estimated	Estimated	End of
		January 11	February 11	March 11	April 11	May 11	June 11	July 11	August 11	September 11	October 11	November 11	December 11	Period
		Total												
Expense Dr (Cr)														
a. 5020011	Ammonia Expense	386,148	272,242	329,813	331,400	303,028	365,735	283,486	284,753	259,983	249,223	146,852	242,673	3,455,337
b. 5020012	Limestone Expense	347,053	280,410	306,652	294,359	321,811	303,283	461,451	426,171	428,346	426,988	253,027	423,520	4,273,069
c. 5020013	Dibasic Acid Expense	0	0	0	0	0	0	0	0	0	0	0	0	0
d. 5020003	Gypsum Disposal/Sale	127,623	221,100	406,513	357,711	(82,572)	1,313,296	539,835	422,070	429,330	424,798	75,000	182,354	4,417,058
e. 5020014	Bottom/Fly Ash Reagents Expense	0	0	42,969	29,210	528	8,532	16,667	16,667	16,667	16,667	16,667	16,667	181,239
f. Other		860,823	773,753	1,085,947	1,012,680	542,795	1,990,846	1,301,439	1,149,661	1,134,325	1,117,675	491,546	865,213	12,326,703
Net Expense (C)														

		January 11	February 11	March 11	April 11	May 11	June 11	July 11	August 11	September 11	October 11	November 11	December 11	End of	Variance
		Total													Explanation
Expense Dr (Cr)															
a. 5020011	Ammonia Expense	0	0	0	0	0	0	101,520	119,099	21,245	(2,450)	59,554	(43,205)	255,763	1
b. 5020012	Limestone Expense	0	0	0	0	0	0	(103,308)	1,311	36,961	1,886	(68,170)	(115,426)	(246,745)	2
c. 5020013	Dibasic Acid Expense	0	0	0	0	0	0	0	0	0	0	5,281	3,245	8,527	3
d. 5020003	Gypsum Disposal/Sale	0	0	0	0	0	0	128,008	280,697	571,702	347,942	(63,092)	(132,334)	1,132,923	4
e. 5020014	Bottom/Fly Ash Reagents Expense	0	0	0	0	0	0	311,515	(8,227)	(16,202)	(1,913)	(6,244)	(6,168)	272,760	5
f. Other		0	0	0	0	0	0	437,736	392,880	613,707	345,465	(72,672)	(293,888)	1,423,229	
Net Expense (C)															

Variance Explanations

- 1 Ammonia variance primarily due to an increase in production offset by a decrease in the price of this reagent.
- 2 Limestone variance primarily due to burning lower sulfur coal later in the year that resulted in less limestone usage than originally forecasted offset slightly by higher capacity factors.
Usage of limestone is dependent on the reactivity rate of the limestone itself and the SO2 content of the coal burned. Lower sulfur coal produces less SO2.
- 3 Variance due to trial use of dibasic acid that was not originally forecasted. This substance was used to test for positive impacts on scrubber efficiency.
- 4 Variance due to higher than budgeted volumes & higher expenses for gypsum removal. In 2011, actual production of gypsum was 478,792 tons compared to a projection of 430,890 tons.
Actual production exceeded the projected amount primarily due to higher actual capacity factors for Crystal River Units 4 & 5. In addition, increased production and suppressed market sales led to more gypsum being land filled than expected.
- 5 Variance primarily due to April through June costs that were improperly classified and accounted for in July 2011.

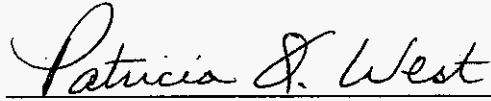
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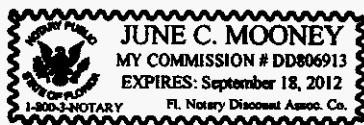
COUNTY OF PINELLAS)

I hereby certify that on this 10th day of May, 2012, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared PATRICIA Q. WEST, who is personally known to me, and she acknowledged before me that she provided the answers to interrogatory number 1 from STAFF'S FIRST SET OF INTERROGATORIES TO PROGRESS ENERGY FLORIDA, INC. (NOs. 1 - 5) in Docket No. 120007-EI, and that the response is true and correct based on her personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 10th day of May, 2012.


Patricia Q. West


Notary Public
State of Florida



My Commission Expires:

Sept. 18, 2012

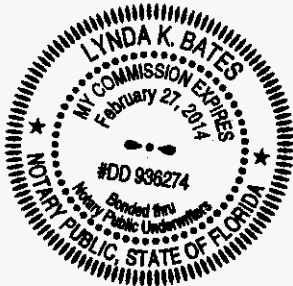
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(STATE OF FLORIDA

COUNTY OF Pinellas)

I hereby certify that on this 29 day of May, 2012, before me, an officer duly authorized in the State and County aforesaid to take acknowledgments, personally appeared COREY ZEIGLER, ~~who is personally known to me,~~ and he acknowledged FL DRIVERS LICENSE before me that he provided the answers to interrogatory number(s) 3 from STAFF's FIRST SET OF INTERROGATORIES TO PROGRESS ENERGY FLORIDA, INC. (NO. 1) in Docket No. 120007-EI, and that the responses are true and correct based on his personal knowledge.

In Witness Whereof, I have hereunto set my hand and seal in the State and County aforesaid as of this 29 day of May, 2012.



Corey Zeigler
Corey Zeigler

Lynda K Bates
Notary Public
State of Florida

My Commission Expires:

2/27/14