JEFF ATWATER
President of the Senate

RAY SANSOM
Speaker of the House of Representatives

STATE OF FLORIDA
OFFICE OF PUBLIC COUNSEL

C/O THE FLORIDA LEGISLATURE
111 WEST MADISON ST.
ROOM 812
TALLAHASSEE, FLORIDA 32399-1400
850-488-9330

EMAIL: OPC_WEBSITE@LEG.STATE.FL.US
WWW.FLORIDAOPC.GOV

J.R. Kelly
Public Counsel

REDACTED

February 13, 2009

RECEIVED-FPSC
09 FEB 13 PM 3:37
COMMISSION CLERK

Ms. Ann Cole, Commission Clerk
Office of Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Docket No. 070703-EI

Dear Ms. Cole:

COM
ECR
GCL
OPC
RCP
SSC
SGA
ADM
CLK

On February 2, 2009, our office filed the direct testimony and exhibits of David J. Putman in the above docket. At the time, Progress Energy Florida, Inc. (PEF) had not had an opportunity to review the testimony and exhibits to determine whether it contained information that PEF deems confidential. Accordingly, we filed a single copy of the entire package of testimony and exhibits subject to confidentiality, pending PEF's review.

Recently PEF informed us that it has completed its review. PEF informed us that PEF asserts that certain portions of Mr. Putman's Exhibit DJP-8 are confidential. PEF informed me that it will file today a Request for Confidential Classification relating to DJP-8.

Accordingly, I am delivering, for filing and distribution, the original and 15 copies of the "public version" of Mr. Putman's testimony and exhibits. Exhibit DJ-8 of the public version has been redacted to be consistent with PEF's assertion of confidentiality.

After we filed the first package of testimony and exhibits, it came to our attention that we inadvertently included the wrong version of Exhibit DJP-7, which had been modified to include, on page 3 of 3, more detailed labeling of a table showing Btu contents of blends of coal. We

have rectified that mistake in the 15 copies that we are delivering you today. The additional column headings, which were added for greater clarity, constitute the only "substantive" changes to the exhibit. We have identified it as "Revised Exhibit DJP-7".

Inasmuch as Exhibit DJP-8 is the only portion of the testimony and exhibits that is the subject of PEF's claim of confidentiality, and PEF has today included full and redacted versions of Exhibit DJP-8 with its Request for Confidential Classification, I request that you return the first package that we filed under confidentiality pending the completion of PEF's review.

Thank you for your assistance.

Yours truly,

Joseph A. McGlothlin
Associate Public Counsel

JAM:bsr

Enclosure

cc: John Burnett
Paul Lewis
Lisa Bennett

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Review of coal costs for Progress Energy Florida's Crystal River Units 4 And 5 for 2006 and 2007	))))	Docket No. 070703-EI Filed: February 2, 2009

(PUBLIC VERSION)

DIRECT TESTIMONY

OF

DAVID J. PUTMAN

ON BEHALF OF THE CITIZENS OF THE STATE OF FLORIDA

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In Re: Review of coal costs for Progress Energy Florida's Crystal River Units 4 And 5 for 2006 and 2007	))))	Docket No. 070703-EI Filed: February 2, 2009

(PUBLIC VERSION)

DIRECT TESTIMONY

OF

DAVID J. PUTMAN

ON BEHALF OF THE CITIZENS OF THE STATE OF FLORIDA

TABLE OF CONTENTS

EXHIBITS

DIRECT TESTIMONY

OF

DAVID J. PUTMAN

On Behalf of the Office of Public Counsel

Before the

Florida Public Service Commission

Docket No. 070703-EI

I. STATEMENT OF QUALIFICATIONS

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is David J. Putman. My business address is 2236 Royal Crest Drive, Birmingham, Alabama 35216.

Q. BY WHOM ARE YOU EMPLOYED?

A. I work as an independent consultant working under the name of Putman Consulting Services. I work with coal producers, transportation companies, power generators, and other related companies to identify innovative solutions to their problems.

Q. PLEASE GIVE US A SUMMARY OF YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE.

A. I have a Bachelor of Mechanical Engineering degree from Georgia Institute of Technology (1967) and a Juris Doctor Degree from Birmingham School of Law (1982).

I have extensive practical experience in multiple areas of utility power plant operations and fuel acquisition nmanagement gained from 30 years of employment with Alabama Power Company and Southern Company Services. Additional information is shown on my resume, which I have attached as Exhibit No. _____ (DJP- 1)

II. BACKGROUND

Q. PLEASE BRIEFLY DESCRIBE THE GENESIS OF THIS PROCEEDING.

A. When the management of PEF's predecessor utility contracted for the design and construction of Crystal River Units # 4 and # 5 (CR4 and CR5), it specified boilers, plant auxiliary equipment and coal yard equipment capable of burning a 50/50 blend of bituminous and sub-bituminous coal. This 50/50 mix was the designated "Design Fuel" that served as the basis for plant design. As part of Florida's plant site approval process the plant was permitted to burn that blend. The utility paid a premium price for the ability to burn a diverse fuel mix. The total cost, including the premium, would have been built into base rates that continue to affect rates paid by PEF customers today.

When the units were completed and ready to be placed in commercial service, the utility did not conduct an acceptance test using the 50/50 Design Fuel. This type test—by that, I mean a test using the "design basis" fuel-- is the accepted practice within the industry. When CR4 and CR5 commenced operations, the units burned 100% bituminous coal from the Central Appalachian coal region. In recent years the plant added bituminous coal from South America to its procurement mix.

In 1996, under Title V of the Clean Air Act, utilities were required to acquire new federal permits for burning the coal they would use for future operations. In its application for the new federal permit for CR4 and CR5, PEF proposed to burn only bituminous coal. The permit PEF received therefore limited it to that type of coal. When PEF applied to renew the federal permit in 2000, PEF again identified only bituminous coal as a fuel, and again the terms of the permit restricted PEF to bituminous coal.

For a period of time following the commercial in-service dates of CR 4 and 5, bituminous coal was the most economical option for the units. During this time the ratepayers did not overpay for fuel due to PEF''s failure to test sub-bituminous coal, acquire the appropriate permit modifications or to keep the plant equipment maintained so as to be capable to burn the sub-bituminous coal.

In the 1990's, the mines in the Powder River Basin (PRB) were developing in a major way. That area became a significant and expanding source of low cost, low sulfur sub-bituminous coal. Because the cost of the coal was very low and the coal is environmentally beneficial, many utilities in the Midwest, Southeast and even into the Northeast began to experiment and test the coal in a wide range of units. Southern Company, where I worked at the time as General Manager in the Fuel Department, was one of those utilities. Utilities found that many units with a reasonable amount of modifications, could burn the coal very successfully. The Southern Company, for example, converted all four of the units at each of its two largest plants to burn 100% sub-bituminous coal, even though those units were not designed to burn sub-bituminous coal. Those big Southern Company plants are

Plant Miller at Alabama Power and Plant Scherer at Georgia Power. However, despite having built the ability to burn sub-bituminous coal into the design of CR4 and CR5, PEF did not seek to obtain the requisite authority to burn sub-bituminous coal and did not test the coal in CR4 and CR5.

In Docket No. 060658-EI, the Commission considered a petition by the Office of Public Counsel to require Progress Energy Florida to refund excess fuel charges occasioned by its imprudent inability to take advantage of more economical sub-bituminous coal.

In Order No. PSC-07-0816-FOF-EI, issued on October 10, 2007 in Docket No. 060658-EI, at pages 34-35 the Commission found:

> "...PEF did not act prudently in placing itself in a position to purchase PRB coal for CR4 and CR5. During 2001 and 2002 PEF did not seek revisions to its environmental permit, it did not conduct PRB coal test burns, it did not modify its plant to burn PRB coal on a long term basis, nor did it purchase PRB coal. Despite the fact that PFC recognized in May 2001 that PRB was very competitive, on an evaluated basis, with the types of coal it had historically purchased (CAPP coal and foreign coal) on behalf of PEF, prudent steps were not taken. We find that PEF management's failure to act despite its affiliate managements' knowledge the PRB coal was a cost-effective alternative was imprudent. We find that while PEF did not pay excessive fuel costs for the years 1996 through 2002 it did pay excessive fuel costs from 2003 through 2005."

The PSC found that PEF's imprudence caused excess coal costs of $9,797,568 and related excess emissions costs (related to the lower sulfur content of the sub-bituminous coal that PEF was unable to purchase) of $2,627,924 during the period 2003 through 2005 for a total of $12,425,492, before the application of interest.

Q. DID YOU PARTICIPATE IN DOCKET NO. 060658-EI?

A. Yes, I testified for the Office of Public Counsel (OPC) in Docket No. 060658-EI. I described my experience with sub-bituminous coal out of the PRB coal region when I was procuring coal for Southern Company as General Manager of the Fuel Department of Southern Company Services. I described how the aggressive marketing by the PRB producers and the Western railroads alerted us to the opportunities offered by the growing coal production in the PRB. I described how we conducted careful tests at Plant Scherer that worked so well that other plants quickly jumped on board with their own tests. I described the types of modifications in coal handling equipment and procedures that were required and how those were made with reasonable ease and costs. And of course I stressed the very significant reductions in fuel cost experienced by the companies and therefore their ratepayers.

III. PURPOSE AND SUMMARY

Q. WHAT IS YOUR ROLE IN THIS PROCEEDING?

A. I have been asked to provide analytical assistance in determining whether PEF's customers were required to bear unnecessarily high fuel costs in calendar years 2006 and 2007 as a result of PEF's inability to take advantage of the most economical coal market opportunities that were available to the company. Based on the analysis I have performed, I will testify that the specific imprudences that the Commission identified in Docket No. 060658-EI continued to impact coal and emissions costs adversely during 2006 and 2007. I will also testify that the specific issues already identified are symptomatic of a broader shortcoming of management

that appears to impact both the procurement program and plant operations. I will testify that, taking into account and applying the parameters of the Commission's decision in Docket No. 060658-EI, and comparing the cost of the coal actually delivered with the evaluated costs of the bids submitted to PEF for delivery in calendar years 2006 and 2007, the failure of PEF to position itself to take advantage of the ability of CR4 and CR5 to burn a mixture of bituminous and sub-bituminous coals continued to require customers to bear unnecessarily and unreasonably high fuel costs. I will show that in 2006 and 2007 PEF overcharged retail customers in the amount of $51,015,826 as a direct result of its inability to take advantage of the most economical fuel offered to it for CR4 and CR5. This figure relates solely to the differential between the cost of coal that was actually delivered to CR4 and CR5 and the lower cost of a blend containing 20% sub-bituminous coal that was available to PEF but that PEF was precluded from buying because of the imprudences observed by the Commission in Docket No 060658-EI. The lower costing blend would have led to separate savings, in the form of lower costs of SO2 emissions allowances, of $10,263,367.65. Neither of these figures includes the application of interest. In Docket No. 060658-EI, the Commission included both components (fuel cost differential and extra costs of emissions allowances) when it calculated the refund provision of Order No. PSC-07-0816-FOF-EI.

IV. EXCESS FUEL COSTS, 2006-2007

Q. WHAT ARE THE FAILURES TO WHICH YOU REFER THAT WERE IDENTIFIED BY THE COMMISSION IN DOCKET NO. 060658-EI?

A. The Commission found that during the period covered by Docket No. 060658-EI, including the years 2001 through 2005, PEF did not seek revisions to its

environmental permit timely, did not conduct PRB coal test burns, and did not modify its plant to burn sub-bituminous coal on a long term basis. The Commission concluded that, because of these imprudences, PEF was not positioned and was therefore unable to procure and burn the most economical fuel available in CR4 and CR5 during three years of the time frame that the Commission examined in Docket No. 060658-EI.

Q. HOW DID YOU STRUCTURE YOUR ANALYSIS TO COMPARE THE COST OF COAL ACTUALLY DELIVERED TO COSTS OF OTHER COAL AVAILABLE TO PEF FOR BURNING IN 2006 AND 2007?

A. I used the evaluation guidelines established by the Commission in PSC Order No. PSC-07-0816-FOF-EI, to compare the delivered coal costs actually incurred by PEF during the years 2006 and 2007 against the costs that would have been incurred if PEF had implemented a procurement program that fully utilized the lowest cost coal available to it during the time period.

In my analysis I recognized and fully incorporated the restrictions imposed by the Commission's prior order, in which when calculating a refund, it limited the use of sub-bituminous coal to a maximum of 20 % (by weight) blend and assumed the blending had to occur prior to arrival at the plant. The Commission applied the 20% factor to only coal that was delivered to CR4 and CR5 by water. Only about half of the coal is shipped to the plant by water; the other half, which is delivered by rail, was not included in the calculation of the refund.

Q. PLEASE ELABORATE ON THE PARAMETERS OF PSC ORDER NO. PSC-07-0816-FOF-EI.

A. The "cost effectiveness test" that the Commission applied in Order No. PSC-07-0816-FOF-EI requires a comparison of the delivered coal costs that PEF actually incurred by using Central Appalachian and South American imported coal at CR 4 and CR 5 during 2006 and 2007 with the evaluated costs that would have been incurred if a blend containing 20 % blend of sub-bituminous coal and 80% bituminous coal had been used at CR 4 and 5 during the same period.

Q. WHAT DOES THE TERM "EVALUATED COST" MEAN?

A. "Evaluated cost" refers to the cost that results when the price quoted by the supplier is adjusted to take into account cost factors not quantified in the quoted "cash price," such as the transportation cost to move the coal from the sales point (FOB point) to the plant, the predicted impact of the offered coal on the boiler operations, and sulfur content.

Q. WHAT MATERIALS DID YOU USE FOR YOUR ANALYSIS?

A. In order to reduce conflicts and disputes regarding the data and assumptions in my analysis compared to any analysis prepared by PEF, I made every effort to use data prepared by PEF or the same industry data relied on by Mr. James Heller, the witness for PEF. In fact, at the core of my comparisons are the actual delivered costs of coal delivered to CR4 and CR5 as reported by PEF and the evaluated costs of alternatives as calculated by PEF at the time it solicited proposals for coal. Although my results differ greatly from Mr. Heller's conclusions, our available

sources were the same. I will identify the sources of the differences later in my testimony.

I relied on PEF's historical delivered coal price data as reported to the Federal Energy Regulatory Commission (FERC) on Form 423 for the 2006-2007 time periods. The relevant data in these reports show the cost of coal delivered to a transloading terminal. The final cost to deliver it by water to the plant must be added to the FERC 423 costs. Exhibit No. _____ (DJP-2)

To determine the cost to deliver coal from the transloading facility I reviewed actual cost data prepared by PEF for the two year period that broke the costs into the categories, barge costs and other costs. Upon comparing the results of my review with the results that Mr. Heller, PEF's witness, used in his Exhibit No. ___(JNH-3), I found the numbers to be the same -- as one would expect, since we both used the same source documents. So, again to reduce any controversy in the way we both performed our separate analysis, I am going to refer to Mr. Heller's exhibit as my source of the "Gulf Barge Transport Rate" and "other Costs" inputs to my comparison analysis.

It is instructive to compare the price for coal actually delivered to CR4 and CR5 as calculated by Mr. Heller on his Exhibit No. _____ (JNH-3) and the same number calculated by me in my similar exhibit to be discussed later. The numbers are basically the same. This means that any final differences in our analyses will be on the side of the comparison that involves selecting and quantifying, on the basis of

availability and evaluated cost, the alternative sub-bituminous coal that could have been purchased.

To determine the evaluated costs of alternative options available to PEF for each year, I relied on evaluation sheets prepared by PEF's Coal Procurement organization in the normal course of business when the organization prepares to make decisions based on responses to formal Request for Proposals (RFPs). The evaluation sheets prepared by PEF summarize all the bids received and show offered prices, delivery point, delivery method, tons offered, period of delivery, coal quality specifications, coal sourcing and other key information.

Q. PLEASE ELABORATE ON PEF'S CALCULATION OF AN "EVALUATED COST."

A. In accordance with PEF's corporate procurement policy during an RFP PEF procurement personnel make an evaluation of each coal offered and its effect on boiler operation. To do this they may use a model, reported currently to be the VISTA model, or they may attempt to approximate the model by using a shorthand variation that uses past outputs from complex model runs. In any case, PEF assigns an evaluated cost to each bid that compares the quality of the offered coal to a baseline standard and that takes operational factors into account. The evaluated cost is shown on the evaluation sheet. The evaluated cost could be higher or lower than the price quoted in the proposal, based on the comparison of the qualities of the coal with the baseline value.

PEF determines a cost of delivery of the coal from the supplier's delivery point (the FOB point) to the plant. This cost is shown on the evaluation sheet.

On the evaluation sheet the numbers are summed and a "Cash Cost" (i.e., the price quoted by the supplier, as affected by transportation costs) is shown in both $/ton and $/ MMBtu as well as an "Evaluated Cost" in $/ton and $/MMBtu. The bids are ranked based on the evaluated cost in $/MMBtu. The final evaluated cost is dependent upon the assumptions and values that are employed as inputs to the calculation.

Q. IN YOUR ANALYSIS, DID YOU MODIFY OR TAKE ISSUE WITH EITHER THE MANNER IN WHICH PEF EVALUATED THE COALS OR THE SPECIFIC INPUTS THAT PEF CHOSE FOR THE ANALYSIS?

A. No. In my analysis I wished to employ, to the extent possible, PEF's own numbers. Without indicating whether I would necessarily agree or disagree with all of PEF's inputs had I performed a separate and independent evaluation, for my purposes I used the evaluated costs that PEF derived, without change.

These evaluations represented bids from a competitive market RFP that were competing alternatives at the time PEF made purchase decisions for the years that are the subject of this docket. For that reason, evaluated costs are the best information available. In Order No. PSC-07-0816-FOF-EI, the Commission determined that using the evaluated costs of available alternatives is the appropriate way to assess whether the actual delivered costs were reasonable.

Q. WHICH OF PEF'S PROCUREMENT ACTIVITIES DID YOU REVIEW DURING THE COURSE OF YOUR ANALYSIS?

A. I reviewed the following RFPs issued by PEF, all of which resulted in bids offering coal for 2006 and 2007:

Date of RFP	Period encompassed by RFP					
April 2004	RFP for	2005	2006	2007		
September 2005	RFP for	2006	2007	2008		
February 2006	RFP for	2007	2008	2009		
September 2007	RFP for	2008	2009	2010	2011	2012

I reviewed the September 2007 RFP only to evaluate future trends.

Q. PLEASE DESCRIBE THE STEPS IN YOUR ANALYSIS.

A. In my analysis, I consciously tracked the methodology that the Commission employed when it calculated the refund in Order No. PSC-07-0816-FOF-EI. First, to implement the Commission's decision to base the cost of alternative coal on a blend containing 20% sub-bituminous coal, I determined the number of tons represented by 20% of the total amount of waterborne coal received at the plant for each year, 2006 and 2007. The basis for my calculation is PEF's answer to OPC's Interrogatory No. 4, which shows that PEF delivered 2,689,454 tons by water in 2006 and 2,626,932 tons by water in 2007. I am attaching PEF's answer to Interrogatory No. 4 as Exhibit No. _____ (DJP-3). Applying the 20% factor, I identified 537,890 tons and 525,386 tons as the quantity of lower costing, alternative sub-bituminous coal that could have been substituted in 2006 and 2007, respectively, under the approach the Commission adopted in PSC Order No. PSC-

07-0816-FOF-EI. The quantity of tons representing 20% of the water-delivered tons was a little higher than the number used in Docket No. 060658-EI because apparently PEF was able to move more coal by water in 2006 and 2007. Next, on the assumption that any more economical coal would be used to displace the most expensive coal that was actually delivered, using Form 423 data I ranked the actually delivered coal in order of cost, and identified the 20% highest costing tons for each of the years 2006 and 2007. This is the method that PEF witness James Heller used in Docket No. 060658-EI for his "cost-effectiveness test." The Commission adopted this approach in its Order. I note that Mr. Heller used this same method in his prefiled testimony for this docket.

Q. PLEASE CONTINUE.

A. After I determined the highest cost coal actually delivered that constituted 20% of all tons actually delivered by water, using information on the FERC form 423, I then determined the total cost of delivering those tons to the plant for each year. For the costs to deliver the coal to Crystal River I used the Gulf Barge Transport Rate and Other Costs from Mr Heller's Exhibit No. _____(JNH-3). The total of the two years' costs was the delivered cost actually incurred by PEF by using Central Appalachian and imported South American coal during 2006 and 2007 that could have been replaced by a corresponding number of tons of sub-bituminous coal.

I then determined the lowest cost options for the same quantity of tons available to PEF for each of the years 2006 and 2007 which could have been used in a 20% blend with other waterborne coal.

Q. HOW DID YOU SELECT THE ALTERNATIVES TO COMPARE AGAINST ACTUAL DELIVERED COSTS?

A. For 2006 I reviewed bids offered in the April 2004 RFP. The lowest cost bids on an evaluated basis that were available in both 2005 and 2006 were PRB bids offered to PEF in response to its April 2004 RFP. It is important to understand that in the April 2004 RFP document, which I am attaching as Exhibit No. _____ (DJP-4), PEF solicited, and later received, proposals to deliver coal in 2005, 2006, and 2007. In fact, I believe it is worth emphasizing that the portion of the refund related to calendar year 2005 that the Commission ordered in Docket No. 060658-EI was based on a comparison of the coal that was actually delivered to CR4 and CR5 in 2005 with the evaluated cost of sub-bituminous coal that was offered for delivery in 2005 in response to the April 2004 RFP solicitation. The inquiry of Docket No. 060658 ended with calendar year 2005; however, because in the 2004 RFP PEF solicited proposals for 2006 and 2007 as well, and in fact acted on the proposals as they relate to 2006, the 2004 RFP is as important to this docket as it was to the earlier one.

Q. PLEASE DESCRIBE PEF'S PURCHASES AND OTHER ACTIONS THAT SHOW PEF HAD ADEQUATE SPACE IN ITS PROCUREMENT PLAN FOR 2006 TO HAVE ALLOWED THE PURCHASE OF THE TONS OF SUB-BITUMINOUS COAL THAT YOU USED IN YOUR ANALYSIS.

A. The decisions are well documented in a report by PEF's procurement personnel to management dated June 22, 2004, which I am attaching to my testimony as Exhibit No. _____(DJP-5). At the time, with respect to CR4 and CR5 PEF had an open position for 650,000 tons and was negotiating an extension of an existing contract

for additional tons. PEF elected to fill 480,000 tons of the open position from proposals for bituminous coal that were submitted in response to the April 2004 RFP. PEF purchased 480,000 tons of bituminous coal at a price higher than the evaluated price of PRB sub-bituminous coal that had been offered for delivery in 2006. With respect to the contract extension, which PEF negotiated during the same time frame in which it conducted the RFP, PEF purchased an additional 1 million tons of bituminous coal for delivery in 2006 at a delivered price higher than the evaluated cost of PRB sub-bituminous coal that was bid to the 2004 RFP for delivery in 2006. This more economical PRB sub-bituminous coal could have been purchased in lieu of the "contract extension" coal. Inasmuch as the total of the bituminous coal that PEF purchased to add to the amount already contracted (480,000 + 1,000,000) exceeded the tons represented by 20% of the total tons that could be delivered by water (537,890), it is clear that there was ample room in the 2006 procurement plan to purchase 537,890 tons of sub-bituminous coal instead of the higher priced coal that was actually purchased.

Q. YOU MENTIONED THAT THE APRIL 2004 RFP INVITED BIDDERS TO SUBMIT PROPOSALS FOR COAL TO BE DELIVERED IN 2007 AS WELL AS 2005 AND 2006. DID THE BIDDERS SUBMIT PROPOSALS RELATED TO DELIVERY IN 2007?

A. Yes. The bids received by PEF from the April 2004 RFP included several offers for coal to be delivered in 2007, including the low cost PRB offers. However, PEF elected to not buy any coals off the RFP for delivery during 2007.

Q. IN YOUR ANALYSIS, DID YOU MODIFY EITHER THE QUANTITY OF COAL THAT PEF PURCHASED FOR DELIVERY IN 2006 OR ITS DECISION NOT TO PURCHASE COAL FROM THE 2004 RFP FOR DELIVERY IN 2007?

A. No. I did not question PEF's decision not to buy coal for 2007 from the April 2004 RFP. Nor did I question or modify PEF's decision to purchase less than the "full burn" requirement for 2006 at the time it acted on the bids to the 2004 RFP and negotiated a extension of an existing contract. A utility's decision on the timing and size of a purchase is a subject separate from the impact of not buying the lowest cost coal available at the time the purchase decision is made. I limited my review to the latter subject. In other words, as a starting point I accepted the timing and quantities of coal resulting from PEF's procurement actions. I focused solely on the difference between actual delivered prices and what the cost would have been if PEF had included 20% sub-bituminous coal when it was more economical *and* when it was being offered to PEF at the time of PEF's decisions.

Q. PLEASE SUMMARIZE YOUR COMPARISON OF "ACTUAL DELIVERED" COSTS FOR 2006 AND THE EVALUATED COSTS OF ALTERNATIVE COALS THAT WERE AVAILABLE AT THE TIME PEF MADE ITS PROCUREMENT DECISIONS FOR 2006.

A. For 2006, the decisions that PEF made at the conclusion of the 2004 RFP—the same decisions that led the Commission to order a refund of 2005 costs—are key. It happens that the analysis for 2006 is a straightforward extension of the adjustment the Commission made for 2005. The same suppliers of sub-bituminous coal that offered coal to be delivered in 2005 at evaluated costs lower than the delivered cost of the

bituminous coal that PEFactually received at CR4 and CR5 in 2005 also offered proposals for 2006 coal to be delivered in 2006 at evaluated cost lower than the delivered cost of the bituminous coal that PEF actually received at CR4 and CR5 in 2006. I am attaching the evaluation sheet that PEF prepared to summarize the proposals submitted to the April 2004 RFP as Exhibit No. ____ (DJP-6).

Accordingly, I accepted the delivered costs and the quantity of tons delivered in 2006 as reported by PEF, calculated the cost of delivering the highest costing 20% of the total tons delivered by water, then compared that to an equal number of tons of the more economical sub-bituminous coal that was offered in the 2004 RFP for delivery in 2006. I used PEF's own evaluated cost of the sub-bituminous coal, to comprise 20% of the amount delivered by water in 2006. This comparison results in a reduction of 2006 costs of fueling CR4 and CR5 in the amount of $25,149,462. Page one of my Exhibit No. _____ (DJP-7) shows the details of the calculation.

Q. HOW DID YOU SELECT ALTERNATIVES FOR 2007 TO COMPARE AGAINST ACTUAL DELIVERED COSTS?

A. For my analysis of calendar year 2007, I used bids received in response to the February 2006 RFP. I am attaching PEF's summary of evaluations of bids submitted to the 2006 RFP as my Exhibit No. ____(DJP-8). The lowest cost bids received on an evaluated basis were two bids for sub-bituminous coal from mines in Indonesia, as shown by the 'evaluated ranking' on page 2 of Exhibt No. _____ (DJP-8). The evaluation sheet prepared by PEF clearly identifies these proposals as the lowest and second lowest bids for coal to be delivered in 2007. In fact, in his prefiled testimony in Docket 060658-EI, PEF witness Mr. Weintraub acknowledged

that the Indonesian sub-bituminous coal was the cheapest coal offered in response to the 2006 RFP. He also testified that PEF did not purchase the Indonesian sub-bituminous coal offered to the 2006 RFP for delivery in 2007 because PEF was still in the process of organizing the test burn (that would later support its application for a permit authorizing PEF to burn sub-bituminous coal legally). Specifically, Mr. Weintraub testified:

> We did not purchase the Indonesian sub-bituminous coal product because the plant had no prior experience with this type of coal, the CR4 and CR5 units were undergoing modifications to safely handle the PRB coals for a test burn as recommended by our outside engineering consultant and the test burn of PRB sub-bituminous coals had not yet occurred.

I am attaching the pertinent portion of Mr. Weintraub's testimony as Exhibit No. _____ (DJP-9).

Q. HAVE YOU HAD AN OPPORTUNITY TO REVIEW PEF'S EVALUATION OF THE BIDS THAT THE INDONESIAN PRODUCERS AND OTHERS SUBMITTED TO PEF'S 2006 RFP?

A. Yes. I have attached PEF's evaluation sheet from the February 2006 RFP as Exhibit No. _____ (DJP-8) to my testimony. It shows that, as Mr. Weintraub testified in Docket No. 060658-EI, on an evaluated basis the two bids to supply sub-bituminous coal that Indonesian producers offered to PEF in response to the 2006 solicitation were the cheapest coals offered to supply CR4 and CR5 in calendar year 2007.

Q. WHAT ELSE DOES THE EVALUATION SHEET REVEAL ABOUT THE INDONESIAN SUB-BITUMINOUS COALS?

A. The specifications for the Indonesian sub-bituminous coal show that this coal possessed many desirable characteristsics. The ash content of the Indonesian coal was extremely low, which is very desirable from an operational standpoint. The coal offered by the Indonesian producers also contained extremely low amounts of sulfur. The highly desirable qualities are reflected in the favorable score the coal received when PEF subjected it to the "evaluated cost" process.

Q. WERE THE PROPOSALS OF THE INDONESIAN PRODUCERS TO DELIVER COAL IN 2007 VIABLE AT THE TIME?

A. Yes. The two Indonesian suppliers are significant and substantial global coal suppliers. Quoting from PT Adaro's web site:

> PT Adaro has been mining coal from its coal concession area in the Tantung region of Indonesia's South Kalimanatan Province since 1991. The coal resource comprises 2.8 Billion tonnes of surface minable coal which is exceptionally clean at 0.1% sulpher and 1.5% and which, because of its environmental attributes, has been trademarked globally as Envirocoal. The coal has been used widely throughout Europe, Asia and the Americas. Production and sales of Envirocoal have increased steadly since the start-up of operations reaching 36 million tons in 2007.

PT Kideco Jaya Agung was established in 1982. It produced 22 million tons of coal in 2008. It is also a major exporter of coal into the Global market. I am attaching portions of the information that the Indonesian producers supplied to PEF at the time they submitted their proposals as Exhibit No. _____(DJP-10).

Q. WOULD THE ABSENCE OF A STACK TEST SPECIFIC TO THE INDONESIAN COAL HAVE PREVENTED THE TRANSACTION, EVEN IF

PEF HAD PERFORMED A TEST WITH PRB SUB-BITUMINOUS COAL AND HAD OBTAINED A PERMIT AT THE TIME OF THE RFP?

A. No. The quality specified by the producers was higher than that of the PRB coal typically available, and, especially in view of the extremely low ash content, the impact on operations would have been more favorable than sub-bituminous coal from the PRB. Even if PEF desired to conduct a stack test before purchasing the coal in quantity, in Docket No. 060658-EI PEF's witness testified that PEF conducted a stack test sufficient to confirm the suitability of a new imported bituminous coal in only four days of testing. It is clear from Mr. Weintraub's testifimony in Docket No. 060658-EI that only PEF's failure to position itself to take advantage of the opportunity presented by sub-bituminous coal prevented PEF from purchasing the Indonesian coal.

PEF's request to modify the plant's permit to authorize the burning of sub-bituminous coal was not filed until September 5, 2006 and it was not approved until May 18, 2007, which was well after the purchase decisions had been made from the February 2006 RFP. Thus, again in 2006,PEF was precluded by the earlier imprudences noted in PSC Order No. PSC-07-0816-FOF-EI from taking advantage of the lowest priced coal offered for delivery to CR4 and CR5 in 2007 at the time of its procurement decisions.

Q. DID PEF EXECUTE ANY CONTRACTS FOR DELIVERY OF COAL TO CR4 AND CR5 IN 2007 WITH BIDDERS TO THE 2006 RFP?

A. Yes. PEF entered into two such contracts with bidders whose proposals were more expensive than the Indonesian proposals. The two contracts totaled 762,000 tons for

2007. These contracts demonstrate that, as was the case at the time of the 2004 RFP, there was "room" in PEF's procurement plan to purchase the 525,386 tons of more economical sub-bituminous coal that I have used in my analysis.

Q. PLEASE SUMMARIZE THE COMPARISON YOU MADE BETWEEN ACTUAL DELIVERED COSTS FOR 2007 AND AVAILABLE ALTERNATIVES.

A. I began with PEF's actual delivered costs for 2007. Using the same methodology that I described earlier when discussing calendar year 2006, I calculated the alternative cost that would have been incurred if it had replaced the highest costing 20% of the quantity delivered by water with the more economical sub-bituminous coal from Indonesia. The exercise resulted in an adjustment for 2007 of $25,866,364. Page 2 of Exhibit No. _____ (DJP-7) shows the calculation in detail.

Q. WHAT IS THE TOTAL AMOUNT OF OVERCHARGES RELATING TO CALENDAR YEARS 2006 AND 2007 THAT THE COMMISSION SHOULD REQUIRE PEF TO REFUND TO ITS CUSTOMERS?

A. The amount is reflected on my page 2 of Exhibit No. _____(DJP-7), which presents the results of my analysis and shows a total excess coal cost for both years of $51,015,826.

Q. CAN YOU EXPLAIN TO THE COMMISSIONERS HOW THE EXCESS FUEL CHARGES RELATING TO CR4 AND CR5 COULD REACH AN AMOUNT OF THIS MAGNITUDE IN TWO YEARS, GIVEN THAT YOUR CALCULATION LIMITS THE QUANTITY OF THE ALTERNATIVE SUB-

BITUMINOUS COAL TO A 20% BLEND OF THE QUANITY DELIVERED BY WATER?

A. Yes. Perhaps it is natural to expect that bids to a competitive Request for Proposals will not vary in price to a great extent—that is to say, one would expect the bids to be competitive, and the differential in overall costs less than dramatic. That was not the case in either the 2006 or the 2007 time frames. Based on PEF's own evaluated costs of the bids they received, that include transportation, the alternative sub-bituminous coal that PEF could not purchase was approximately 40% cheaper than the bituminous coal that was actually delivered.

Q. PLEASE ELABORATE ON THE SIGNIFICANCE OF THIS DIFFERENTIAL.

A. Methodologically, I conducted my comparison by expressing the costs of the two scenarios in units of dollars per million Btus. Because most people are more accustomed to thinking in terms of tons, perhaps a generalized "ball park" comparison of costs per delivered ton will help convey the magnitude of the differential. For the coal that was actually delivered, during the 2006-2007 time frame PEF paid approximately $72-$76 per ton. The cost of the sub-bituminous alternative that was offered in the RFPs was in the range of $28-$34 per delivered ton. Accordingly, the difference was generally in the range of $42-$44 per ton. Even with the limitation of 20% of coal delivered by water, the opportunity was to purchase and blend more than 500,000 tons of the sub-bituminous coal with the bituminous coal during each calendar year—or more than a million tons for the two year period. This view of the differential in the costs of the coals and the quantities

involved shows how the numbers can get very large in a relatively short time. It also emphasizes the importance of flexibility and preparedness.

This dramatic difference in the costs of the two alternatives is of the order of magnitude that seized the attention of Southern Company and caused it to convert units and begin burning 100% sub-bituminous coal beginning in the 1990s.

Q. YOU MENTIONED THAT YOU AND MR. HELLER WORKED FROM THE SAME AVAILABLE RESOURCES. HOW DO EXPLAIN THE VERY DIFFERENT RESULTS OF YOUR ANALYSES?

A. As discussed earlier, Mr. Heller's analysis and mine result in basically the same numbers for the cost of coal actually delivered to Crystal River in 2006 and 2007. The large differences come from the selection of the alternative coal opportunities that we used for comparision. I will begin with the manner in which Mr. Heller addressed 2006. In his analysis Mr. Heller, like his client, ignored the bids from the April 2004 RFP, which sought bids for coal to be delivered in 2005, 2006 and 2007, whereas for the reasons I stated earlier I used the bids that the sub-bituminous producers submitted to the 2004 RFP as the alternative to be compared with actual delivered costs.

At page 7 of his prefiled direct testimony Mr. Weintraub alludes vaguely to the fact that some coal delivered to CR4 and CR5 in 2006 was purchased from solicitations conducted in prior years. However, he restricts his testimony *to purchase decisions* made in 2006, and Mr. Heller apparently followed suit.

Q. IS IT LEGITIMATE TO EXCLUDE THE 2004 RFP RESULTS FROM THE ANALYSIS OF 2006 DELIVERIES BY LIMITING THE REVIEW OF 2006 COSTS TO PROCUREMENT DECISIONS THAT WERE MADE IN 2006?

A. No. As PEF's witnesses are aware, in many instances a utility will conduct a solicitation for coal to be delivered in the year of the solicitation or for years well into the future. In fact, at page 9 of his prefiled testimony Mr. Heller uses a bid received in the February 2006 RFP in his analysis of coal available for delivery in 2007.

Q. IF MR. HELLER IGNORED THE APRIL 2004 RFP BIDS IN HIS ANALYSIS, WHAT DID HE USE AS A PROXY FOR THE ALTERNATIVE COAL IN HIS COMPARISON FOR THE YEAR 2006?

A. For his 2006 comparison Mr. Heller used as a proxy the 3,300 tons of coal that PEF acquired from Peabody Coal in 2006 for PEF's May 2006 test burn of PRB coal.

Q. WHAT IS YOUR RESPONSE TO MR. HELLER'S USE OF THE 3,300 TONS OF PEABODY COAL IN HIS COMPARISON WITH ACTUAL 2006 COSTS?

A. First and foremost, of course, Mr. Heller was wrong to use the Peabody coal in his analysis because it was not the lowest priced sub-bituminous coal offered for delivery in 2006 at the time PEF purchased the majority of new coal for the year 2006. In fact, when procurement decisions for 2006 deliveries were made, the Peabody offer was not even on the table. Kennecott Coal submitted two bids for different sub-bituminous coals for delivery in 2005 and 2006 in response to the April 2004 RFP. As the most economical proposals that were before PEF at the time of its

procurement decision, those bids for 2006 deliveries are the ones that should have been selected to blend with bituminous coal at the IMT terminal, and should have been used by Mr. Heller in his cost-effectiveness test. The evaluated delivered cost of those coals, as developed by PEF and shown on the procurement spreadsheet, are the evaluated costs that I used in my comparison analysis. (See Exhibit No. _____ DJP-7 attached).

In addition, the Peabody transaction was a spot purchase of a tiny quantity of coal. A small spot purchase simply is not representative of the market. In addition to selecting a transaction that was not "on the table" at the time PEF made its procurement decisions for 2006, Mr. Heller chose an alternative apple to compare to the actual orange.

Even the quality of the Peabody coal, especially the sulfur level, was not what would be expected for PRB sub-bituminous coal. Typically, PRB sub-bituminous coal's characteristically low sulfur content aids its evaluated cost. By contrast, the sulfur content of the Peabody coal was at or above the baseline value that PEF employs in its evaluation. This is another indication that the Peabody coal is a poor proxy for the alternative coal that was available to PEF when it purchased coal for delivery in 2006.

Q. WHAT CAUSES THE DIFFERENCES BETWEEN YOUR ANALYSIS FOR COAL DELIVERED IN 2007 AND MR. HELLER'S CORRESPONDING ANALYSIS?

A. New purchases of coal for delivery in 2007 came off the February, 2006 RFP, in which PEF requested coal for delivery in 2007, 2008 and 2009. In response to that RFP, PEF received bids from two Indonesian suppliers for sub-bituminous coal, a bid with three pricing options from a coal broker, Louis Dreyfus, for PRB sub-bituminous coal and multiple bituminous suppliers from CAPP and South America.

As I testified earlier, PEF's request for a modification of the plant's air permit was not filed until September 2006 and was not granted until May, 2007. So, at the time procurement decisions were made off this RFP, PEF could not accept any of the sub-bituminous bids.

The evaluation sheet prepared by PEF's fuel organization shows that the two bids for the Indonesian coal supplies were ranked as # 1 and # 2 on an evaluated basis. In addition to being lower cost than the bituminous coals that PEF purchased, the two Indonesian bids had a significantly lower evaluated cost than the Louis Dreyfus proposal to supply sub-bituminous coal from the PRB. I selected the lowest cost bids—in this instance, the Indonesian sub-bituminous coal-for use in my comparison analysis. Mr. Heller elected to use the Louis Dreyfus bid in his comparison analysis. This difference accounts for the major part of the variation in the results of our analyses.

Q. WHY DID MR. HELLER SELECT THE LOUIS DREYFUS BID FOR HIS ANALYSIS, WHEN THE PROPOSALS OF THE INDONESIAN PRODUCERS WERE CONSPICUOUSLY THE LOWEST COST SUB-

BITUMINOUS BIDS ON THE EVALUATION SPREADSHEET THAT PEF PREPARED?

A. Despite the availability of the evaluated cost data in the procurement spreadsheet, and despite Mr. Weintraub's acknowledgement in the earlier docket that the Indonesian bids presented the lowest evaluated cost received during the 2006 RFP, Mr. Heller ignored the Indonesian bids in his analysis and testimony.

Q. WHY DID MR. HELLER IGNORE THESE BIDS OF MORE ECONOMICAL INDONESIAN SUB-BITUMINOUS COAL?

A. During his deposition, Mr. Heller stated that his role, as defined to him by PEF, was to examine only whether sub-bituminous coal *from the Powder River Basin* could have been substituted more economically for the bituminous coal actually purchased. Therefore, he limited his review to bids received from Powder River Basin suppliers.

Q. IS PEF'S INSTRUCTION TO MR. HELLER CONSISTENT WITH THE SCOPE OF THE PROCEEDING AS YOU UNDERSTAND IT?

A. No. In the Order Establishing Procedure for Docket No. 070703-EI the pertinent sentences read:

> The issue of the prudence of PEF for its coal procurement activities for Crystal River Units 4 and 5 for the years 2006 and 2007 was raised as an issue in the 2007 fuel docket No. 070001-EI. By stipulation of the parties, it was agreed to consider this issue in a separate docket.

In the Order, the Commission did not limit the scope of this separate docket to a consideration of PRB sub-bituminous coal—nor should it, in my view, as a utility's

procurement activities extend to all coals that are available at the time procurement decisions are made.

Q. DID YOU CONSIDER THE BTU CONTENT OF THE BLENDS CONTAINING 20% SUB-BITUMINOUS COAL THAT YOU EMPLOY IN YOUR ANALYSIS?

A. I considered the Btu contents of the blends in the sense that I confirmed they are not an issue. The use of a blend containing 20% sub-bituminous coal by weight is fully consistent with the findings of the Commission in Docket No. 060658-EI and with the methodology it employed when it calculated the refund. I am aware of statements by PEF in the hearing of Docket No. 060658-EI, which the Commission discussed in Order 07-0816-FOF-EI at page 30. In the order the Commission noted that PEF's Witness Toms testified "that if the fuel ratings falls lower than the range of 11,000 to 11,300 Btu/pound then CR4 and CR5 are not able to operate at overpressure." The Commission said it found this testimony to be persuasive. I decided to confirm that the blends of the specific coals that I have used in my analysis conform to that criterion. I calculated the weighted average Btu per pound for each blend. Using 12,400 Btus per pound as typical of the bituminous coal with which the alternative sub-bituminous coal would be blended, I determined that the blends I have used in the analysis of overcharges would contain in the range of 11,560 to 11,790 Btus per pound—which values satisfy PEF's own stated criterion. I show this result on page 3 of Exhibit No. _____ (DJP- 7).

Q. ARE THERE ANY OTHER DIFFERENCES IN APPROACH THAT EXPLAIN THE VERY DIFFERENT RESULTS OF YOUR ANALYSIS AND THAT OF MR. HELLER?

A. Yes. In Mr. Heller's testimony and analysis, he adds a capital component to the evaluated cost of the sub-bituminous coal to represent the capital cost of converting the units to burn sub-bituminous coal. He initially sets that as .03 $/MMBtu, but then argues that the PSC made a mathematical error and that the amount should be higher. Adding this component, of course would make the sub-bituminous coal less competitive compared to the actually delivered coal.

Q. DO YOU AGREE WITH MR. HELLER'S ARGUMENT CONCERNING CAPITAL COSTS?

A. No. In Order No. PSC-07-0816-FOF-EI, at pages 35-40,the PSC made the following findings:

> The capital and operational cost impacts of burning PRB coal would be quite limited if the quantities were restricted to blends less than 30 % PRB coal blended off site. (Page 35)
>
> PEF was imprudent to not incur the minimal operational costs to be able to safely burn a 20 % blend of PRB coal beginning in 2003 (Pages 35-36)
>
> Using the cost effectiveness test of witness Heller, including a capital adder, indicated that PRB savings were available in 2003, 2004 and 2005. (Page 39)
>
> In calculating the refund amount that amount is restricted to costs that normally flow through the fuel clause, which does not include the capital and operating costs associated with converting the plant to burn PRB coal. (Page 39)
>
> The correct amount for purposes of cost recovery, hence refund, is the differential in delivered costs of CAPP/Foreign coal and the evaluated costs of PRB coal. For purposes of cost recovery we removed the

operational and capital costs required to upgrade the Units to burn PRB coal. (Pages 39-40)

In Docket No. 060658-EI the Commission concluded that savings available in the 2003-2005 time frame justified the very modest expenditure of capital that would have been necessary to capture those savings. Had PEF made those capital investments prior to 2003, the modifications would have been in place in subsequent years, and there would have been no occasion to require alternative coals to justify capital expenditures a second time. Instead, additional fuel differential savings in subsequent years would serve to make the earlier, one-time investment in capital costs increasingly more cost-effective. In fact, many of the costs would be in the nature of fixed costs, meaning PEF would incur them whether or not it purchased sub-bituminous coal. Moreover, the determination by the Commission that the amount refunded in Docket No. 060658-EI should not be reduced by the amount of capital and operating costs, as those items would be recovered through base rates, renders Mr. Heller's discussion of capital costs moot. The only appropriate assumption consistent with the Commission's order in Docket No. 060658-EI is that any costs should have been incurred prior to 2003 and should be recovered through base rates.

V. EXCESS COST OF EMISSION ALLOWANCES 2006-2007

Q. IN THE PRIOR DOCKET NO. 060658-EI, OPC'S WITNESS PRESENTED A CALCULATION OF SEPARATE SAVINGS, IN THE FORM OF LOWER COSTS OF EMISSIONS ALLOWANCES, THAT WOULD HAVE

RESULTED FROM THE USE OF SUB-BITUMINOUS COAL THAT WAS NOT PURCHASED. IN PSC ORDER NO. PSC-07-0816-FOF-EI, THE COMMISSION INCLUDED SUCH A COMPONENT IN THE CALCULATION OF THE TOTAL REFUND THAT IT ORDERED AT THE TIME. DID YOU MAKE A SIMILAR CALCULATION FOR THIS DOCKET?

A. Yes. In doing so, I adhered to the methodology that the Commission adopted and employed in PSC Order No. PSC-07-0816-FOF-EI. In my calculation, I analyzed the same "comparative sets" of coals that were the subject of my analysis of fuel cost differential savings. For each of the years 2006 and 2007 I calculated the number of tons of SO2 emissions that would result from burning the tons consisting of 20% of the highest costing coal actually delivered to Crystal River by water, based upon the known sulfur content of that coal. I multiplied the resulting tons of SO2 emissions by a forecasted SO2 Emission Allowance price, expressed as a cost per ton of emitted SO2, to determine the total cost of emissions allowances that PEF would incur by using that coal. I then calculated the corresponding number of tons of SO2 emissions that would have resulted from burning the tons of coal that were available to purchase by PEF in the form of a blend containing 20% sub-bituminous coal, but were not purchased, because PEF did not have a permit to burn sub-bituminous coal. This is the same alternative coal that I compared against the cost of the highest costing coal actually delivered in 2006 and 2007. Again, I used the known sulfur content of the unpurchased coal. I multiplied the tons of SO2 times the same forecasted SO2 Emission Allowance price to determine the total cost of SO2 emissions that PEF would incur by using that coal.

I then compared the emission allowances costs from each scenario (coal actually delivered and the alternative, more economical coal not purchased) for each year and determined the savings that would have resulted from the use of the alternative blend containing sub-bituminous coal. I have attached an Exhibit No. ____(DJP-11) which shows the steps of my calculations and the resulting total for both 2006 and 2007 of $10,263,367.65.

Q. WHAT WAS THE SOURCE OF YOUR FORECASTED EMISSION ALLOWANCE?

A. I used a sheet prepared by JD Energy titled "Monthly Average Emission Allowance Price Forecast." I have attached the sheet as Exhibit No. _____(DJP-12). This sheet was provided by PEF in response to OPC's request for Production of Documents # 34. JD Energy 's John Dean appeared in Docket 060658-EI as a witness for PEF. He was the source of the values of emission allowances that were used in that docket to calculate excess costs due to SO2 emission costs. From this sheet, I calculated the mathematical average of the monthly Emission Allowance prices for each of the years 2006 and 2007.

Q. WHAT WAS THE SOURCE OF THE INFORMATION REGARDING THE SULFUR CONTENT OF EACH COAL?

A. I obtained those values from information provided by PEF. The sulfur content of coal is one of the important quality characteristics that is provided by the supplier and verified by the purchaser. The amount of sulfur contained in a pound of a given

coal can be converted to the tons of SO2 that would be emitted upon burning that coal by a straightforward formula.

Q. DID EITHER OF PEF'S WITNESSES PROVIDE A SIMILAR SET OF CALCULATIONS REGARDING SAVINGS ASSOCIATED WITH LOWER COSTS OF EMISSION ALLOWANCES?

A. Not to my knowledge.

Q. DO YOU KNOW WHY THEY DID NOT, SINCE THIS TYPE OF CALCULATION WAS A FACTOR IN THE TOTAL REFUND TO THE RATEPAYERS THAT THE COMMISSION ORDERED IN DOCKET NO. 060658-EI?

A. I don't know. To adhere fully to the methodology the Commission employed in Docket No. 060658-EI when it calculated the total refund, it is necessary to take into account the impact of the alternative, more economical coal identified in the course of quantifying the excess coal costs on the costs of emissions allowances. It is a separate, but essential, step in measuring the total impact of PEF's imprudent procurement activities on customers.

VI. TOTAL OVERCHARGES FOR CR4-CR5 BORNE BY CUSTOMERS IN 2006-2007

Q. TAKING INTO ACCOUNT BOTH THE EXCESS COSTS BORNE BY CUSTOMERS IN THE FORM OF FUEL COST DIFFERENTIALS AND THE EXTRA COST OF SO2 EMISSION ALLOWANCES ASSOCIATED WITH THE COAL ACTUALLY DELIVERED, WHAT IS THE TOTAL AMOUNT OF OVERCHARGES THAT YOU HAVE CALCULATED FOR THE YEARS 2006 AND 2007?

A. Adding the $10,263,367 to the previously calculated amount of excess coal costs of $51,015, 826 results in overall excess charges of $61,279,193. This figure does not include interest. The calculation is shown on my Exhibit No. ____ (DJP-13).

VII. ONGOING DEFICIENCIES IN PROCUREMENT AND OPERATIONS

Q. YOU SAID EARLIER THAT PEF's FAILURE TO POSITION ITSELF TO BURN SUB-BITUMINOUS COAL WHEN IT BECAM E ECONOMICAL TO DO SO IS ONE ASPECT OF A BROADER DEFICIENCY IN PROCUREMENT ACTIVITIES. PLEASE EXPLAIN WHAT YOU MEAN.

A. I was alluding to my observation and opinion, based on my experience in plant operations and the development and implementation of fuel procurement strategies, that in its fuel procurement activities PEF has not capitalized fully on the physical assets and geographical location of Crystal River that, if exploited to full advantage, could lower the fuel costs for its customers.

Q. PLEASE EXPLAIN.

A. It is my opinion that due to fortunate decisions of prior management, the geographical location of the Crystal River Plant on the Gulf of Mexico, the development by others of multiple Gulf transloading facilities and the location of worldwide coal basins, the Crystal River Plant is in one of the most opportune locations in the United States to support a balanced fuel program.

Q. PLEASE ELABORATE.

A. Prior management selected the location of Crystal River for a plant site. Prior management developed both rail access and water access to create both transportation competition and risk management of supply or transportation disruptions. When CR4 and CR5 were planned and built, prior management had the foresight to design the plant around a blend that included a coal that was just beginning to be identified and developed. That PRB supply of sub-bituminous coal is now the largest source of coal in the United States. In the recent past the plant has spent, and is now preparing to spend significant money on equipment items and plant modifications that will also expand its unloading capability of waterborne coal, which historically has been cheaper than rail coal, and received a permit to add pollution control equipment to CR4 and CR5 that coincidentally will allow it to burn an even wider range of fuels.

The plant has access to several large transloading facilities developed along the Gulf Coast that provide locations to take coal both from the U.S. River systems and from the international market and transload it to barges for delivery to Crystal River.

This flexible combination of being able to receive coal from all over the world and the ability to burn any coal received should enable the plant to optimize costs and minimize fuel risks.

Unfortunately, in its procurement activities PEF has not, in my view, adopted an energetic and broadly proactive strategy designed to take full advantage of opportunities to enhance its ability to lower fuel costs.

Q. CAN YOU ILLUSTRATE YOUR POINT?

A. Yes. The coal market is characterized by various basins of coal deposits dispersed worldwide. To achieve flexibility and low cost, the procurement practices must seek to establish competition among the basins and among the suppliers in the various basins. I see no evidence that PEF is working proactively to do that.

Similarly, the delivery of coal to the Crystal River site is accomplished through several alternative modes and facilities. Most of PEF's coal that arrives by barge is transloaded at the IMT terminal that once belonged to an affiliate. United Bulk Terminal and the Alabama State Docks (also called McDuffy) can provide the same services, and in my experience will compete for that opportunity. PEF does use the Alabama State Docks for imported coal. However, I have seen little evidence that PEF is trying aggressively to create tension among the facilities to achieve the lowest delivered cost of coal.

Q. CAN YOU CITE OTHER EXAMPLES?

A. In 2006, PEF began a project of retiring its barge unloader and replacing it with a new crane of higher unloading capacity. Greater unloading capacity should lead to increased throughput of coal delivered by water, which typically is cheaper than coal delivered by rail. More specifically, greater barge unloading capacity would enable PEF to deliver more tons of coal by water annually, meaning that it could, during an annual period, deliver additional tons of blended sub-bituminous coal whenever that coal is the more advantageous fuel. Because potential fuel savings are at stake, my view is that the project should have been pursued with a sense of urgency, and with the opportunity to achieve lower fuel costs in mind. However, PEF's witness on fuel procurement told OPC during the discovery phase of this docket that the new unloading crane is being installed simply to replace the one that reached the end of its useful life. Currently,in 2009, PEF is still "debugging" the operation of the replacement unloader.

Q. IS THERE ANOTHER EXAMPLE THAT BEARS ON FUEL COSTS OF CR4 AND CR5?

A. Yes. At the time it was applying for permission to conduct the May 2006 test burn, PEF asserted to the Florida Department of Environmental Protection (FDEP) that a blend containing up to 30% sub-bituminous coal "will have characteristics that closely match those of the bituminous coal types that are currently being burned." (See the excerpt from PEF's application for authority to conduct a test burn, attached as my Exhibit No. _____ (DJP-14)). The FDEP granted PEF's request for permission to test a blend containing up to 30% sub-bituminous coal. However, when it finally tested a blend PEF decided to include only about 20% sub-bituminous coal in the mixture. Subsequently, when in 2006 PEF applied for

permanent authority to burn the blend, PEF asked the FDEP to authorize PEF to burn in CR4 and CR5 a blend containing as much as 50% sub-bituminous coal. In the application, PEF stated:

> The primary fuel will be the Illinois Basin bituminous coals, delivered to the plant by rail. In an effort to continue expanding fuel diversity and ultimately enhancing market options through supplier flexibility at the Crystal River facility, Progress Energy requests to fire a blend of up to 50% by weight sub-bituminous coal, as well as a blend up to 30% by weight petroleum coke.

I am attaching as Exhibit No. _____(DJP-15) an excerpt from that application. Because PEF had tested only a blend containing about 20% sub-bituminous coal, in the permit it issued to PEF the FDEP limited the amount of sub-bituminous coal that PEF can burn to no more than 20% in the blend. However, the FDEP also provided to PEF an explicit opportunity to test blends containing higher percentages of sub-bituminous coal and to seek to amend the permit to allow PEF to burn blends containing more than 20% sub-bituminous coal. In its Technical Evaluation, an excerpt of which is attached as Exhibit No. ____(DJP-16), the FDEP said:

> The applicant proposes to fire a blend of up to 50% by weight sub-bituminous coal with bituminous coal. . . . In support of the request, the plant previously obtained an air construction permit and conducted a trial burn of 18% by weight Powder River basin coal (a sub-bituminous coal) with bituminous coal. The applicant proposes to begin firing such blends upon issuance of the final permit granting authorization. . . .
>
> Although performance tests showed marginal emissions impacts from firing this fuel blend, the tests were only conducted with a blend of 18% by weight of sub-bituminous coal. Based on the tests, the Department will authorize the firing of a blend of up to up to (sic.) 20% by weight of sub-bituminous coal with bituminous coal. However, the draft permit authorizes an additional trial burn allowing a temporary period to fire a blend of up to 50% by weight of sub-bituminous coal with bituminous coal for the purpose of conducting additional performance tests in support of a permanent request for this higher blend.

I believe it was clear at the time of the Commission's decision in Docket No. 060658-EI that the Commission conservatively based its refund calculation on a blend containing 20% sub-bituminous coal--not because the Commission necessarily regarded 20% as the maximum of which the units were capable—but because that was the only level that PEF had tested in May 2006. My testimony in this case illustrates the very significant impacts that flexibility in procurement can have, even when the coal substituted amounts to only 20% of the mixture. When sub-bituminous coal is the most economical fuel, the ability to burn a blend containing, not 20%, but 30% or even more sub-bituminous coal would enable PEF to reduce the fuel costs borne by customers significantly relative to the savings associated with the 20% blend to which PEF is currently limited by the terms of its permit. In view of its own favorable assertion to the FDEP regarding the characteristics of a blend containing 30% sub-bituminous coal, and especially in view of its 2006 application to the FDEP for permission to burn a blend containing up to 50% sub-bituminous coal, in my view a prudent utility intent on lowering costs borne by customers would have acted on the FDEP's invitation to test other, higher blends expeditiously and would have then sought amend its permit to encompass the full extent of the units' capabilities. However, PEF recently informed OPC that from the time the FDEP issued the permit in May 2007 to the present, PEF has made no effort to test blends containing higher proportions of sub-bituminous coal. It is my opinion that PEF's lack of interest in testing sub-bituminous coal further is at least partially a failure of plant management. In Docket No. 060658-EI there was a lot of testimony about what might happen to plant operations if sub-bituminous coal was used, however, there was little indication of a desire to see what the plant personnel could actually make it do. My experience is that most plant operational employees would

look at what plants all over the country are doing with this coal and demand that they have a chance to show that they could run their plant just as successfully, if not more so.

Q. DOES THE FACT THAT PEF IS INSTALLING SCRUBBERS ON CR4 AND CR5, AND WILL THEREAFTER BE CAPABLE OF MEETING SO2 RESTRICTIONS WITH HIGH SULFUR COAL, LESSEN THE SIGNIFICANCE OF SUB-BITUMINOUS COAL TO ITS PROCUREMENT ACTIVITIES?

A. No. With or without scrubbers, PEF should procure the most economical coals available. Depending on market conditions, high sulfur coal – such as the Illinois Basin bituminous coal that PEF identified in its application to the FDEP – may or may not be more economical than sub-bituminous coal.

VIII. CONCLUSION

Q. PLEASE SUMMARIZE YOUR TESTIMONY.

A. The same imprudences that the Commission observed in PSC Order No. PSC-07-0816-FOF-EI caused PEF to incur unnecessarily and unreasonably high coal costs for CR4 and CR5 in 2006 and 2007. An application of the same methodology that the Commission used to calculate the refund in Docket No. 060658-EI, when applied to PEF's own delivered cost data and PEF's own evaluated costs of alternative sub-bituminous coals that were offered to PEF at the time PEF made its purchase decisions, reveals that PEF overcharged customers by the amount of $61,279,193.64 during 2006 and 2007. This amount includes the differential in fuel costs and the excess cost of SO2 allowances, calculated consistently with the

methodology that the Commission employed in its decision in Docket No. 060658-EI. It does not include the calculation of interest.

Because of indications that PEF has not improved its overall fuel procurement strategy, the Commission should scrutinize carefully costs incurred in years following the time frame that is the subject of this docket.

Q. DOES THAT CONCLUDE YOUR TESTIMONY?

A. Yes.

DOCKET NO. 070703-EI
CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a copy of the foregoing Public Version of the Direct Testimony of David J. Putnam has been furnished by U.S. Mail to the following parties on this 13th day of February, 2009.

Keino Young, Esquire
Lisa Bennett, Esquire
Division of Legal Services
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, FL 32399-0850

Paul Lewis, Jr.
Director, Regulatory
Progress Energy Florida
106 E. College Ave., Suite 800
Tallahassee, FL 32301

R. Alexander Glenn, Esquire
John T. Burnett, Esquire
Progress Energy Service Co., LLC
Post Office Box 14042
St. Petersburg, Florida 33733-4042

Joseph A. McGlothlin

David J. Putman
2236 Royal Crest Drive
Birmingham, AL 35216
(205) 979-8974
djputman@aol.com

Education

Georgia Institute of Technology, Bachelor of Mechanical Engineering-1967
Birmingham School of Law, Juris Doctor-1982
Magna cum Laude; Class Valedictorian
Member of Alabama Bar

Work Experience – Alabama Power/Southern Company-1970 to 2000

Power Plant Management
Engineering
Maintenance
Assistant Plant Manager

Labor Relations
Department Manager

Construction
Plant Retrofit Superintendent
Major Plant Quality Assurance Manager
Corporate Headquarters Building Construction Superintendent

Fuel Program Management
Strategic Planning
Economic Analysis
Coal and Transportation Procurement
Natural Gas Procurement
Coal Inventory Management
Coal Logistics-Scheduling and Performance Monitoring
Railcar Fleet Management
Weighing and Sampling

Work Experience – Consulting

Rail Contract Evaluation and Negotiations
Export Transloading Facility Contract Negotiations
Multi Party Rail Logistics Program Facilitation and Performance Monitoring

Expert Testimony

Fuel Procurement
Strategic Fuel Programs

2006

Crystal River Transaction History

Tons

Plant Operator	Plant Name	Plant State	Year	Mine Supply Region	Mine Controlling Co	Mine/Coal Source	Nearest Town	Mine County	Mine State	Originating Transport	Transloading Location	Terminal Transport	Contract Type	Contract Expiration	Tons (000)	Btu/lb	Lbs SO2/mmBtu	% Sulfur	% Ash	Platts Delivered Price $/ton	Price cents/mmBtu
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	CAPP	Bowmier Investors	River Point Dock	MARMET	Kanawha	West Virginia	TK	Kanawha River Dock	BG	CONT	2006-12	186.43	12,402	1.04	0.64	11.42	73.28	295.37
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	CAPP	Trans North Ameri	Quincy Dock	CABIN CREE	Kanawha	West Virginia	ACBL	Quincy Dock	ACBL	CONT	2006-12	330.80	12,398	1.09	0.66	11.58	72.74	290.38
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	CAPP	Winifrede Dock Llc	Winifrede Dock	WINIFREDE	Kanawha	West Virginia	ACBL	Winifrede Dock	ACBL	CONT	2006-12	329.67	12,377	1.16	0.71	11.70	62.66	253.12
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	CAPP	Winifrede Dock Llc	Winifrede Dock	WINIFREDE	Kanawha	West Virginia	ACBL	Winifrede Dock	ACBL	SPOT	2006-3	3.46	12,180	1.13	0.69	12.37	56.09	233.94
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	CAPP	Winifrede Dock Llc	Winifrede Dock	WINIFREDE	Kanawha	West Virginia	ACBL	Winifrede Dock	ACBL	SPOT	2006-4	51.63	12,841	1.14	0.73	8.00	73.97	288.01
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	CAPP	Winifrede Dock Llc	Winifrede Dock	WINIFREDE	Kanawha	West Virginia	ACBL	Winifrede Dock	ACBL	SPOT	2006-6	16.82	12,966	1.13	0.73	7.74	74.66	288.00
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	Imports	Carbon Consortium	Mina Norte	NOT GIVEN	Not Applicable	Not Applicable	BG	Puerto Bolivar	BG	CONT	2006-12	93.79	13,065	1.22	0.78	7.46	42.39	162.22
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	Imports	Consorcio Minero U	La Jagua	NOT GIVEN	Not Applicable	Not Applicable	BG	Port Drummond Co	BG	CONT	2006-12	229.85	12,142	1.07	0.65	6.35	65.64	270.27
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	Imports	Consorcio Minero U	La Jagua	NOT GIVEN	Not Applicable	Not Applicable	BG	Port Drummond Co	BG	CONT	2006-12	84.70	12,022	1.08	0.65	6.58	65.46	272.26
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	Imports	Corporacion De Des	Paso Diablo (Guasa	NOT GIVEN	Not Applicable	Not Applicable	TK	Port Of Maracaibo	BG	CONT	2006-12	501.10	13,104	0.89	0.58	8.82	65.45	249.74
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	Imports	Prodeco	Calenturitas	NOT GIVEN	Not Applicable	Not Applicable		NA		CONT	2006-12	72.38	11,395	0.88	0.60	7.48	59.48	261.02
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	Imports	Unknown	Colombia Coal	NOT GIVEN	Not Applicable	Not Applicable	BG	Port Of Maracaibo	BG	CONT	2006-12	289.37	11,542	1.00	0.58	7.79	66.96	288.30
Florida Power Corp.	Crystal R@ Int Mart	LA	2006	SPRB	(Not Reported)	Various PRB Coal	NOT GIVEN	Campbell	Wyoming	BNSF	Cahokia Terminal	BG	SPOT	2006-5	3.33	8,585	0.96	0.41	6.65	47.34	275.71
Florida Power Corp.	Crystal River	FL	2006	CAPP	Alpha Natural Resou	Pioneer Preparation	CRUTCHFIEL	Knott	Kentucky	CSX	NA	CSX	CONT	2006-12	212.86	12,665	1.31	0.83	9.84	72.80	287.79
Florida Power Corp.	Crystal River	FL	2006	CAPP	Alpha Natural Resou	Roxana Prep. Plant	NORTON	Letcher	Kentucky	CSX	NA	CSX	CONT	2006-12	20.10	12,590	1.48	0.91	10.73	70.76	280.97
Florida Power Corp.	Crystal River	FL	2006	CAPP	Alpha Natural Resou	Roxana Prep. Plant	NORTON	Letcher	Kentucky	CSX	NA	CSX	SPOT	2006-1	30.20	12,328	1.46	0.90	11.36	83.65	339.82
Florida Power Corp.	Crystal River	FL	2006	CAPP	Arch Coal Inc	Hall Creek No.1	SAINT CHAR	Harlan	Kentucky	CSX	NA	CSX	SPOT	2006-6	21.47	12,577	1.10	0.69	11.57	82.58	328.30
Florida Power Corp.	Crystal River	FL	2006	CAPP	Arch Coal Inc	Pardee Prep/Loadou	APPALACHIA	Wise	Virginia	CSX	NA	CSX	SPOT	2006-3	0.27	12,388	1.10	0.68	12.98	91.80	370.92
Florida Power Corp.	Crystal River	FL	2006	CAPP	Arch Coal Inc	Pardee Prep/Loadou	APPALACHIA	Wise	Virginia	CSX	NA	CSX	SPOT	2006-8	0.91	12,155	1.05	0.64	12.60	85.88	349.86
Florida Power Corp.	Crystal River	FL	2006	CAPP	B & W Resources I	Manchester Tipple(	MANCHESTER	Clay	Kentucky	CSX	NA	CSX	CONT	2006-12	227.94	12,296	1.66	1.02	11.77	72.21	293.62
Florida Power Corp.	Crystal River	FL	2006	CAPP	B & W Resources I	Manchester Tipple(	MANCHESTER	Clay	Kentucky	CSX	NA	CSX	CONT	2006-12	106.37	12,157	1.59	0.96	12.27	78.96	324.73
Florida Power Corp.	Crystal River	FL	2006	CAPP	Cheyenne Resource	Charlene Tipple (Gr	VICCO	Perry	Kentucky	CSX	NA	CSX	SPOT	2006-5	9.89	12,573	1.10	0.66	9.82	94.17	374.46
Florida Power Corp.	Crystal River	FL	2006	CAPP	Cheyenne Resource	Charlene Tipple (Gr	VICCO	Perry	Kentucky	CSX	NA	CSX	SPOT	2006-8	22.32	12,483	1.12	0.70	11.03	85.70	343.25
Florida Power Corp.	Crystal River	FL	2006	CAPP	Consol Energy Inc	Fola No. 2	BICKMORE	Clay	West Virginia	CSX	NA	CSX	SPOT	2006-7	11.06	12,515	1.13	0.71	11.02	89.42	357.25
Florida Power Corp.	Crystal River	FL	2006	CAPP	Consol Energy Inc	Jones Fork Prep Pl	MOUSIE	Knott	Kentucky	CSX	NA	CSX	CONT	2006-12	736.00	12,585	1.71	1.08	9.13	81.74	324.49
Florida Power Corp.	Crystal River	FL	2006	CAPP	Kanl Acquisition Ll	Mayflower Preparat	SAINT CHAR	Lee	Virginia	CSX	NA	CSX	CONT	2006-12	70.28	12,662	1.14	0.72	8.16	73.79	293.26
Florida Power Corp.	Crystal River	FL	2006	CAPP	Kanl Acquisition Ll	Mayflower Preparat	SAINT CHAR	Lee	Virginia	CSX	NA	CSX	SPOT	2006-4	10.26	12,452	1.25	0.78	8.96	83.43	335.01
Florida Power Corp.	Crystal River	FL	2006	CAPP	Kanl Acquisition Ll	Mayflower Preparat	SAINT CHAR	Lee	Virginia	CSX	NA	CSX	SPOT	2006-8	8.91	12,829	1.20	0.77	7.34	85.15	331.86
Florida Power Corp.	Crystal River	FL	2006	CAPP	Lexington Coal Co L	Scott's Branch	MARTIN	Pike	Kentucky	CSX	NA	CSX	CONT	2006-12	658.96	12,660	1.09	0.69	8.92	83.14	327.85
Florida Power Corp.	Crystal River	FL	2006	CAPP	Magnum Coal Co	Fanco	YOLYN	Logan	West Virginia	CSX	NA	CSX	SPOT	2006-8	10.93	12,209	1.16	0.71	11.94	85.28	349.16
Florida Power Corp.	Crystal River	FL	2006	CAPP	Magnum Coal Co	Hobet 21 Surface M	JULIAN	Boone	West Virginia	CSX	NA	CSX	SPOT	2006-12	41.24	12,583	1.10	0.69	10.65	83.21	330.60
Florida Power Corp.	Crystal River	FL	2006	CAPP	Magnum Coal Co	Toms Fork Loadout	ESKDALE	Kanawha	West Virginia		NA	CSX	SPOT	2006-12	32.83	12,420	1.19	0.74	12.01	80.52	324.14
Florida Power Corp.	Crystal River	FL	2006	CAPP	Massey Energy Co	#1 Prep.	SIDNEY	Pike	Kentucky	NS	NA	CSX	CONT	2006-12	385.59	12,144	1.78	1.07	11.76	77.21	317.88
Florida Power Corp.	Crystal River	FL	2006	CAPP	Massey Energy Co	Chess Processing C	SYLVESTER	Boone	West Virginia	CSX	NA	CSX	CONT	2006-12	428.38	12,894	1.13	0.71	11.81	88.52	351.44
Florida Power Corp.	Crystal River	FL	2006	CAPP	Massey Energy Co	Chess Processing C	SYLVESTER	Boone	West Virginia	CSX	NA	CSX	CONT	2007-1	42.25	12,860	1.12	0.72	11.82	92.22	358.53
Florida Power Corp.	Crystal River	FL	2006	CAPP	Massey Energy Co	Chess Processing C	SYLVESTER	Boone	West Virginia	CSX	NA	CSX	SPOT	2006-4	10.72	12,561	1.15	0.72	11.52	92.80	369.41
Florida Power Corp.	Crystal River	FL	2006	CAPP	Massey Energy Co	Chess Processing C	SYLVESTER	Boone	West Virginia	CSX	NA	CSX	SPOT	SPOT	9.44	12,380	1.45	0.90	13.10	86.14	347.90
Florida Power Corp.	Crystal River	FL	2006	CAPP	Massey Energy Co	Goals Preparation P	WHITESVILL	Raleigh	West Virginia	CSX	NA	CSX	CONT	2006-12	67.49	13,097	1.34	0.88	9.18	81.38	310.66
Florida Power Corp.	Crystal River	FL	2006	CAPP	Massey Energy Co	Rum Creek Prep	STOLLINGS	Logan	West Virginia	CSX	NA	CSX	CONT	2006-12	31.97	12,071	1.13	0.69	12.79	88.69	367.37
Florida Power Corp.	Crystal River	FL	2006	CAPP	(Not Reported)	Kobleet *	NOT GIVEN	Boone	West Virginia	CSX	NA	CSX	SPOT	SPOT	11.31	12,289	1.27	0.76	12.10	85.64	349.00
Florida Power Corp.	Crystal River	FL	2006	CAPP	Patriot Coal Co Lp	Wells Preparation P	WHARTON	Boone	West Virginia	CSX	NA	CSX	SPOT	2006-4	9.21	12,633	0.90	0.57	11.49	92.93	367.82
Florida Power Corp.	Crystal River	FL	2006	CAPP	Patriot Coal Co Lp	Wells Preparation P	WHARTON	Boone	West Virginia	CSX	NA	CSX	SPOT	SPOT	0.42	13,300	1.22	0.81	5.30	74.56	280.30
Florida Power Corp.	Crystal River	FL	2006	CAPP	Sequoia Energy Llc	Sequoia Preparation	LIGGETT	Harlan	Kentucky	CSX	NA	CSX	CONT	2006-12	222.46	13,121	1.55	1.02	7.71	74.57	284.16
Florida Power Corp.	Crystal River	FL	2006	CAPP	Wexford Capital Llc	Mill Creek Prep Pla	PIKEVILLE	Letcher	Kentucky	CSX	NA	CSX	CONT	2006-12	112.74	12,465	1.87	1.16	11.63	78.88	316.42
Florida Power Corp.	Crystal River	FL	2006	CAPP	Wexford Capital Llc	Rob Fork Processin	VIRGIE	Pike	Kentucky	CSX	NA	CSX	CONT	2006-10	206.08	12,622	1.06	0.68	10.46	61.78	244.65
Florida Power Corp.	Crystal R@ McDuff	FL	2006	Imports	(Not Reported)	Cartagena	NOT GIVEN	Not Applicable	Not Applicable	BG	Bailey Prep	BG	CONT	2006-12	12.33	11,676	0.94	0.58	4.75	54.89	235.04
Florida Power Corp.	Crystal R@ McDuff	FL	2006	Imports	(Not Reported)	Cartagena	NOT GIVEN	Not Applicable	Not Applicable	BG	Buckhorn No.1 Prep	BG	CONT	2006-12	46.15	11,341	0.97	0.55	6.26	52.89	233.19
Florida Power Corp.	Crystal R@ McDuff	FL	2006	Imports	(Not Reported)	Cartagena	NOT GIVEN	Not Applicable	Not Applicable	BG	Burke Branch No.1	BG	CONT	2006-8	111.11	11,644	0.93	0.54	8.24	54.73	235.00
Florida Power Corp.	Crystal R@ McDuff	FL	2006	Imports	(Not Reported)	Cartagena	NOT GIVEN	Not Applicable	Not Applicable	BG	Burke Branch No.1	BG	CONT	2007-1	45.63	11,487	0.80	0.49	6.11	54.00	235.04
Florida Power Corp.	Crystal R@ McDuff	FL	2006	Imports	(Not Reported)	Cartagena	NOT GIVEN	Not Applicable	Not Applicable	BG	Indian Creek No.2 F	BG	CONT	2006-12	66.89	11,581	0.86	0.50	6.27	54.44	235.04
Florida Power Corp.	Crystal R@ McDuff	FL	2006	Imports	(Not Reported)	Cartagena	NOT GIVEN	Not Applicable	Not Applicable	BG	Jones Fork Prep	BG	CONT	2006-12	58.23	11,804	1.06	0.62	5.34	54.95	238.82
Florida Power Corp.	Crystal R@ McDuff	FL	2006	Imports	(Not Reported)	Cartagena	NOT GIVEN	Not Applicable	Not Applicable	BG	Straight Creek Tran	BG	CONT	2006-12	46.71	11,511	0.83	0.48	5.00	54.11	235.04

2007

Crystal River Transaction History

Plant Operator Co	Plant Name	Plant State	Year	Mine Supply Region	Mine Controlled Co	Mine/Coal Source	Nearest Town	Mine County	Mine State	Primary Transport	Transload Location	Transportation Trans	Contract Type	Contract Exp	Tons (000s)	Btu/Lb	Lb SO2/mmBtu	% Sulfur	% Ash	Plant Delivered Price $/ton	Plant Delivered Price (cents/mmBtu)
Florida Power Corp.	Crystal R@ Int Mar	LA	2007	CAPP	Bagwiller Investors	River Point Dock	MARMET	Kanawha	West Virginia	TX	Kanawha River Doc	BG	CONT	2008-12	295.88	12,394	1.13	0.70	11.29	78.83	310.35
Florida Power Corp.	Crystal R@ Int Mar	LA	2007	CAPP	Massey Energy Co	Rum Creek Prep	STOLLINGS	Logan	West Virginia	TX	Kanawha River Doc	ACBL	SPOT	2007-3	1.73	12,179	1.15	0.70	13.18	81.42	211.87
Florida Power Corp.	Crystal R@ Int Mar	LA	2007	CAPP	Trans North Ameri	Ceredo Dock	CEREDO	Wayne	West Virginia	ACBL	Kri Ceredo (Ogleba	ACBL	CONT	2007-8	10.00	9,881	1.07	0.83	28.07	36.70	180.65
Florida Power Corp.	Crystal R@ Int Mar	LA	2007	CAPP	Trans North Ameri	Ceredo Dock	CEREDO	Wayne	West Virginia	ACBL	Kri Ceredo (Ogleba	ACBL	SPOT	2007-12	10.26	8,804	1.20	0.87	20.30	38.32	191.10
Florida Power Corp.	Crystal R@ Int Mar	LA	2007	CAPP	Trans North Ameri	Ceredo Dock	CEREDO	Wayne	West Virginia	ACBL	Kri Ceredo (Ogleba	ACBL	SPOT	2007-7	10.80	11,614	1.26	0.73	17.30	48.22	207.60
Florida Power Corp.	Crystal R@ Int Mar	LA	2007	CAPP	Trans North Ameri	Ceredo Dock	CEREDO	Wayne	West Virginia	ACBL	Kri Ceredo (Ogleba	ACBL	SPOT	2008-1	39.56	9,248	1.16	0.83	30.18	38.31	207.15
Florida Power Corp.	Crystal R@ Int Mar	LA	2007	CAPP	Winifrede Dock Llc	Winifrede Dock	WINIFREDE	Kanawha	West Virginia	ACBL	Winifrede Dock	ACBL	CONT	2008-12	303.36	12,420	1.12	0.68	11.27	78.61	308.40
Florida Power Corp.	Crystal R@ Int Mar	LA	2007	Imports	Consorcio Minero U	La Jagua	NOT GIVEN	Not Applicable	Not Applicable	BG	Port Drummond Co	BG	CONT	2008-12	70.21	12,250	1.08	0.68	6.30	65.61	267.80
Florida Power Corp.	Crystal R@ Int Mar	LA	2007	Imports	Consorcio Minero U	La Jagua	NOT GIVEN	Not Applicable	Not Applicable	BG	Port Drummond Co	BG	CONT	2009-12	195.24	12,313	1.07	0.66	8.28	66.01	268.04
Florida Power Corp.	Crystal R@ Int Mar	LA	2007	Imports	Corporacion De Des	Paso Diablo (Guasa	NOT GIVEN	Not Applicable	Not Applicable	TK	Port Of Maracaibo	BG	CONT	2008-12	282.54	13,094	0.89	0.58	6.94	71.38	273.19
Florida Power Corp.	Crystal R@ Int Mar	LA	2007	Rockies	Oxbow Carbon & M	Elk Creek Mine	NOT GIVEN	Gunnison	Colorado	UP	Cahokia Terminal	BG	SPOT	2008-1	22.30	11,917	0.73	0.44	8.11	62.82	263.60
Florida Power Corp.	Crystal River	FL	2007	CAPP	A & G Coal Corp	Sigmon Strip #23	WISE	Lee	Virginia	CSX	NA	CSX	CONT	2008-12	10.89	12,298	1.89	1.16	10.50	78.23	318.30
Florida Power Corp.	Crystal River	FL	2007	CAPP	A & G Coal Corp	Sigmon Strip #23	WISE	Lee	Virginia	CSX	NA	CSX	CONT	2009-12	10.78	12,384	1.81	1.12	9.80	78.89	319.30
Florida Power Corp.	Crystal River	FL	2007	CAPP	A & G Coal Corp	Sigmon Strip #23	WISE	Lee	Virginia	CSX	NA	CSX	CONT	2010-12	87.29	12,229	1.62	1.11	10.78	77.28	315.97
Florida Power Corp.	Crystal River	FL	2007	CAPP	Alpha Natural Reso	Pioneer Preparation	CRUTCHFIEL	Knott	Kentucky	CSX	NA	CSX	CONT	2007-1	10.62	12,450	1.29	0.80	10.60	70.30	282.32
Florida Power Corp.	Crystal River	FL	2007	CAPP	Arch Coal Inc	Pardee Prep/Loader	APPALACHIA	Wise	Virginia	CSX	NA	CSX	SPOT	2007-11	20.86	12,413	1.09	0.64	11.53	69.57	280.21
Florida Power Corp.	Crystal River	FL	2007	CAPP	Arch Coal Inc	Pardee Prep/Loader	APPALACHIA	Wise	Virginia	CSX	NA	CSX	SPOT	2007-12	21.41	12,872	1.10	0.70	12.54	72.51	286.34
Florida Power Corp.	Crystal River	FL	2007	CAPP	Arch Coal Inc	Pardee Prep/Loader	APPALACHIA	Wise	Virginia	CSX	NA	CSX	SPOT	SPOT	11.19	12,430	1.13	0.70	13.40	69.98	281.60
Florida Power Corp.	Crystal River	FL	2007	CAPP	Black Diamond Min	Ivel Plant	IVEL	Floyd	Kentucky	CSX	NA	CSX	CONT	2008-12	34.94	12,871	1.65	1.16	8.37	78.19	314.61
Florida Power Corp.	Crystal River	FL	2007	CAPP	B & W Resources	Manchester Tipple	MANCHESTER	Clay	Kentucky	CSX	NA	CSX	CONT	2009-12	334.61	12,313	1.52	0.94	10.72	78.31	318.00
Florida Power Corp.	Crystal River	FL	2007	CAPP	Cheyenne Resourc	Charlene Tipple (En	VICCO	Perry	Kentucky	CSX	NA	CSX	CONT	2008-12	33.30	12,088	1.46	0.88	11.47	80.56	333.36
Florida Power Corp.	Crystal River	FL	2007	CAPP	Consol Energy Inc	Jones Fork Prep Pl	MOUSIE	Knott	Kentucky	CSX	NA	CSX	CONT	2007-12	283.29	12,630	1.70	1.07	8.89	80.25	317.70
Florida Power Corp.	Crystal River	FL	2007	CAPP	Consol Energy Inc	Jones Fork Prep Pl	MOUSIE	Knott	Kentucky	CSX	NA	CSX	CONT	2008-12	80.51	12,640	1.88	1.19	8.48	81.36	321.81
Florida Power Corp.	Crystal River	FL	2007	CAPP	Frasure Creek Min	Bufan Load Out	SCOTT DEPO	Perry	Kentucky	CSX	NA	CSX	CONT	2010-12	31.24	12,472	1.82	1.01	9.30	79.55	318.80
Florida Power Corp.	Crystal River	FL	2007	CAPP	International Coal G	Bates Branch	NOT GIVEN	Knott	Kentucky		NA	CSX	CONT	2009-12	11.82	12,428	2.00	1.24	11.60	75.17	302.48
Florida Power Corp.	Crystal River	FL	2007	CAPP	International Coal G	Kentucky River Loa	HAZARD	Perry	Kentucky	CSX	NA	CSX	CONT	2009-12	22.53	12,322	1.86	1.16	10.11	75.09	304.69
Florida Power Corp.	Crystal River	FL	2007	CAPP	International Coal G	Raven Prep Plant	KITE	Knott	Kentucky	CSX	NA	CSX	CONT	2009-12	87.87	12,441	1.75	1.09	10.82	74.24	298.37
Florida Power Corp.	Crystal River	FL	2007	CAPP	Lexington Coal Co L	Scott's Branch	MARTIN	Pike	Kentucky	CSX	NA	CSX	CONT	2007-12	158.43	12,676	1.01	0.64	9.20	87.92	346.78
Florida Power Corp.	Crystal River	FL	2007	CAPP	Lexington Coal Co L	Scott's Branch	MARTIN	Pike	Kentucky	CSX	NA	CSX	CONT	2008-1	22.19	12,675	0.93	0.59	8.54	92.35	364.30
Florida Power Corp.	Crystal River	FL	2007	CAPP	Lexington Coal Co L	Scott's Branch	MARTIN	Pike	Kentucky	CSX	NA	CSX	CONT	2008-2	44.93	12,664	0.98	0.62	8.87	90.52	357.80
Florida Power Corp.	Crystal River	FL	2007	CAPP	Magnum Coal Co	Farco	YOLYN	Logan	West Virginia	CSX	NA	CSX	SPOT	2007-1	10.58	12,387	1.14	0.70	10.83	77.77	318.49
Florida Power Corp.	Crystal River	FL	2007	CAPP	Magnum Coal Co	Toms Fork Loadout	ESKDALE	Kanawha	West Virginia		NA	CSX	CONT	2008-12	22.01	12,298	1.37	0.84	12.73	78.19	323.14
Florida Power Corp.	Crystal River	FL	2007	CAPP	Massey Energy Co	#1 Prep.	SIDNEY	Pike	Kentucky	NS	NA	CSX	CONT	2008-12	283.70	12,141	1.51	0.92	10.84	77.35	318.55
Florida Power Corp.	Crystal River	FL	2007	CAPP	Massey Energy Co	Chess Processing	SYLVESTER	Boone	West Virginia	CSX	NA	CSX	CONT	2009-12	647.48	12,704	1.12	0.71	11.61	90.85	357.58
Florida Power Corp.	Crystal River	FL	2007	CAPP	Massey Energy Co	Rum Creek Prep	STOLLINGS	Logan	West Virginia	CSX	NA	CSX	CONT	2008-12	56.41	12,355	1.21	0.75	10.93	87.35	353.52
Florida Power Corp.	Crystal River	FL	2007	CAPP	National Coal Corp	Viall Tipple (No P-1	STONEY FOR	Bell	Kentucky	CSX	NA	CSX	CONT	2009-12	11.08	12,831	1.84	1.16	8.38	81.01	320.68
Florida Power Corp.	Crystal River	FL	2007	CAPP	(Not Reported)	Kahlsead *	NOT GIVEN	Boone	West Virginia	CSX	NA	CSX	CONT	2008-12	10.24	12,810	1.34	0.84	11.11	82.25	320.78
Florida Power Corp.	Crystal River	FL	2007	CAPP	Trinity Coal Partner	Banner Loadout	BANNER	Floyd	Kentucky	CSX	NA	CSX	CONT	2007-12	45.43	12,131	1.55	0.94	11.10	78.21	322.35
Florida Power Corp.	Crystal River	FL	2007	CAPP	Trinity Coal Partner	Banner Loadout	BANNER	Floyd	Kentucky	CSX	NA	CSX	CONT	2010-12	49.80	12,348	1.62	1.00	10.78	79.77	323.09
Florida Power Corp.	Crystal River	FL	2007	CAPP	Wexford Capital Llc	Rob Fork Processin	VIRGIE	Pike	Kentucky	CSX	NA	CSX	CONT	2007-12	267.91	12,806	1.63	1.02	10.73	82.40	329.48
Florida Power Corp.	Crystal River	FL	2007	CAPP	Wexford Capital Llc	Rob Fork Processin	VIRGIE	Pike	Kentucky	CSX	NA	CSX	CONT	2008-12	131.72	12,481	1.48	0.92	11.24	79.01	316.52
Florida Power Corp.	Crystal R@ McDuff	FL	2007	Imports	(Not Reported)	Cartagena	NOT GIVEN	Not Applicable	Not Applicable	BG	Burke Branch No.1	BG	CONT	2008-12	398.68	11,533	0.95	0.56	5.13	55.98	242.31
Florida Power Corp.	Crystal R@ McDuff	FL	2007	Imports	(Not Reported)	Cartagena	NOT GIVEN	Not Applicable	Not Applicable	BG	Leatherwood Prep	BG	CONT	2008-12	29.40	11,342	0.79	0.45	8.60	53.06	233.91
Florida Power Corp.	Crystal R@US Uni	LA	2007	CAPP	Arch Coal Inc	Arch Coal Terminal	CATLETTSBU	Boyd	Kentucky	BG	NA	BG	CONT	2007-2	8.74	11,779	1.14	0.67	11.40	52.16	221.41
Florida Power Corp.	Crystal R@US Uni	LA	2007	Imports	Carbones Del Cerre	Carbones Del Cerre	NOT GIVEN	Not Applicable	Not Applicable	BG	Port Drummond Co	BG	CONT	2007-12	78.22	11,383	1.00	0.57	12.30	54.21	238.10
Florida Power Corp.	Crystal R@US Uni	LA	2007	Imports	Carbones Del Cerre	Carbones Del Cerre	NOT GIVEN	Not Applicable	Not Applicable	BG	Port Drummond Co	BG	CONT	2008-3	230.50	11,322	0.98	0.58	8.38	54.04	238.64
Florida Power Corp.	Crystal R@US Uni	LA	2007	Imports	Consorcio Minero U	La Jagua	NOT GIVEN	Not Applicable	Not Applicable	BG	Port Drummond Co	BG	CONT	2008-12	528.33	12,283	1.10	0.67	8.40	61.44	250.50
Florida Power Corp.	Crystal R@US Uni	LA	2007	Imports	Consorcio Minero U	La Jagua	NOT GIVEN	Not Applicable	Not Applicable	BG	Port Drummond Co	BG	CONT	2009-12	154.84	12,375	0.87	0.80	5.82	62.89	254.08
Florida Power Corp.	Crystal R@US Uni	LA	2007	Imports	Corporacion De Des	Paso Diablo (Guasa	NOT GIVEN	Not Applicable	Not Applicable		NA		CONT	2008-12	109.20	13,094	0.93	0.61	6.50	68.85	266.74

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

FILE COPY

In re: Review of coal costs for Progress Energy Florida's Crystal River Units 4 and 5 for 2006 and 2007

Docket No. 070703-EI

Submitted for Filing: February 15, 2008

PEF'S RESPONSE TO OPC'S SECOND SET OF INTERROGATORIES (NOS. 4-8)

Progress Energy Florida, Inc., ("PEF" or "Company"), responds to OPC's Second Set of Interrogatories (Nos. 4-8), as follows:

GENERAL RESPONSES AND OBJECTIONS

PEF incorporates and restates its General Responses and Objections to OPC's Second Set of Interrogatories (Nos. 4-8), served on February 5, 2008, as if those responses and objections were fully set forth herein.

INTERROGATORIES

4. For the calendar years 2004, 2005, 2006, and 2007, please provide by month the total quantity of coal that was delivered to Crystal River by barge, stated separately for CR 4&5 and for CR 1&2.

ANSWER: PEF incorporates and restates its specific objections to this request, served on February 5, 2008 as if those objections were fully set forth herein. Subject to and without waiving those objections or any of PEF's general objections, for the calendar year 2006 and 2007 respectively, 2,689,454 and 2,626,932 tons of coal were delivered to Crystal River by barge for units 4 and 5.

Progress Energy

April 12, 2004

COMPLIANCE COAL RFP
BID DEADLINE: MAY 12, 2004
TIME: 5PM EDT

Potential Supplier:

To place a portion of our requirements under contract for Progress Energy's *Crystal River Units Nos. 4 and 5*, Progress Fuels Corporation (PFC) is considering entering into a new coal supply agreement(s) beginning January 1, 2005. Accordingly, we prefer that you quote a minimum of 150,000 tons annually to be delivered in generally ratable monthly amounts during the following periods; however, lesser quantities will be considered (please quote each offer separately):

1. January 1, 2005 through December 31, 2005
2. January 1, 2005 through December 31, 2006
3. January 1, 2005 through December 31, 2007

The quality of all coals submitted should conform to the specifications listed on the attached bid form. ***Coals not meeting a 1.2 LB/SO_2 maximum standard will not be considered.***

PFC prefers a price quote effective on the start date, which will be fixed for the first twelve months. For terms longer than twelve months, PFC will consider fixed and firm, adjusted and/or reopener(s) if term is three years. *All prices should be quoted either f.o.b. mine loading point for rail delivery and f.o.b. barge loading point for water delivery.* Your proposal for this business must be submitted in writing by 5 *PM EDT on* May 12, 2004, and should be valid and binding for a minimum of thirty (30) days from that date. PFC encourages offers that provide added value, including, but not limited to:

1. Annual tonnage flexibility (expressed as a percentage),
2. Unilateral extension option(s) for PFC,
3. Innovative pricing proposals.

In evaluating the submitted proposals, PFC will consider all relevant factors including an "as burned" bus bar analysis. However, the delivered cost per million Btu has been and will continue to be the factor with the strongest overall impact to the evaluation process. PFC encourages suppliers to quote their coals at the highest quality rating they feel they can comfortably maintain. All cost calculations will be based on guaranteed values rather than typical values expected. *Guaranteed values are expected to be met on a per shipment basis.* Negotiations of the remaining terms and conditions will be conducted with those suppliers making a "short list" based on delivered economics.

Due to our ability to deliver coal to Crystal River by both rail and ocean barge, PFC will consider both rail and water delivered origins of the submitted product. Those suppliers planning to ship by barge should indicate any dock preferences. (This would also apply to western USA coal suppliers.) Those suppliers planning to ship CSX rail direct must be capable of shipping 24 hours per day, 7 days per week, in 90-car unit train lots (PFC-owned or leased rapid discharge cars) and they must specify

Progress Fuels Corporation
200 Central Avenue
St. Petersburg, FL 33701

loading time requirements and CSX rail district origin. *Please do not attempt to secure domestic rail/barge rates as these are to be negotiated by PFC.*

Draft and narrow channel restrictions at the power plant receiving facility will not accommodate large deep-draft vessels. Therefore, foreign origin coals will require delivery through a New Orleans or Mobile area import terminal. Foreign origin coals should be quoted on a "CIF" basis in "Self-Discharging" vessels. Belted type vessels are preferred.

Proposals must be submitted by the date and time specified above in a sealed envelope clearly marked *"Term Contract Compliance Coal Quotation"* addressed to Mrs. Robin Ott at the address indicated on the attached bid form. Note that bids submitted directly to me via e-mail or fax will not be considered. Proposals must include a completed copy of the attached bid form (for multiple proposals, please copy the attached form and submit a separate form for each proposal) complete with *current and projected typical ash mineral analysis including minimum and maximum Na_2O (sodium oxide), typical ultimate analysis including maximum nitrogen and chlorine, sulfur forms, all reducing ash fusion points (average and minimum temperatures), and trace elements.* In some cases, where suppliers are quoting a blend of various seams of coal, the above requested quality data *must be provided for the blended product as well as the individual seams for all coals you would expect to ship on this business.* Any extraneous information not included on the provided bid form will not be considered.

Weighing and sampling and analysis will be done at the mine facility, loading dock or the power plant by a mutually agreeable independent testing company.

PFC reserves the right to waive informal technicalities or irregularities and reject any and all proposals for any reason PFC deems appropriate under the circumstances. PFC does not represent that it will accept the lowest bid or any other bid. In no event shall PFC be considered to have accepted any offer except and unless in an express written acceptance or contract signed by an officer of PFC.

Thank you for your attention to this *Request for Proposals.* If you have any questions or require further information regarding this invitation to quote, please contact me at 727/824-6692.

Sincerely,

A. W. Pitcher
Vice President—Coal Procurement

AWP/ro

Attachment

PROGRESS FUELS CORPORATION

COAL PRODUCERS' SOLICITATION FORM
CRYSTAL RIVER 4 & 5
PAGE 1 OF 3

PRODUCER NAME:

STREET ADDRESS:

CONTACT: | TELEPHONE NO.

MINE(S): | BOM DISTRICT: | COUNTY: | STATE:

ORIGIN RAILROAD(S)/DISTRICT: EK____ CV____ Big Sandy____ Other_____ | R/R TIPPLE DESIGNATION/NUMBER:

TYPE OF LOADING FACILITY:
UNIT TRAIN: _____ SINGLE CAR: _____ TRAINLOAD: _____

MAXIMUM LOADING CAPACITY:
_____ TONS. _____ HOURS _____ TRACK CAPACITY

WATER DELIVERY CAPABILITY: ____YES ____NO IMPORT COAL: LOAD PORT _____

SHIP THROUGH: _____DOCK LOAD RATE: _____

TOTAL PRODUCTION CAPACITY PER MONTH: _____TONS

PRODUCTION PER MONTH—MEETING OUR COAL SPECIFICATIONS: _____ TONS

TYPE OF MINE: _____% DEEP _____% STRIP _____% AUGER

SEAMS: | BLEND RATIOS:

COAL PREPARATION: _____RAW _____WASHED _____COMBINATION

TYPE OF COAL WASHER, IF WASHED:

TYPE OF COAL SAMPLING:

TYPE OF LABOR CONTRACT(S): | DATE FOR RENEGOTIATION:

TYPE OF COAL WEIGHING: | SCALE CERTIFIED? ____YES ____NO

PERIOD	TONNAGE	BASE PRICE PER TON FOB MINE

IF THIS COAL IS OFFERED BY A COMPANY OR INDIVIDUAL WHICH IS NOT THE PRODUCER PLEASE INDICATE SO BY MAKING AN "X" IN THIS SPOT.

PRODUCER'S COMMENTS:

CREDIT REFERENCES (Minimum two):

INDUSTRY REFERENCES (Minimum four):

SIGNATURE: | TITLE: | DATE:

MAIL THIS FORM AND ANY ADDITIONAL INFORMATION TO:

MRS. ROBIN OTT
PROGRESS FUELS CORPORATION
ONE PROGRESS PLAZA, SUITE 600
ST. PETERSBURG, FLORIDA 33701

OR

POST OFFICE BOX 15208
ST. PETERSBURG, FLORIDA 33733

PHONE NO. 727/824-6570
FAX NO. 727/824-6601

PROGRESS FUELS CORPORATION

COAL PRODUCERS' SOLICITATION FORM
CRYSTAL RIVER 4 & 5
PAGE 2 OF 3

CURRENT QUALITY

DESCRIPTION	OFFERED COAL SPECIFICATIONS		REQUIRED COAL SPECIFICATIONS	
	"AS RECEIVED" AVERAGE OR TYPICAL	"AS RECEIVED" GUARANTEED	BITUMINOUS "AS RECEIVED" GUARANTEED	SUB-BITUMINOUS "AS RECEIVED" GUARANTEED
MOISTURE (TOTAL) %		[4]	8.0% MAX.	30.0% MAX.
SURFACE MOISTURE %			5.0% MAX.	5.0% MAX.
ASH %		[4]	10.0% MAX.[2]	7.8% MAX.[2]
SULFUR DIOXIDE (LB/MBTU)			1.2 LB/MAX.[1]	1.2 LB/MAX.[1]
BTU/LB		[4]	12,300 MIN.	8,200/LB MIN.
ASH SOFTENING DEGREES FAHRENHEIT H=W (R)		[4]	2,500 MIN.	2,200 MIN.
VOLATILE %		[4]	31.0% MIN.[1]	31.0% MIN.[1]
GRINDABILITY, HARDGROVE		[4]	42 MIN.[3]	65 MIN.[3]
SIZE			2" X 0"	2" X 0"
FINES (-1/4" X 0")			45% MAX.[5]	30% MAX.[5]
PYRITIC SULFUR			0.2% MAX.[1]	0.2% MAX.[1]
FIXED CARBON %			—	—
HYDROGEN %			—	—
NITROGEN %			—	—
CHLORINE %			—	—
OXYGEN %			—	—

[1]Must be met on an individual shipment basis.
[2]Adjustable in direct proportion to Btu.
[3]Adjustable in inverse proportion to Btu.
[4]Economic analyses will be based on these values.
[5]Preferred value, coals not meeting this specification will be considered.

MINERAL ANALYSIS %WEIGHT		
DESCRIPTION	AVERAGE	STD. DEV.
P_2O_5		
SiO_2		
Fe_2O_3		
Al_2O_3		
TiO_2		
CaO		
MgO		
SO_3		
K_2O		
Na_2O		
Undetermined		
Base/Acid Ratio		
Maximum Base/Acid Ratio		

TRACE ELEMENTS PPM IN COAL		
DESCRIPTION	AVERAGE	STD DEV.
Antimony		
Arsenic		
Beryllium		
Cadmium		
Chromium		
Cobalt		
Fluorine		
Lead		
Lithium		
Manganese		
Mercury		
Nickel		
Selenium		

*NOTE: ADD SHEETS IF MORE THAN ONE SEAM

PROGRESS FUELS CORPORATION

COAL PRODUCERS' SOLICITATION FORM
CRYSTAL RIVER 4 & 5
PAGE 3 OF 3

PROJECTED QUALITY

DESCRIPTION	OFFERED COAL SPECIFICATIONS		REQUIRED COAL SPECIFICATIONS	
	"AS RECEIVED" AVERAGE OR TYPICAL	"AS RECEIVED" GUARANTEED	BITUMINOUS "AS RECEIVED" GUARANTEED	SUB-BITUMINOUS "AS RECEIVED" GUARANTEED
MOISTURE (TOTAL) %		[4]	8.0% MAX.	30.0% MAX.
SURFACE MOISTURE %			5.0% MAX.	5.0% MAX.
ASH %		[4]	10.0% MAX.[2]	7.8% MAX.[2]
SULFUR DIOXIDE (LB/MBTU)			1.2 LB/MAX.[1]	1.2 LB/MAX.[1]
BTU/LB		[4]	12,300 MIN.	8,200/LB MIN.
ASH SOFTENING DEGREES FAHRENHEIT H=W (R)		[4]	2,500 MIN.	2,200 MIN.
VOLATILE %		[4]	31.0% MIN.[1]	31.0% MIN.[1]
GRINDABILITY, HARDGROVE		[4]	42 MIN.[3]	65 MIN.[3]
SIZE			2" X 0"	2" X 0"
FINES (-1/4" X 0")			45% MAX.[5]	30% MAX.[5]
PYRITIC SULFUR			0.2% MAX.[1]	0.2% MAX.[1]
FIXED CARBON %			———	———
HYDROGEN %			———	———
NITROGEN %			———	———
CHLORINE %			———	———
OXYGEN %			———	———

[1]Must be met on an individual shipment basis.
[2]Adjustable in direct proportion to Btu.
[3]Adjustable in inverse proportion to Btu.
[4]Economic analyses will be based on these values.
[5]Preferred value, coals not meeting this specification will be considered.

MINERAL ANALYSIS %WEIGHT		
DESCRIPTION	AVERAGE	STD. DEV.
P_2O_5		
SiO_2		
Fe_2O_3		
Al_2O_3		
TiO_2		
CaO		
MgO		
SO_3		
K_2O		
Na_2O		
Undetermined		
Base/Acid Ratio		
Maximum Base/Acid Ratio		

TRACE ELEMENTS PPM IN COAL		
DESCRIPTION	AVERAGE	STD DEV.
Antimony		
Arsenic		
Beryllium		
Cadmium		
Chromium		
Cobalt		
Fluorine		
Lead		
Lithium		
Manganese		
Mercury		
Nickel		
Selenium		

*NOTE: ADD SHEETS IF MORE THAN ONE SEAM

PROGRESS FUELS Corporation

INTER-OFFICE CORRESPONDENCE

Fuel Transportation (Office) | BT10E (MAC) | 727/824-6692 (Phone No.)

Docket No. 070703-EI
PEF REPORT TO MANAGEMENT: 2005-2006 PURCHASE ACTIVITY
Exhibit No.___(DJP-5)
Page 1 of 4

SUBJECT: 2005-2007 REQUEST FOR PROPOSALS (RFP), PURCHASE ACTIVITY AND CONTRACT RE-OPENERS (RE-OPENERS)

TO: Charlie Gates

DATE: June 22, 2004

Since the beginning of the year, coal prices have continued to escalate to unprecedented levels. At the present time, there does not appear to be anything that will allow these prices to recede from their current levels. Most projections show a very strong coal market, at least through 2005 and probably well into 2006. Coal has been affected, like other fuels, by a worldwide mix of uncertainties, regulatory indecision, improving and in some cases "booming" (China) economies, transportation shortages and inefficiencies, and regional coal supply shortages. As discussed during each of our past meetings, we at Progress Fuels Corporation (PFC) are committed to continue to seek the most opportune times to enter the coal market to insure the competitiveness of the Crystal River plants. In addition to participating in the 2004 spot coal market, when we deemed it advantageous, PFC successfully renegotiated agreements with various suppliers in conjunction with their contract price re-opener provisions. Additionally, PFC has just completed evaluating and purchasing coal from the results of the 2005-2007 Request for Proposals (RFP).

Last year, we had eight contracts with price re-openers, five of which were for the Delta coal and three of which were for the Alpha coal. We successfully renegotiated six contracts (three Alpha and three Delta) and were unsuccessful with two Delta suppliers. A portion of the tonnage for the unsuccessful contracts was placed with other existing suppliers and the balance was secured in the 2004 spot market. More importantly, we negotiated renewed prices, tons, and two-year terms (2004 and 2005) with two suppliers; and in each case, we have re-openers for 2006. Our 2004 RFP purchases and the renegotiated contracts are currently at least $15.00-20.00 below the current market.

Our challenge this year was to attempt timing the market for our 2005-2007 RFP and any other purchases that we deemed of value. Although the prices are dramatically higher than last year, we were able to time the market such that the purchases we made, based on the results of the RFP just one month ago, are $3.00-$5.00 dollars below the current market; and in the case of the March Colombian purchase, it is at least $15.00 to $17.00 below the current market for that coal.

The remainder of this memo will address the results from the 2005-2007 RFP and the Drummond Colombian coal purchase noted above. The 2005-2007 RFP provided PFC a reasonable selection of potential suppliers. We received bids from 20 domestic and foreign suppliers who submitted 37 bids. Last year we received bids from 21 domestic and foreign suppliers, submitting approximately 75 bids. This year we were offered 33.0 million tons of which 13% were foreign offers and 87% were water, rail-eastern, and rail-western offers. Last year we were offered 42.0 million tons spread fairly evenly between the foreign and domestic suppliers.

CONFIDENTIAL

Because of the strength of the current market, we only purchased for 2005 and 2006. Our plan is to watch the market, and re-enter for both spot and contract coal during late 2004 and early 2005. I have enclosed with this memo the purchases and the economic evaluation from the RFP (See Attachment "A"), a Supply Assessment for 2005 and 2006 (See Attachment "B"), and the 2005 and 2006 scheduled purchases including their economic evaluations (See Attachment "C").

As always, we attempted to improve the economics, as compared to the prices offered, while increasing the tonnage purchased and the term offered.

2005-2006 PURCHASES

FOREIGN WATER

Choice:

- During the latter part of March and early April, we began negotiations with Drummond for an extension of our 2004 agreement. This decision was made because all indicators pointed to the beginning of another round of price increases and supply shortages for both domestic and foreign coals. We purchased 800,000 tons for 2005 and 1 million tons for 2006 from Drummond's Mina Pribbenow mines; this is "Delta" coal. The delivered cost to Crystal River (CR) is 2.509 $/MMBTU and 2.531 $/MMBTU, respectively.

  No additional purchases were made for foreign coal from the RFP because the prices submitted from other foreign suppliers were not competitive. Their prices ranged from 2.828 to 2.948 $/MMBTU. These prices compared to 2.672 to 3.082 $/MMBTU, for offers from the domestic suppliers.

Explanation:

During 2004, we began shipments of Drummond's Colombian coal. The results economically, environmentally, and operationally have been excellent. This coal, besides being very low in ash and sulfur, reduces NO_x emissions by almost 25%. This purchase will assist CR in achieving their NO_x goals, while providing them with a competitively priced product.

DOMESTIC WATER

Choices:

5/17/04 need: 2005 720,000 2006 n/a

- We purchased "Delta" coal from two suppliers for delivery on the river system. We were offered and purchased 300,000 tons per year for 2005 and 2006 from Central Coal Company. This "Delta" coal will ship via truck to the Kanawha River and will deliver into CR at 2.672 $/MMBTU. We also purchased 360,000 and 180,000 tons of "Delta" coal for 2005 and 2006 from Massey Energy. This coal will be rail-delivered to the Ohio River, and it will deliver into CR at 2.698 $/MMBTU.

CONFIDE

Explanation:

- We have had previous experience with both of these suppliers and are very satisfied they will meet or exceed the specifications bid.

DOMESTIC RAIL

Choices:

- We purchased "Delta" coal from two companies and "Alpha" coal from three others. We have previous experience with three of the suppliers and have added two new companies.

"DELTA COAL"

We purchased 360,000 for 2005 and 180,000 tons for 2006 from Massey Energy. This coal will deliver into CR at $2.693 $/MMBTU. We also purchased 360,000 each year from Progress Fuels-Marketing and Trading. This product will deliver into CR at 2.735 $/MMBTU.

"ALPHA COAL"

We purchased 720,000 tons for 2005 and 360,000 for 2006 from Massey Energy. This coal will deliver into CR at 2.596 $/MMBTU. We purchased 120,000 tons for 2005 and 240,000 tons for 2006 from Sequoia Energy LLC. This coal will deliver into CR at 2.586 $/MMBTU. Also, we purchased 240,000 tons for each year (2005 and 2006) from B&W Resources. This coal will deliver into CR at 2.608 $/MMBTU.

Explanation:

- Massey Energy has been a consistently reliable supplier over the past 20 years. Progress Fuels-Marketing & Trading has very good quality coal and a reliable track record. Because of the shortage of coals in the Central Appalachian region, we felt it imperative to add to our base of suppliers. Both Sequoia Energy and B&W Resources will fulfill this need. Prior to contracting with them we had our field representative visit their mining operations, and we called other utility buyers to verify their performance. No problems were noted in either case.

2004 RE-OPENERS

We have only one contract with a re-opener during 2004. Consol Energy (Consol) has a price, quantity, and terms re-opener, which needs to be completed by November 1, 2004. We have already had several discussions with Consol regarding tonnage for next year. Current estimates are that they will have 750,000 to 1 million tons to offer. The current contract is for 1 million tons.

SUMMARY OF 2005 and 2006 PURCHASES

We anticipate a burn of 2.3 million tons for Crystal River Units 1 and 2 for both 2005 and 2006 and 4.3 and 4.4 million tons for Crystal River Units 4 and 5 for 2005 and 2006, respectively. The total burn is estimated at 6.6 million tons for 2005 and 6.7 million tons for 2006.

Our CR 1 & 2 open position for 2005 is approximately 330,000 tons, while it is 1.9 million tons for 2006; and it will be delivered 100 percent via rail.

Regarding Crystal River Units 4 and 5, our open position for 2005 is approximately 230,000 tons and approximately 920,000 tons for 2006. We will deliver 2.3 million tons via barge each year and 2.0-2.1 million tons by rail.

We will continue to fulfill the open positions from the spot and contract markets.

I would like to schedule a meeting with you at your earliest convenience to discuss the details of this report and answer any questions you may have.

A. W. Pitcher

AWP/ro

Attachments

cc/att: Rufus Jackson
Kyle Crake

Workpapers Only

PROGRESS FUELS CORPORATION

CR Units 4 and 5
May 2004
Solicitation
ALL BIDS

Docket No. 070703-EI
2004 RFP Evaluation Sheet
Exhibit No.___(DJP-6)
Page 1 of 1

Supplier	Term (Yrs)	Origin	(000) Tons	Weight Avg Price	2005 Tons	2005 Price	2006 Tons	2006 Price	2007 Tons	2007 Price	2008 Tons	2008 Price	Ash	Sulfur	Btu	Moisture	Vol	HGI	SO2	Cents Cost $/MBtu	Cents Cost $/MBtu	Delivered Cost $/Ton	Delivered Cost $/MBtu
Western Coals																							
DTE	2005	PRB/Cora	504	$18.62	504	$18.62	0	$0.00	0	$0.00	0	$0.00	5.64%	0.30%	8,800	26.70%	31.65%	51	0.68	$30.69	1.744	$32.17	$1.83
Kennecott	*05-07*	*Barge Cahokia*	*1500*	*$22.90*	*500*	*$22.90*	*500*	*$22.90*	*500*	*$22.90*	*0*	*$0.00*	*4.00%*	*0.38%*	*9,350*	*22.36%*	*31.26%*	*61*	*0.80*	*$34.97*	*1.870*	*$34.37*	*$1.84*
Arch	1/05-12/07	Thunder Basin	1500	$7.85	500	$7.85	500	$7.85	500	$7.85	0	$0.00	5.50%	0.30%	8,800	28.00%	30.78%	50	0.68	$32.92	1.870	$35.49	$2.02
Triton	05	PRB N. Rochelle	1000	$8.00	1000	$8.00	0	$0.00	0	$0.00	0	$0.00	5.20%	0.35%	8,800	28.50%	31.50%	63	0.80	$33.07	1.879	$34.87	$1.98
Triton	05-07	PRB-Buckskin	3000	$6.50	1000	$6.50	1000	$6.50	1000	$6.50	0	$0.00	5.50%	0.34%	8,400	30.00%	31.00%	65	0.80	$31.57	1.879	$33.92	$2.02
Triton	05-07	PRB N. Rochelle	3000	$8.25	1000	$8.25	1000	$8.25	1000	$8.25	0	$0.00	5.20%	0.35%	8,800	28.50%	31.50%	63	0.80	$33.32	1.893	$35.12	$2.00
Peabody	05-07	Antelope	900	$8.17	300	$8.75	300	$9.25	300	$9.50	0	$0.00	5.50%	0.27%	8,900	28.00%	30.00%	56	0.60	$34.24	1.923	$36.50	$2.05
Kennecott	05-07	Barge Cahokia	1000	$27.74	200	$27.74	400	$27.74	400	$27.74	0	$0.00	5.00%	0.59%	9,963	13.22%	30.75%	61	1.18	$39.81	1.998	$39.22	$1.97
Oxbow	05-08	Colorado	1550	$28.39	50	$30.00	500	$27.50	500	$28.33	500	$28.33	12.00%	0.72%	11,900	9.00%	31.00%	50	1.20	$53.46	2.246	$54.35	$2.28
		Total Western	13954		5054	139	4200	110	4200	111	500												
Central App Coals																							
Massey	05	NS-Sydney	600	$47.08	600	$47.08	0	$0.00	0	$0.00	0	$0.00	12.50%	0.74%	12,300	8.00%	31.00%	42	1.20	$49.00	1.992	$49.68	$2.02
Central	*1/05-12/06*	*Winifred Dock*	*600*	*$50.50*	*300*	*$50.50*	*300*	*$50.50*	*0*	*$0.00*	*0*	*$0.00*	*12.00%*	*0.74%*	*12,300*	*8.00%*	*31.00%*	*42*	*1.20*	*$65.73*	*2.672*	*$66.24*	*$2.69*
Massey	05	Bandmill	720	$45.00	720	$45.00	0	$0.00	0	$0.00	0	$0.00	13.00%	0.73%	12,100	8.00%	31.00%	42	1.20	$65.18	2.693	$66.14	$2.73
Progress	05-07	Diamond May	1080	$48.50	360	$49.50	360	$48.50	360	$47.50	0	$0.00	12.00%	0.75%	12,500	8.00%	32.00%	43	1.20	$68.38	2.735	$68.76	$2.75
Massey	05	FOB Ceredo	720	$51.80	720	$51.80	0	$0.00	0	$0.00	0	$0.00	13.00%	0.73%	12,100	8.00%	31.00%	42	1.20	$66.43	2.745	$67.38	$2.78
Massey	05	Sydney-Ceredo	600	$53.80	600	$53.80	0	$0.00	0	$0.00	0	$0.00	12.50%	0.74%	12,300	8.00%	31.00%	42	1.20	$66.43	2.702	$69.09	$2.81
Alliance	05-07	MC Mining	900	$57.00	150	$57.00	150	$57.00	600	$57.00	0	$0.00	10.00%	0.74%	12,300	9.00%	32.00%	39	1.20	$76.82	3.082	$76.84	$3.12
		Total Cent App	5220		3450	355	810	156	960	105	0												
Foreign Coals																							
Interocean	07	Colombia-Mobile	1000	$55.00	0	$0.00	0	$0.00	1000	$55.00	0	$0.00	5.50%	0.70%	11,700	14.00%	31.00%	43	1.20	$59.01	2.522	$58.57	$2.50
CMC	05	Colombia-Mobile	200	$58.74	200	$58.74	0	$0.00	0	$0.00	0	$0.00	8.30%	0.71%	11,800	12.00%	33.00%	45	1.20	$66.75	2.828	$66.91	$2.84
Glencore	2005	Colombia-IMT	150	$61.25	150	$61.25	0	$0.00	0	$0.00	0	$0.00	9.00%	0.69%	12,000	10.00%	34.00%	46	1.15	$68.74	2.864	$68.59	$2.86
CMC	05	Colombia-ECT	200	$59.42	200	$59.42	0	$0.00	0	$0.00	0	$0.00	8.30%	0.71%	11,800	12.00%	33.00%	45	1.20	$67.81	2.873	$67.97	$2.88
Glencore	2005	Colombia-IMT	150	$65.00	150	$65.00	0	$0.00	0	$0.00	0	$0.00	8.00%	0.75%	12,400	9.00%	35.00%	46	1.20	$72.49	2.923	$71.85	$2.90
Guasare	05-07	Pasa Diablo - IMT	990	$67.66	330	$68.76	330	$67.87	330	$66.94	0	$0.00	7.00%	0.77%	12,800	8.00%	34.00%	45	1.20	$75.35	2.943	$74.02	$2.89
Guasare	05-07	Mina Norte-IMT	700	$69.16	200	$70.15	250	$69.24	250	$68.30	0	$0.00	8.00%	0.78%	13,000	8.00%	31.00%	45	1.20	$76.65	2.948	$75.52	$2.90
		Total Foreign	3390		1230	383	580	137	1580	190	0												
													Ash	Sulfur	Btu	Moisture	Vol	HGI					
													10.00%	0.70%	12,000	8.00%	31.00%	40					
		Total Tons	22564		9734	877	5590	403	6740	406	500								SO2 $	$			

Cost of Tons Actually Purchased and Delivered to Crystal River That Could Have Been Replaced by a Lower Cost Coal.

Comparison of actual delivered cost vs. evaluated cost of coal not purchased

Line					
1	2006 Water Tons delivered to Crystal River # 4 & # 5 = 2,689,454	X 20 % =	**537,890**	Tons available to be blended prior to shipment to the Plant.
2	2007 Water Tons delivered to Crystal River # 4 & # 5 = 2,626,932	X 20 % =	**525,386**	Tons available to be blended prior to shipment to the Plant.

YEAR 2006

Cost of Coal Actually Purchased and Delivered To Crystal River

						Costs Delivered at IMT			Other	Gulf Barge	Delivered Cost for Purchased	Delivered Cost at Crystal River
		Highest Cost Supplies				Cash	Cash	Delivered	Costs	Transport	Coal	Purchased Coal
	YEAR	Actually Delivered	Tons	Btu/lbs	MMBtu's	$/ton	$/MMBtu	$	$/MMBtu	$/MMBtu	$/MMBtu	$
10	2006	1st Highest Cost	186,430	12,402	4,624,210	$73.28	$2.95	$13,661,590.40				
11	2006	2nd highest Cost	330,800	12,399	8,203,178	$72.74	$2.93	$24,062,392.00				
12	2006	3rd Highest Cost	20,660	12,377	511,418	$62.66	$2.53	$1,294,555.60				
13		**TOTALS**	**537,890**		**13,338,806**		**$2.93**	**$39,018,538.00**	**$0.06**	**$0.30**	**$3.29**	**43,820,508**

Cost of Tons Offered for Purchase at Crystal River That Could Have Replaced Higher Price Coal.

											Evaluated Cost
		Replacement				Cash	Cash	Cash	Evaluated	Evaluated	At Crystal River
	YEAR	Sub-Bituminous	Tons	Btu/lbs	MMBtu's	$/ton	$/MMBtu	Cost	Cost/ton	$/MMBtu	Un Purchased Coal
20	2006	Kennecott-Cahokia	500,000	9,350	9,350,000	$34.97	$1.87	$17,485,000.00	$34.37	$1.84	17,185,000
21	2006	Kennecott-Cahokia	37,890	9,963	754,996	$39.81	$2.00	$1,508,400.90	$39.22	$1.97	1,486,046
22		**TOTALS**	**537,890**		**10,104,996**			**$18,993,400.90**		**$1.85**	**18,671,046**

ADDITIONAL COST in 2006 DUE TO PURCHASE OF HIGHER PRICE COAL: **25,149,462**

YEAR 2007

Cost of Coal Actually Purchased and Delivered To Crystal River

						Costs Delivered at IMT			Other	Gulf Barge	Delivered Cost for Purchased	Delivered Cost at Crystal River
		Highest Cost Supplies				Cash	Cash	Delivered	Costs	Transport	Coal	Purchased Coal
	YEAR	Actually Delivered	Tons	Btu/lbs	MMBtu's	$/ton	$/MMBtu	$	$/MMBtu	$/MMBtu	$/MMBtu	$
	2007	1st Highest Cost	295,880	12,394	7,334,273	$76.93	$3.10	$22,762,048.40				
	2007	2nd highest Cost	229,506	12,420	5,700,929	$76.61	$3.08	$17,582,454.66				
		TOTALS	**525,386**		**13,035,202**		**$3.10**	**$40,344,503.06**	**$0.08**	**$0.29**	**$3.47**	**$45,167,527.98**

Cost of Tons Offered for Purchase at Crystal River That Could Have Replaced Higher Price Coal.

		Replacement				Cash	Cash	Cash	Evaluated	Evaluated	Evaluated Cost At Crystal River
	YEAR	Sub-Bituminous	Tons	Btu/lbs	MMBtu's	$/ton	$/MMBtu	Cost	Cost/ton	$/MMBtu	Un-Purchased Coal
	2007	PT Adaro-Indonesia	150,000	9,300	2,790,000	$45.02	$2.42	$6,753,000.00	$27.12	$1.46	$4,068,000.00
	2007	PT Kideco Jaya Agung	375,386	8,200	6,156,330	$56.02	$3.42	$21,029,123.72	$40.58	$2.47	$15,233,163.88
		TOTALS	**525,386**		**8,946,330**			**$27,782,123.72**		**$2.16**	**$19,301,163.88**

ADDITIONAL COST in 2007 DUE TO PURCHASE OF HIGHER PRICE COAL: **$25,866,364.10**

ADDITIONAL COST in 2006 and 2007 DUE TO PURCHASE OF HIGHER PRICE COAL: **$51,015,826.37**

Line

NOTES

1 Actual tons delivered by water to Crystal River # 4 and # 5 in 2006: See response to OPC's Interrogatories # 4

2 Actual tons delivered by water to Crystal River # 4 and # 5 in 2007: See response to OPC's Interrogatories # 4

10 Highest cost supply source delivered to IMT in 2006 per FERC 423 data. See OPC's Request for Documents # 28

11 Second highest cost supply source delivered to IMT in 2006 per FERC 423 data. See OPC's Request for Documents # 28

12 Third highest cost supply source delivered to IMT in 2006 per FERC 423 data. See OPC's Request for Documents # 28

13 2006 totals and averages. Includes "other Transportation Costs", (see OPC's Request for Documents # 28), and Cross Gulf Transportation Rates. (See OPC's Request for Documents # 25), Calculates Actual Delivered Cost at CR for 2006

Line

NOTES (continued)

20 Lowest cost coal bid to PEF on April 2004 RFP. Costs are from the evaluation spread sheet developed by PEF coal group (See OPC's Request for Documents # 1). Bid is for coal to be delivered in 2006.

21 Second lowest cost coal bid to PEF on April 2004 RFP. Costs are from the evaluation spread sheet developed by PEF coal group (See OPC's Request for Documents # 1). Bid is for coal to be delivered in 2006.

22 Totals for 2006. Tons (537,890 tons) are equal to 20 % of the water tons delivered to Crystal River in 2006.
PEF had an open position for 650,000 tons for 2006 and a Price Reopener on a contract when they purchased coal from the April 2004 RFP for 2006.
Line calculates the Evaluated cost of un purchased coal had it been purchased and delivered.

24 Line makes the comparison of Actually Delivered Coal to CR 4 and 5 with the Evaluated Cost of Un-Purchased coal in accordance with the "Cost Effectiveness Analysis" adopted by the commission in Order 07-0816-FOF-EI. (See page39) Total excess cost for fuel in 2006 is $25,149,462

32 Highest cost supply source delivered to IMT in 2007 per FERC 423 data. See OPC's Request for Documents # 28

33 Second highest cost supply source delivered to IMT in 2007 per FERC 423 data. See OPC's Request for Documents # 28

34 2007 totals and averages. Includes "other Transportation Costs" (see OPC's Request for Documents # 28) and Cross Gulf Transportation Rates (See OPC's Request for Documents # 25). Calculates Actual Delivered Cost at CR for 2006

41 Lowest cost coal bid to PEF on February 2006 RFP. Costs are from the evaluation spread sheet developed by PEF coal group (See OPC's Request for Documents # 1 and # 2). Bid is for coal to be delivered in 2007.

42 Second lowest cost coal bid to PEF on February 2006 RFP. Costs are from the evaluation spread sheet developed by PEF coal group (See OPC's Request for Documents # 1 and # 2). Bid is for coal to be delivered in 2007.

43 Totals for 2007. Tons (525,386 tons) are equal to 20 % of the water tons delivered to Crystal River in 2007
Line calculates the Evaluated Cost of un purchased coal had it been purchased and delivered.

46 Line makes the comparison of Actually Delivered Coal to CR 4 and 5 in 2007 with the Evaluated Cost of Un-Purchased coal in accordance with the "Cost Effectiveness Analysis" adopted by the commission in Order 07-0816-FOF-EI. (See page39) Total excess cost for fuel in 2007 is $25,866,364

48 The difference in total dollar cost between coal actually bought and delivered to Crystal River in 2006 and 2007 and the total evaluated cost of the same tons of sub-bituminous coal that were bid to PEF, but not purchased.

The difference is $ 51,015,826

Btu Content of Blend

	Bituminous		Sub-Bituminous		Wt. Average
2006	12,400	0.8	9,350	0.2	11,790
2007	12,400	0.8	8,200	0.2	11,560

Docket No. 070703-EI
Redacted 2006 Evaluation Sheet
Exhibit No.___(DJP-8)
Page 1 of 2

U Coal Summary Sheet

ubmission Date	Supplier	Contract Identifier (PFCFEB2006-xx)	Mine	Term	Origin	Per Month short Tons	short ton Price	Transp. Mode	Transp. Cost	SO2 Price	Railcar Costs	Purchase Specifications Ash	Sulfur	Btu	Moist
06	National Coal	23	NO BID												
06	K&P Mining	24	NO BID												
06	PS Energy Group	25	NO BID												
2007 Bids															
.06	Glencore LTD	22a	La Jagua	2007	IMT		$	barge	$	$	$ -	7.00%	0.73%	12,200	11.00%
.06	Glencore LTD	22b	La Jagua	2007	McDuffie		$	barge	$	$	$ -	7.00%	0.73%	12,200	11.00%
.06	Glencore LTD	22c	La Jagua	2007	IMT		$	barge	$	$	$ -	7.00%	0.73%	12,200	11.00%
.06	Glencore LTD	22d	La Jagua	2007	McDuffie		$	barge	$	$	$ -	7.00%	0.73%	12,200	11.00%
.06	Coal Trade Int.	20	Australia	2007	McDuffie		$	barge	$	$	$ -	10.50%	0.46%	11,400	9.50%
.06	Interocean Coal Sales (I	14	Mine Pribbenow	2007	McDuffie		$	barge	$	$	$ -	7.00%	0.69%	11,500	15.00%
.06	Inter-American Coal, Inc	9	Mina Norte	2007	IMT		$	barge	$	$	$ -	7.00%	0.78%	13,000	7.00%
.06	Coal Marketing Co.	18	Cerrejon	2007	IMT		$	barge	$	$	$ -	8.40%	0.68%	11,400	13.90%
.06	Oxbow Carbon Minerals	6	Columbian	2007	IMT		$	barge	$	$	$ -	8.00%	0.75%	12,500	8.00%
.06	Emerald Coal	13	Russian Coal	2007	IMT		$	barge	$	$	$ -	11.00%	0.51%	11,300	11.00%
.06	PT Adaro Indonesia	2	Tutupan	2007	IMT		$	barge	$	$	$ -	1.20%	0.05%	9,300	26.00%
.06	Suek AG	27c	various Suek	2007	IMT		$	barge	$	$	$ -	12.00%	0.40%	11,300	12.00%
.06	Suek AG	27a	various Suek	2007	McDuffie		$	barge	$	$	$ -	12.00%	0.40%	11,300	12.00%
5.06	LDES	5g	PRB OTC	2007	OTC		$	barge	$	$	$ -	6.50%	0.49%	8,200	30.00%
5.06	LDES	5g	PRB OTC	2008	OTC		$	barge	$	$	$ -	6.50%	0.49%	8,200	30.00%
5.06	LDES	5g	PRB OTC	2009	OTC		$	barge	$	$	$ -	6.50%	0.49%	8,200	30.00%
5.06	Central Coal Co.	17b	Kanawha Eagle	2007	Kanawha		$	barge	$	$	$ -	13.00%	0.74%	12,300	8.00%
5.06	CoalTrade LLC	12	Cook Mountain	2007	Kanawha		$	CSX	$	$	$ -	13.50%	0.73%	12,500	7.50%
5.06	CoalTrade LLC	12	Cook Mountain	2008	Kanawha		$	CSX	$	$	$ -	13.50%	0.73%	12,200	7.50%
5.06	Keystone Industries, LLC	1	Rush Creek	2008	Kanawa, Marmet Dock / IMT		$	barge	$	$	$ -	13.00%	0.74%	12,200	8.00%
5.06	LDES	5g	PRB OTC	2007	OTC		$	CSX	$	$	$ -	6.50%	0.49%	8,200	30.00%
5.06	Bandmill Coal Co.	26a	Highland	2008	Kanawha		$	CSX	$	$	$ -	13.00%	0.73%	12,100	8.00%
5.06	Bandmill Coal Co.	26a	Highland	2009	Kanawha		$	CSX	$	$	$ -	13.00%	0.73%	12,100	8.00%
5.06	LDES	5g	PRB OTC	2009	OTC		$	CSX	$	$	$ -	6.50%	0.49%	8,200	30.00%
5.06	LDES	5g	PRB OTC	2009	OTC		$	barge	$	$	$ -	6.50%	0.49%	8,200	30.00%
15.06	Emerald Coal	13	Russian Coal	2007	IMT		$	barge	$	$	$ -	11.00%	0.51%	11,300	11.00%
15.06	MIR Trade AG	28a	n/a	2007	IMT		$	barge	$	$	$ -	12.00%	0.68%	11,300	12.00%
16.06	MIR Trade AG	28b	n/a	2007	McDuffie		$	barge	$	$	$ -	12.00%	0.68%	11,300	12.00%
e 2.15.06	PT Kideco Jaya Agung	30	Pasir / Batukajang	2007	IMT		$	barge	$	$	$ -	2.80%	0.06%	8,200	30.00%

CONFIDENTIAL

Vol	HGI	SO2	Utilization Cost/Vol	Derate Concerns: Ash	Sulfur	Btu	Moisture	Vol	HGI	Unit 48 Derate Codes	Cash Cost $/st	Cash Cost $/M	Evaluated Cost RANK	Evaluated Utilized Cost $/st	Evaluated Utilized Cost $/M	Evaluated Utilized RANK	Supplier	Bid #
													2007 Bids			2007 Bids		
35.00%	45	1.20	$ [redacted]				M			M	$ [redacted]	$ [redacted]	6	$ [redacted]	$ [redacted]	7	Glencore LTD	22a
35.00%	45	1.20	$				M			M	$	$	7	$	$	11	Glencore LTD	22b
35.00%	45	1.20	$				M			M	$	$	12	$	$	15	Glencore LTD	22c
35.00%	45	1.20	$				M			M	$	$	10	$	$	12	Glencore LTD	22d
31.00%	42	0.80	$	A		B				AB	$	$	16	$	$	13	Coal Trade Int.	20
31.00%	43	1.20	$			B	M			BM	$	$	3	$	$	4	Interocean Coal Sales (Drummond)	14
33.00%	46	1.20	$								$	$	4	$	$	6	Inter-American Coal, Inc.	9
31.70%	46	1.20	$			B	M			BM	$	$	2	$	$	3	Coal Marketing Co.	18
35.00%	45	1.20	$								$	$	13	$	$	19	Oxbow Carbon Minerals	6
31.00%	55	0.91	$			B	M			BM	$	$	14	$	$	9	Emerald Coal	13
37.20%	48	0.10	$			B	M			BM	$	$	1	$	$	1	PT Adaro Indonesia	2
31.00%	50	0.70	$			B	M			BM	$	$	21	$	$	17	Suek AG	27c
31.00%	50	0.70	$			B	M			BM	$	$	17	$	$	8	Suek AG	27a
35.00%	49	1.20	$			B	M			BM	$	$	5	$	$	5	LDES	5q
35.00%	49	1.20	$			B	M			BM	$	$	8	$	$	14	LDES	5q
35.00%	49	1.20	$			B	M			BM	$	$	11	$	$	18	LDES	5q
31.00%	42	1.20	$	A						A	$	$	20	$	$	21	Caniral Coal Co.	17b
30.00%	40	1.20	$	A				V		AV	$	$	23	$	$	23	CoalTrade LLC	12
30.00%	40	1.20	$	A				V		AV	$	$	24	$	$	24	CoalTrade LLC	12
31.00%	42	1.20	$	A	S					AS	$	$	25	$	$	25	Keystone Industries, LLC	1
35.00%	49	1.20	$			B	M			BM	$	$	29	$	$	28	LDES	5q
30.00%	42	1.20	$	A				V		AV	$	$	26	$	$	27	Bandmill Coal Co.	26a
30.00%	42	1.20	$	A				V		AV	$	$	27	$	$	26	Bandmill Coal Co.	26a
35.00%	49	1.20	$			B	M			BM	$	$	28	$	$	29	LDES	5q
35.00%	49	1.20	$			B	M			BM	$	$	9	$	$	16	LDES	5q
31.00%	55	0.91	$			B	M			BM	$	$	14	$	$	9	Emerald Coal	13
28.00%	50	1.20	$			B	M	V		BMV	$	$	22	$	$	22	MIR Trade AG	28a
28.00%	50	1.20	$			B	M	V		BMV	$	$	10	$	$	20	MIR Trade AG	28b
35.00%	44	0.15	$			B	M			BM	$ [redacted]	$ [redacted]	18	$ [redacted]	$ [redacted]	2	PT Kideco Jaya Agung	30

bidder list indicating those suppliers who responded with bids or simply did not respond at all to the January 2006 RFP is Exhibit No. ___ (SAW-6) to my testimony.

Q. What were the results of the evaluation of the January 2006 RFP?

A. For 2007, we entered into six contracts for [redacted] tons of compliance coal from both domestic and import bituminous coal suppliers at an average of [redacted]/ton cost (a range of [redacted]/ton to [redacted]/ton). Five of those suppliers also agreed to contracts for over [redacted] tons of coal in 2008 at an average of [redacted]/ton (a range of [redacted]/ton to [redacted]/ton) and two of them further contracted for the delivery of over [redacted] tons in 2009 at an average of [redacted]/ton. As a result of this solicitation, the Company met its objectives and guidelines for the RFP, provided CR4 and CR5 with quality bituminous compliance coal, and purchased the most economical coal available on the market. A copy of the Company's coal procurement plan for the January-February 2006 RFP is Exhibit No. ____ (SAW-7) to my testimony.

Q. Was the sole PRB offer in response to the January 2006 RFP a better value than the bituminous coals that the Company purchases as a result of the RFP?

A. No, it was not. But there were two Indonesian sub-bituminous coal offers that ranked ahead of the bituminous coal bids we purchased. We did not purchase the Indonesian sub-bituminous coal product because the plant had no prior experience with this type of coal, the CR4 and CR5 units were undergoing modifications to safely handle the PRB coals for a test burn as recommended by our outside engineering consultant, and the test burn of PRB sub-bituminous coals had not yet occurred.

PROGRESS Energy Florida

COAL PRODUCERS' SOLICITATION FORM
CRYSTAL RIVER 4 & 5
PAGE 1 OF 3

PRODUCER NAME: **PT Adaro Indonesia**

STREET ADDRESS: ***1401 Manatee Avenue West, Suite 910, Bradenton, Florida 34205***

CONTACT: **Pamela E. Solomon**		CONTACT: **Pamela E. Solomon**	
MINE(S): **Tutupan**	BOM DISTRICT:	MINE(S): **Tutupan**	MINE(S): **Tutupan**
TYPE OF LOADING FACILITY: UNIT TRAIN: _____ _____	SINGLE CAR: TRAINLOAD: _____	TYPE OF LOADING FACILITY: UNIT TRAIN: _____	

MAXIMUM LOADING CAPACITY: _____ TONS _____ HOURS _____ TRACK CAPACITY

WATER DELIVERY CAPABILITY: X YES ____ NO IMPORT COAL:LOAD PORT Taboneo Anchorage load rate 10,000 MTWWDSHINC; International Bulk Terminal load rate 20,000 MTWWDSHINC

TOTAL PRODUCTION CAPACITY PER MONTH: 3,000,000 TONS

PRODUCTION PER MONTH—MEETING OUR COAL SPECIFICATIONS: 2,000,000 TONS

TYPE OF MINE: 100% SURFACE

SEAMS: N/A

COAL PREPARATION: 100% RAW 0% WASHED 0% COMBINATION

TYPE OF COAL WASHER, IF WASHED: N/A

PE OF COAL SAMPLING:

TYPE OF LABOR CONTRACT(S):

TYPE OF COAL WEIGHING:	TYPE OF COAL WEIGHING:	
PERIOD	**TONNAGE**	**BASE PRICE PER TON FOB MINE**
2007, 2008, 2009	**150,000 mt**	**$33.50 fob**

IF THIS COAL IS OFFERED BY A COMPANY OR INDIVIDUAL WHICH IS NOT THE PRODUCER PLEASE INDICATE SO BY MAKING AN "X" IN THIS SPOT.

PRODUCER'S COMMENTS:

CREDIT REFERENCES (*Minimum two*):

INDUSTRY REFERENCES (Minimum four):

SIGNATURE: Pamela E. Solomon | TITLE: Sales Manager | DATE: 2/10/2006

MAIL THIS FORM AND ANY ADDITIONAL INFORMATION TO:

Ms. Annette Britton
annette.britton@pgnmail.com
c/o Progress Energy Carolinas, Inc. Regulated Fuels Department
410 S. Wilmington Street
Mail Code PEB10
Raleigh, NC 27601

CURRENT QUALITY

DESCRIPTION	OFFERED COAL SPECIFICATIONS		REQUIRED COAL SPECIFICATIONS	
	"AS RECEIVED" AVERAGE OR TYPICAL	"AS RECEIVED" GUARANTEED	BITUMINOUS "AS RECEIVED" GUARANTEED	SUB-BITUMINOUS "AS RECEIVED" GUARANTEED
MOISTURE (TOTAL) %	26	N/A	8.0% MAX.	30.0% MAX.
SURFACE MOISTURE %	26	N/A	5.0% MAX.	5.0% MAX.
ASH %	1.2	N/A	10.0% MAX.[2]	7.8% MAX.[2]
SULFUR DIOXIDE (LB/MBTU)	0.1	N/A	1.2 LB/MAX.[1]	1.2 LB/MAX.[1]
BTU/LB	9,300	N/A	12,300 MIN.	8,200/LB MIN.
ASH SOFTENING DEGREES FAHRENHEIT H=W (R)	1,240	N/A	2,500 MIN.	2,200 MIN.
VOLATILE %	37.2	N/A	31.0% MIN.[1]	31.0% MIN.[1]
GRINDABILITY, HARDGROVE	48	N/A	42 MIN.[3]	65 MIN.[3]
SIZE	2" x 0"	N/A	2" X 0"	2" X 0"
FINES (-1/4" X 0")	N/A	N/A	45% MAX.[5]	30% MAX.[5]
PYRITIC SULFUR	0.01	N/A	0.2% MAX.[1]	0.2% MAX.[1]
FIXED CARBON %	35	N/A	—	—
HYDROGEN %	3.5	N/A	—	—
ROGEN %	0.6	N/A	—	—
CHLORINE %	0.01	N/A	—	—
OXYGEN %	14.5	N/A	—	—

[1]Must be met on an individual shipment basis.
[2]Adjustable in direct proportion to Btu.
[3]Adjustable in inverse proportion to Btu.
[4]Economic analyses will be based on these values.
[5]Preferred value, coals not meeting this specification will be considered.

MINERAL ANALYSIS %WEIGHT			TRACE ELEMENTS PPM IN COAL		
DESCRIPTION	AVERAGE	STD. DEV.	DESCRIPTION	AVERAGE	STD DEV.
P_2O_5	0.3	N/A	Antimony	0.05	N/A
SiO_2	35	N/A	Arsenic	0.8	N/A
Fe_2O_3	20	N/A	Beryllium	0.5	N/A
Al_2O_3	20	N/A	Cadmium	0.01	N/A
TiO_2	1.0	N/A	Chromium	1	N/A
CaO	11	N/A	Cobalt	1.1	N/A
MgO	3.0	N/A	Fluorine	No data	N/A
SO_3	9.0	N/A	Lead	1.2	N/A
K_2O	0.7	N/A	Lithium	0.6	N/A
Na_2O	0.3	N/A	Manganese	15	N/A
etermined	N/A	N/A	Mercury	0.1	N/A
Base/Acid Ratio	0.6	N/A	Nickel	2	N/A
Maximum Base/Acid Ratio	N/A	N/A	Selenium	0.12	N/A

PROGRESS Energy Florida

COAL PRODUCERS' SOLICITATION FORM
CRYSTAL RIVER 4 & 5
PAGE 3 OF 3

PROJECTED QUALITY

*NOTE: ADD SHEETS IF MORE THAN ONE SEAM

DESCRIPTION	OFFERED COAL SPECIFICATIONS		REQUIRED COAL SPECIFICATIONS	
	"AS RECEIVED" AVERAGE OR TYPICAL	"AS RECEIVED" GUARANTEED	BITUMINOUS "AS RECEIVED" GUARANTEED	SUB-BITUMINOUS "AS RECEIVED" GUARANTEED
MOISTURE (TOTAL) %	26	N/A	8.0% MAX.	30.0% MAX.
SURFACE MOISTURE %	26	N/A	5.0% MAX.	5.0% MAX.
ASH %	1.2	N/A	10.0% MAX.[2]	7.8% MAX.[2]
SULFUR DIOXIDE (LB/MBTU)	0.1	N/A	1.2 LB/MAX.[1]	1.2 LB/MAX.[1]
BTU/LB	9,300	N/A	12,300 MIN.	8,200/LB MIN.
ASH SOFTENING DEGREES FAHRENHEIT H=W (R)	1,240	N/A	2,500 MIN.	2,200 MIN.
VOLATILE %	37.2	N/A	31.0% MIN.[1]	31.0% MIN.[1]
GRINDABILITY, HARDGROVE	48	N/A	42 MIN.[3]	65 MIN.[3]
SIZE	2" x 0"	N/A	2" X 0"	2" X 0"
FINES (-1/4" X 0")	N/A	N/A	45% MAX.[5]	30% MAX.[5]
PYRITIC SULFUR	0.01	N/A	0.2% MAX.[1]	0.2% MAX.[1]
FIXED CARBON %	35	N/A	———	———
YDROGEN %	0.6	N/A	———	———
TROGEN %	0.6	N/A	———	———
CHLORINE %	0.01	N/A	———	———
OXYGEN %	14.5	N/A	———	———

[1]Must be met on an individual shipment basis.
[2]Adjustable in direct proportion to Btu.
[3]Adjustable in inverse proportion to Btu.
[4]Economic analyses will be based on these values.
[5]Preferred value, coals not meeting this specification will be considered.

MINERAL ANALYSIS %WEIGHT			TRACE ELEMENTS PPM IN COAL		
DESCRIPTION	AVERAGE	STD. DEV.	DESCRIPTION	AVERAGE	STD DEV.
P_2O_5	0.3	N/A	Antimony	0.05	N/A
SiO_2	35	N/A	Arsenic	0.8	N/A
Fe_2O_3	20	N/A	Beryllium	0.5	N/A
Al_2O_3	20	N/A	Cadmium	0.01	N/A
TiO_2	1.0	N/A	Chromium	1	N/A
CaO	11	N/A	Cobalt	1.1	N/A
MgO	3.0	N/A	Fluorine	No data	N/A
SO_3	9.0	N/A	Lead	1.2	N/A
K_2O	0.7	N/A	Lithium	0.6	N/A
Na_2O	0.3	N/A	Manganese	15	N/A
ıdetermined	N/A	N/A	Mercury	0.1	N/A
Base/Acid Ratio	0.6	N/A	Nickel	2	N/A
Maximum Base/Acid Ratio	N/A	N/A	Selenium	0.12	N/A

Docket No. 070703-EI
Indonesian Sub-Bituminous Mine Data
Exhibit No.___(DJP-10)
Page 4 of 9

- Our Coal
- Geology
- Quality
- Reserves
- Technical Benefits
- Environmental Benefits
- Economic Benefits

Keyword :

PT Adaro Indonesia has been mining coal from its coal concession area in the Tanjung region of Indonesia's South Kalimantan Province since 1991. The coal resource comprises 2.8 billion tonnes of surface mineable coal which is exceptionally clean at 0.1% sulphur and 1.5% ash which, because of its environmental attributes, has been trademarked globally as Envirocoal

The coal has been widely used throughout Europe, Asia and the Americas for use in industrial centers where environmental restrictions are stringently controlled or as a blending coal with more common high ash, high sulphur coals and results have consistently shown considerable environmental, economic and technical benefits from its utilization.

Production and sales of Envirocoal have increased steadily since the start-up of operations reaching 36 million tonnes in 2007 with sales to major power utilities and other industrial customers in countries worldwide and with production increases planned for future years.

Envirocoal has a number of quality features:

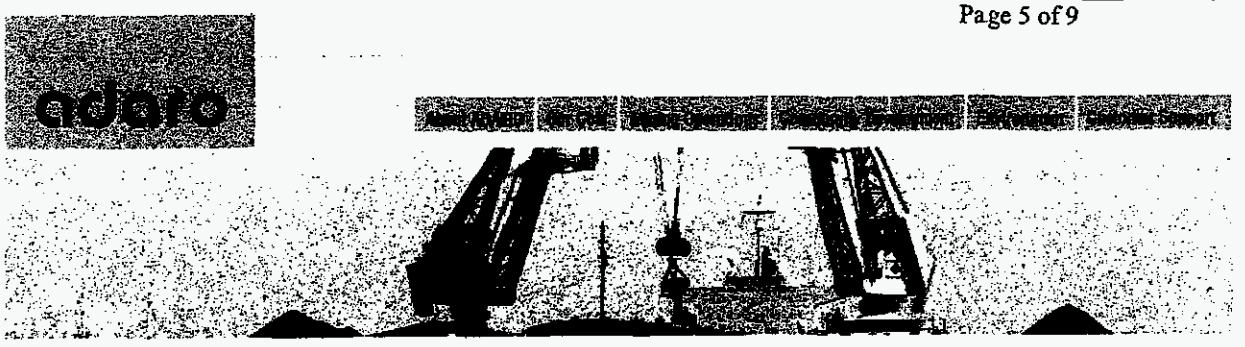
- Ultra low sulphur of 0.1%
- Ultra low ash of 1.5%or less
- Ultra low Nox produced during combustion
- Ultra low ash wastes
- Ultra low dust emissions

Because of it's unique qualities, Envirocoal is the most environmentally acceptable solid fuel available.

We have a new facility to help you to calculate the blend qualities of various coals with envirocoal. Please follow this link.

Home | References | Sitemap

Docket No. 070703-EI
Indonesian Sub-Bituminous Mine Data
Exhibit No.___(DJP-10)
Page 5 of 9



- Tutupan
- Location
- Mining and Hauling
- Processing & Barge Loading
- Barging and Shipping
- Gallery
- Chain Coal

Keyword :

Barging operations are by tug and flat top barge combinations transporting coal either directly to consumers receival ports or coastal offshore anchorage locations for trans-shipment to bulk carriers, or to coal terminal facilities.

Transshipment is by loading from barges to bulk carriers at an anchorage 15 nautical miles off the Barito river entrance channel. Loading is either by ships gear or by 4 floating transshipment system which can load vessels up to 200,000 dwt at up to 25,000 tonnes per day.

Adaro also transships coal through the Pulau Laut Terminal operated by PT Indonesia Bulk Terminal which has a throughput capacity of 12 million tonnes per year and can load panamax vessels in less than two days.

PROGRESS Energy Florida

COAL PRODUCERS' SOLICITATION FORM
CRYSTAL RIVER 4 & 5
PAGE 1 OF 3

PRODUCER NAME: PT KIDECO JAYA AGUNG		
STREET ADDRESS: MENARA MULIA SUITE 1701, 17TH FLOOR, JALAN JENDRAL GATOT SUBROTO KAV 9 – 11 JAKARTA 12930		
CONTACT: MR KIM SUNG KOOK – PRESIDENT DIRECTOR OR MR. REYNARD HANOPPO – MARKETING MANAGER	TELEPHONE NO. +62 21 525 76 26	
MINE(S): PASIR MINE, BATUKAJANG BOM DISTRICT:	REGENCY: PASIR REGENCY	PROVINCE : EAST KALIMANTAN
ORIGIN RAILROAD(S)/DISTRICT: EK____ CV____ Big Sandy____ Other_____	R/R TIPPLE DESIGNATION/NUMBER:	
TYPE OF LOADING FACILITY: UNIT TRAIN: ____NA____	SINGLE CAR: ___NA_____	TRAINLOAD: ____NA_____
MAXIMUM LOADING CAPACITY: 70,000 METRIC TONNES PER 24 HOUR ____NA____ TONS	____NA____ HOURS	_____NA___ TRACK CAPACITY
WATER DELIVERY CAPABILITY: ___x__ YES ____ NO	IMPORT COAL: LOAD PORT _____	
SHIP THROUGH: ADANG BAY TRANSHIPMENT POINT ON MAKASSAR STRAIT, EAST KALIMANTAN	LOAD RATE:: 20,000 MT/DAY SHINC GEARLESS VESSEL	
TOTAL PRODUCTION CAPACITY PER MONTH: 1,600,000 METRIC TONS		
PRODUCTION PER MONTH—MEETING OUR COAL SPECIFICATIONS: 1,200,0000 METRIC TONS		
TYPE OF MINE: _____% DEEP	_____% STRIP	_____% AUGER
SEAMS: MULTIPLE SEAMS OF 10 – 20 SEAMS WITH THICKNESS OF SEAMS BETWEEN 6 TO 60 METRES	BLEND RATIOS: NA	
COAL PREPARATION: ____X____ RAW	_____ WASHED	_____ COMBINATION
TYPE OF COAL WASHER, IF WASHED:		

TYPE OF COAL SAMPLING: MECHANICAL TWO-STAGE CROSS-BELT COAL SAMPLER ON THE BARGE LOADER CONVEYOR BELT PRODUCED BY SGS AUSTRALIA AND BIAS-TESTED BY SGS AUSTRALIA AND PT SUCOFINDO (INDONESIAN CORRESPONDENCE OF SGS)

TYPE OF LABOR CONTRACT(S): RENEGOTIATED EVERY 3 YEARS	DATE FOR RENEGOTIATION: PART OF SUBCONTRACTORS CONTRACT – REGENEGOTIATED EVERY 3 YEARS
TYPE OF COAL WEIGHING: VESSEL DRAFT SURVEY	SCALE CERTIFIED? ____YES ____NO

PERIOD	TONNAGE	BASE PRICE PER TON DES IMT
2007 – 2009	500,000 ST/YEAR (7 x 71,600 ST) +/- 10% FES	2007: $44.50/ST; 2008: $45.25/ST; 2009: $45.75/ST DES

IF THIS COAL IS OFFERED BY A COMPANY OR INDIVIDUAL WHICH IS NOT THE PRODUCER PLEASE INDICATE SO BY MAKING AN "X" IN THIS SPOT.

PRODUCER'S COMMENTS: KIDECO IS INDONESIA'S THIRD LARGEST COAL MINE PRODUCTING 18.2 MILLION METRIC TONNES OF STEAM COAL IN 2005 AND PLANNED FOR 18.5 MILLION METRIC TONNES OF STEAM COAL IN 2006. PLEASE SEE ATTACHMENT 3.

CREDIT REFERENCES (Minimum two): CITIBANK NA JAKARTA OFFICE, KOREA EXCHANGE BANK JAKARTA OFFICE

INDUSTRY REFERENCES (Minimum four): ENEL TRADE SPA (ITALY) , EDF TRADING LTD (UK), SSM COAL AMERICAS LLC (US), TAIWAN POWER COMPANY (TAIWAN ROC)

SIGNATURE:	TITLE:	DATE:

MAIL THIS FORM AND ANY ADDITIONAL INFORMATION TO:
Ms. Annette Britton
annette.britton@pgnmail.com
c/o Progress Energy Carolinas, Inc. Regulated Fuels Department
410 S. Wilmington Street
Mail Code PEB10
Raleigh, NC 27601

PROGRESS Energy Florida

COAL PRODUCERS' SOLICITATION FORM
CRYSTAL RIVER 4 & 5
PAGE 2 OF 3

CURRENT QUALITY

DESCRIPTION	OFFERED COAL SPECIFICATIONS		REQUIRED COAL SPECIFICATIONS	
	"AS RECEIVED" AVERAGE OR TYPICAL	"AS RECEIVED" GUARANTEED	BITUMINOUS "AS RECEIVED" GUARANTEED	SUB-BITUMINOUS "AS RECEIVED" GUARANTEED
MOISTURE (TOTAL) %	27	MIN 26 – MAX 30 [4]	8.0% MAX.	30.0% MAX.
SURFACE MOISTURE %			5.0% MAX.	5.0% MAX.
ASH %	3.0	MIN 2.8 – MAX 4.0 [4]	10.0% MAX.[2]	7.8% MAX.[2]
TOTAL SULFUR %	0.10	MIN 0.08 – MAX 0.15 [4]	1.2 LB/MAX.[1]	1.2 LB/MAX.[1]
BTU/LB GROSS AS RECEIVED	8,700	8,200 MIN	12,300 MIN.	8,200/LB MIN.
ASH SOFTENING DEGREES FAHRENHEIT H=W (R)	2,080	MIN 2,048 – MAX 2,156 [4]	2,500 MIN.	2,200 MIN.
VOLATILE %	36.0	MIN 35.0 – MAX 43.0 [4]	31.0% MIN.[1]	31.0% MIN.[1]
GRINDABILITY, HARDGROVE	46	MIN 44 – MAX 47 [4]	42 MIN.[3]	65 MIN.[3]
SIZE	2 x 0		2" X 0"	2" X 0"
FINES (-1/4" X 0")	30	28 – 35	45% MAX.[5]	30% MAX.[5]
PYRITIC SULFUR			0.2% MAX.[1]	0.2% MAX.[1]
FIXED CARBON %	BY DIFFERENCE – ASTM		—	—
HYDROGEN %	3.30	MAX 10.00	—	—
NITROGEN %	0.56	MAX 3.00	—	—
CHLORINE %	< 100PPM	< 100PPM	—	—
OXYGEN %	17.02	MAX 25.00	—	—

[1]Must be met on an individual shipment basis.
[2]Adjustable in direct proportion to Btu.
[3]Adjustable in inverse proportion to Btu.
[4]Economic analyses will be based on these values.
[5]Preferred value, coals not meeting this specification will be considered.

MINERAL ANALYSIS %WEIGHT ON DRY BASIS			TRACE ELEMENTS PPM IN COAL		
DESCRIPTION	AVERAGE	STD. DEV.	DESCRIPTION	AVERAGE	STD DEV.
P_2O_5	0.68		Antimony		
SiO_2	32.24		Arsenic		
Fe_2O_3	21.14		Beryllium		
Al_2O_3	11.70		Cadmium		
TiO_2	0.89		Chromium		
CaO	16.35		Cobalt		
MgO	7.83		Fluorine	<100PPM	
SO_3	8.14		Lead		
K_2O	0.49		Lithium		
Na_2O	0.11	1 MAX	Manganese		
Undetermined			Mercury		
Base/Acid Ratio			Nickel		
Maximum Base/Acid Ratio			Selenium	<100PPM	

*NOTE: ADD SHEETS IF MORE THAN ONE SEAM

This offer of Indonesian coal is subject to mutual agreement on SSM's general terms and conditions.

1. QUANTITY
   The offered tonnage is comprised of seven (7) Panamax gearless cargoes per year of ~~71,600 ST +/- 10% seller~~'s option each with guaranteed ~~discharge rate~~ at IMT of 20,000 MT/DAY SHINC. Shipment period beginning in 2007 and ending in ~~2009 fairly evenly spread~~.

2. PRICE
   The offered price is $44.50 per short ton for shipments in 2007, $45.25 per short ton for shipments in 2008, and $45.75 per short ton for shipments in 2009 DES IMT, Mississippi River, and firm until February 22, 2006.

3. PREMIUM/PENALTY
   The contract price will be adjusted on a prorata basis if actual heating value is over/under 8,700 Btu/lb gross as received.

4. WEIGHT DETERMINATION
   Draft survey of vessel at loadport by independent surveyor to be final and binding to both parties. Cost for Seller's account.

5. QUALITY DETERMINATION
   At loadport in accordance with ASTM standards by an independent laboratory for Seller's account.

6. PAYMENT
   Telegraphically within 25 banking days after B/L-date, subject to credit approval.

7. DISCHARGING RATE
   20,000 MT/DAY SHINC.

8. DEMURRAGE/DESPATCH
   As per Seller's contract of Affreightment.

9. CREDIT
   Subject to SSM credit department approval.

KIMCO ARMINDO

Sukamaju Coal

Parameter	Units	Typical	Range(Min/Max)
Calorific Value			
GAD	kcal/kg	6,200	6,100 Min
GAR	kcal/kg	5,800	5,700 Min
NAR	kcal/kg	5,550	5,400 Min
Total moisture	%	18	21.0 Max
Proximate Analysis (air dried)			
Inherent moisture	%	12.3	14.0 Max
Ash	%	7	9.0 Max
Volatile matter	%	40	35.0 Min
Total Sulfur	%	0.45	0.55 Max
Phosphorus	%	0.002	
Chlorine	%	0.01	
Physical Properties			
Hardgrove Index	HGI	47	45 Min
Size	-% above 50mm	0	0 Max
	% under 2mm	25	30 Max
Ash Fusion Temperture (Reducing atmosphere)			
Deformation	℃	1,200	1,150 Min
Ultimate Analysis (dry basis)			
Carbon	%	70	
Hydrogen	%	4	
Nitrogen	%	1.2	1.5 Max
Oxygen	%	24.8	
Ash Analysis (dry basis)			
Fe_2O_3	%	13	
Na_2O	%	0.5	
K_2O	%	1	
CaO	%	10	

30 -12 **Excess 2006-2007 Costs Related to SO2 allowances at CR 4 and CR5**

Excess Cost of Emission Allowances 2006-2007
Exhibit No.___(DJP-11)
Page 1 of 1

YEAR 2006

Year	Highest Cost Supplies Actually Delivered	Tons	Btu/Lb	Total MMBtu	Lbs SO2/MMBtu	Tons SO2	Allowance Cost $/Ton SO2	Total Allowance Cost in $
2006	1st Highest Cost	186,430	12,402	4,624,210	1.04	2,404.59	$977.00	$2,349,283.51
2006	2nd highest Cost	330,800	12,399	8,203,178	1.09	4,470.73	$977.00	$4,367,905.39
2006	3rd Highest Cost	20,660	12,377	511,418	1.15	294.07	$977.00	$287,301.64
	TOTALS	537,890		13,338,806		7,169.39		$7,004,490.54

	Bids with lowest Evaluated Cost Not Purchased	Tons	Btu/Lb	Total MMBtu	Lbs SO2/MMBtu	Tons SO2	Allowance Cost $/Ton SO2	Total Allowance Cost in $
2006	Kennecott-Cahokia	500,000	9,350	9,350,000	0.80	3,740.00	$977.00	$3,653,980.00
2006	Kennecott-Cahokia	37,890	9,963	754,996	1.18	445.45	$977.00	$435,202.42
	TOTALS	537,890		10,104,996		4,185.45		$4,089,182.42

Excess 2006 Costs Related to SO2 allowances at CR 4 and CR5 **$2,915,308.11**

YEAR 2007

Year	Highest Cost Supplies Actually Delivered	Tons	Btu/Lb	Total MMBtu	Lbs SO2/MMBtu	Tons SO2	Allowance Cost $/Ton SO2	Total Allowance Cost in $
2007	1st Highest Cost	295,880	12,394	7,334,273	1.13	4,143.86	$1,091.00	$4,520,956.16
	2nd highest cost	229,506	12,420	5,700,929	1.12	3,192.52	$1,091.00	$3,483,039.61
	TOTALS	525,386		13,035,202		7,336.38		$8,003,995.77

	Bids with lowest Evaluated Cost Not Purchased	Tons	Btu/Lb	Total MMBtu	Lbs SO2/MMBtu	Tons SO2	Allowance Cost $/Ton SO2	Total Allowance Cost in $
2007	PT Adaro-Indonesia	150,000	9,300	2,790,000	0.10	139.50	$1,091.00	$152,194.50
2007	PT Kideco Jaya Agung	375,386	8,200	6,156,330	0.15	461.72	$1,091.00	$503,741.73
	TOTALS	525,386		8,946,330		601.22		$655,936.23

Excess 2007 Costs Related to SO2 allowances at CR 4 and CR5 **$7,348,059.53**

Excess 2006-2007 Costs Related to SO2 allowances at CR 4 and CR5 **$10,263,367.65**

Docket No. 070703-EI
Allowance Price Forecast
Exhibit No.___(DJP-12)
Page 1 of 1

SO2 AND NOx EMISSSION ALLOWANCE PRICE FORECAST

JD Energy, Inc.
April 4th, 2006

DIRECTORY

Cell	Forecast
B16	Monthly SO2 and NOx Forecasts
M16	Long-Term SO2 Forecast
M57	Long-Term NOx Forecast

Nominal $/Ton

	SO2	NOx-OTC	NOx-SIP Call 2003-2004		SO2	NOx-SIP Call
Jan - 1999	$203	$5,250		Jan - 2004	$248	$2,589
Feb	$212	$7,500		Feb	$267	$2,325
Mar	$211	$6,260		Mar	$274	$2,132
Apr	$210	$5,250		Apr	$279	$1,995
May	$213	$5,450		May	$333	$2,195
June	$210	$3,900		June	$394	$2,280
July	$199	$1,940		July	$541	$2,472
Aug	$191	$1,535		Aug	$482	$2,224
Sept	$180	$980		Sept	$487	$2,081
Oct	$186	$725		Oct	$568	$2,180
Nov	$168	$800		Nov	$578	$2,295
Dec	$152	$680		Dec	$706	$2,222
Jan - 2000	$133	$910		Jan - 2005	$700	$3,571
Feb	$133	$779		Feb	$654	$3,426
Mar	$136	$803		Mar	$688	$3,413
Apr	$136	$822		Apr	$841	$3,312
May	$134	$772		May	$805	$2,931
June	$146	$861		June	$758	$2,315
July	$150	$899		July	$812	$2,329
Aug	$151	$621		Aug	$858	$2,567
Sept	$154	$455		Sept	$865	$2,476
Oct	$152	$369		Oct	$968	$2,658
Nov	$141	$440		Nov	$1,322	$2,277
Dec	$128	$650		Dec	$1,587	$1,944
Jan - 2001	$152	$1,475		Jan - 2006	$1,503	$2,723
Feb	$170	$1,556		Feb	$998	$2,577
Mar	$178	$1,695		Mar	$894	$2,459
Apr	$195	$1,575		Apr	$808	$2,464
May	$191	$1,613		May	$792	$2,486
June	$200	$1,400	$6,300	June	$811	$2,535
July	$202	$1,081	$5,150	July	$831	$2,655
Aug	$209	$925	$5,583	Aug	$886	$2,742
Sept	$207	$855	$4,830	Sept	$956	$2,822
Oct	$185	$644	$4,800	Oct	$1,042	$2,535
Nov	$172	$518	$4,280	Nov	$1,097	$2,465
Dec	$172	$619	$4,200	Dec	$1,104	$2,450
Jan - 2002	$166	$944	$4,640	Jan - 2007	$1,102	$2,490
Feb	$167	$920	$4,800	Feb	$1,088	$2,485
Mar	$172	$865	$4,850	Mar	$1,075	$2,480
Apr	$171	$815	$4,825	Apr	$1,068	$2,485
May	$171	$809	$4,930	May	$1,072	$2,490
June	$164	$764	$4,730	June	$1,085	$2,525
July	$146	$671	$4,725	July	$1,106	$2,560
Aug	$141	$647	$4,700	Aug	$1,119	$2,545
Sept	$142	$628	$4,520	Sept	$1,121	$2,495
Oct	$136	$899	$4,800	Oct	$1,111	$2,435
Nov	$130	$764	$4,375	Nov	$1,086	$2,320
Dec	$132	$826	$4,490	Dec	$1,056	$2,200
Jan - 2003	$140	$4,959	$4,390	Jan - 2008	$1,045	
Feb	$150	$5,938	$4,770	Feb	$1,042	
Mar	$160	$6,560	$4,535	Mar	$1,038	
Apr	$163	$7,176	$4,562	Apr	$1,025	
May	$167	$7,442	$4,760	May	$1,015	
June	$165	$4,987	$4,233	June	$1,002	
July	$174	$3,899	$3,524	July	$987	
Aug	$181	$2,983	$2,826	Aug	$969	
Sept	$183	$2,529	$2,455	Sept	$954	
Oct	$188	$2,462	$2,467	Oct	$933	
Nov	$204	$2,806	$2,681	Nov	$921	
Dec	$216	$2,535	$2,635	Dec	$908	

SO2 BASE CASE

Year	Nominal $/Ton	% Change	Real 2006 $/Ton	% Change
1992	$320		$426	
1993	$187	-41.72%	$243	-43.03%
1994	$164	-12.20%	$209	-14.02%
1995	$133	-19.08%	$165	-20.71%
1996	$84	-36.86%	$103	-38.02%
1997	$99	18.43%	$119	16.48%
1998	$157	58.90%	$188	57.15%
1999	$194	23.53%	$228	21.77%
2000	$141	-27.37%	$162	-28.92%
2001	$186	31.51%	$209	28.43%
2002	$153	-17.62%	$169	-19.04%
2003	$174	13.88%	$189	11.62%
2004	$438	151.30%	$462	144.66%
2005	$906	106.96%	$930	101.39%
2006	$977	7.80%	$977	5.11%
2007	$1,091	11.64%	$1,070	9.51%
2008	$967	-9.55%	$947	-11.47%
2009	$960	-0.69%	$919	-2.99%
2010	$968	-1.18%	$888	-3.37%
2011	$940	-2.84%	$842	-5.18%
2012	$922	-1.92%	$805	-4.28%
2013	$981	6.45%	$838	3.97%
2014	$1,031	5.08%	$861	2.74%
2015	$1,003	-2.74%	$819	-4.88%
2016	$954	-4.86%	$762	-6.96%
2017	$892	-6.45%	$697	-8.53%
2018	$705	-21.05%	$538	-22.81%
2019	$470	-33.31%	$351	-34.80%
2020	$212	-54.84%	$155	-55.85%
2021	$138	-34.95%	$98	-36.42%
2022	$115	-16.85%	$80	-18.75%
2023	$108	-5.53%	$74	-7.69%
2024	$106	-1.91%	$71	-4.17%
2025	$103	-3.59%	$67	-5.80%

NOx SIP CALL BASE CASE

Year	Nominal $/Ton	% Change	Real 2005 $/Ton	% Change
2001	$4,976		$5,423	
2002	$4,699	-5.56%	$5,061	-6.68%
2003	$3,655	-22.22%	$3,844	-24.05%
2004	$2,250	-38.45%	$2,305	-40.02%
2005	$2,788	23.95%	$2,839	19.74%
2006	$2,559	-7.54%	$2,559	-9.85%
2007	$2,459	-3.92%	$2,412	-5.74%
2008	$2,262	-8.02%	$2,172	-9.97%
2009	$2,642	16.80%	$2,478	14.10%
2010	$2,487	-5.87%	$2,281	-7.95%
2011	$2,291	-7.88%	$2,053	-10.01%
2012	$1,944	-15.15%	$1,700	-17.18%
2013	$1,756	-9.67%	$1,500	-11.77%
2014	$1,435	-18.28%	$1,198	-20.10%
2015	$1,121	-21.88%	$916	-23.60%
2016	$1,153	2.84%	$921	0.58%
2017	$1,184	2.73%	$925	0.45%
2018	$1,217	2.74%	$929	0.44%
2019	$1,241	1.96%	$926	-0.33%
2020	$1,265	1.95%	$923	-0.33%
2021	$1,274	0.72%	$909	-1.57%
2022	$1,189	-6.64%	$829	-8.77%
2023	$1,156	-2.77%	$788	-4.99%
2024	$1,157	0.08%	$770	-2.22%
2025	$1,157	-0.07%	$752	-2.35%

CONFIDENTIAL

Summary of Excess 2006 and 2007 Coal and SO2 Costs and Requested Refund (Exclusive of Interest Adjustment)

	Excess Coal Costs	Excess SO2 Costs	Total Refund Request
2006	$25,149,462.00	$2,915,308.11	$28,064,770.11
2007	$25,866,364.00	$7,348,059.53	$33,214,423.53
Total	$51,015,826.00	$10,263,367.64	$61,279,193.64

MINOR SOURCE AIR CONSTRUCTION PERMIT APPLICATION
COMBUSTION OF POWDER RIVER BASIN (PRB) COAL
CRYSTAL RIVER ENERGY COMPLEX
CRYSTAL RIVER, CITRUS COUNTY, FLORIDA

Submitted to:

Progress Energy Florida
100 Central Avenue
St. Petersburg, Florida 33701

Submitted by:

Golder Associates Inc.
5100 West Lemon Street
Suite 114
Tampa, Florida 33609

Distribution:

4 Copies Department of Environmental Protection
2 Copies Progress Energy Florida
2 Copies Golder Associates Inc.

March 2006

053-9583

PART II

APPLICATION REPORT

1.0 INTRODUCTION AND EXECUTIVE SUMMARY

The proposed Project involves evaluating the firing of various blend ratios (up to 30 percent) of Powder River Basin (PRB) and Eastern Bituminous (Central App) coal at Crystal River Units 4 and 5. This application for a minor source construction permit will allow for a trial burn as a high-level assessment that will assist Progress Energy Florida (PEF) in the performance of a first-cut evaluation to determine if PRB coal will meet expected performance and environmental criteria.

As discussed in a meeting with the Department on February 7, 2006, Crystal River Units 4 and 5 were originally designed to burn a 50/50 percent blend of Eastern bituminous (Illinois Basin) and Western sub-bituminous coal (PRB). The design specifications, provided by Babcock & Wilcox, are included in Appendix A of this application. The original Site Certification language (attached as Appendix B) allowed for a 50 percent blend of PRB coal. The Site Certification for Units 4 and 5 was issued prior to the effective date of the PSD program and, therefore, no construction permit was originally issued. Permit language that specified the burning of "only bituminous coal" originated in the initial Title V air operation permit, issued on January 1, 2000. Finally, as will be presented, the fuel blend, up to a maximum blend of 30 percent PRB, will have characteristics that closely match those of the bituminous coal types that are currently being burned.

The above factors, in addition to the fact that no plant changes to existing process equipment are necessary to test burn the proposed blend, were presented to the Department as PEF's position that Units 4 and 5 are "capable of accommodating" this fuel blend, and that no air permit changes are necessary. In spite of these factors, and at the Department's direction, PEF is submitting this application to obtain a minor source construction permit to allow for the burning of this fuel blend.

The following sections provide the Project Description (Section 2.0) and the Proposed Project Approach (Section 3.0).

Golder Associates Inc.

5100 West Lemon Street, Suite 114
Tampa, FL USA 33609
Telephone (813) 287-1717
Fax (813) 287-1716
www.golder.com

Golder Associates

Docket No. 070703-EI
Excerpt, PEF Application to FDEP
Re: 50% Sub-Bituminous Blend
Exhibit No.___(DJP-15)

PSD PERMIT APPLICATION
CRYSTAL RIVER ENERGY COMPLEX
POLLUTION CONTROL PROJECT
UNITS 4 AND 5

Submitted to:

Florida Department of Environmental Protection

Submitted on behalf of:

Progress Energy Florida
100 Central Avenue
St. Petersburg, Florida 33701

Submitted by:

Golder Associates Inc.
5100 West Lemon Street
Suite 114
Tampa, Florida 33609

Distribution:

4 Copies	-	Florida Department of Environmental Protection
2 Copies		Progress Energy Florida
1 Copy	-	Golder Associates Inc.

August 2006

053-9555

Department of Environmental Protection

Division of Air Resource Management

APPLICATION FOR AIR PERMIT - LONG FORM

I. APPLICATION INFORMATION

Air Construction Permit – Use this form to apply for an air construction permit for a proposed project:
- subject to prevention of significant deterioration (PSD) review, nonattainment area (NAA) new source review, or maximum achievable control technology (MACT) review; or
- where the applicant proposes to assume a restriction on the potential emissions of one or more pollutants to escape a federal program requirement such as PSD review, NAA new source review, Title V, or MACT; or
- at an existing federally enforceable state air operation permit (FESOP) or Title V permitted facility.

Air Operation Permit – Use this form to apply for:
- an initial federally enforceable state air operation permit (FESOP); or
- an initial/revised/renewal Title V air operation permit.

Air Construction Permit & Revised/Renewal Title V Air Operation Permit (Concurrent Processing Option) – Use this form to apply for both an air construction permit and a revised or renewal Title V air operation permit incorporating the proposed project.

To ensure accuracy, please see form instructions.

Identification of Facility

1. Facility Owner/Company Name: PROGRESS ENERGY FLORIDA, INC.	
2. Site Name: CRYSTAL RIVER POWER PLANT	
3. Facility Identification Number: 0170004	
4. Facility Location...: Street Address or Other Locator: NORTH OF CRYSTAL RIVER, WEST OF U.S. 19 City: CRYSTAL RIVER County: CITRUS Zip Code: 34428	
5. Relocatable Facility? ☐ Yes ☒ No	6. Existing Title V Permitted Facility? ☒ Yes ☐ No

Application Contact

1. Application Contact Name: DAVE MEYER, SENIOR ENVIRONMENTAL SPECIALIST
2. Application Contact Mailing Address... Organization/Firm: PROGRESS ENERGY FLORIDA Street Address: 100 CENTRAL AVE CX1B City: ST. PETERSBURG State: FL Zip Code: 33701
3. Application Contact Telephone Numbers... Telephone: (727) 820-5295 ext. Fax: (727) 820-5229
4. Application Contact Email Address: DAVE.MEYER@PGNMAIL.COM

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	07-5-06
2. Project Number(s):	0170004-[illegible]-AC
3. PSD Number (if applicable):	PSD-FL-383
4. Siting Number (if applicable):	

Due to the timing of these various upgrades that are under consideration, a previous application, submitted on April 25, 2006, addressed the installation of SCR systems on Units 4 and 5. Construction on the SCR systems is anticipated to commence in September of 2006, thereby becoming the critical path item for permitting. The additional upgrades summarized above are more fully discussed in the following paragraphs.

2.1 Fuels

The primary fuel will be the Illinois Basin bituminous coals, delivered to the plant by rail. In an effort to continue expanding fuel diversity and ultimately enhancing market options through supplier flexibility at the Crystal River facility, Progress Energy requests to fire a blend of up to 50 percent by weight sub-bituminous coal, as well as a blend up to 30 percent by weight petroleum coke. Typical ultimate and proximate analyses of coals and petroleum coke representative of the types of fuels proposed for the Project are shown in Table 2-1. The amounts and qualities of each type and shipment of fuel will vary depending upon availability and economics, and design values are shown for Highland No. 9 coal, and the co-firing of 30 percent by weight petroleum coke with coal and 50 percent by weight co-firing of sub-bituminous coal. No. 2 oil will be used for startup and flame stabilization.

2.1.1 Sub-Bituminous Coal

A test burn of an approximately 20 percent sub-bituminous blend was conducted on Crystal River Unit 5 during May 2006. This test burn was conducted following approval of a modified air permit by the Florida Department of Environmental Protection (FDEP) allowing testing of a sub-bituminous blended product. A test report, included in Appendix A of this application, was submitted to the Department on July 20, 2006.

There were no substantial issues raised during this trial. Full load was achieved and LOI (loss on ignition) was as good as or better than the base line coal performance measurements. Major emissions constituents, such as NO_x, SO_2, and opacity, were equivalent to or better than the same constituents utilizing the baseline coal. In addition, detailed stack testing of CO, PM and ash resistivity testing were conducted to meet the Florida Department of Environmental Protection (FDEP) requirements. PM was basically unaffected by the sub-bituminous blend as compared to the baseline. CO levels were low during both the baseline tests (about 4-6 ppm) and with the 20 percent

DEPARTMENT OF ENVIRONMENTAL PROTECTION

CERTIFICATION OF COPIES

I HEREBY CERTIFY that the attached document, Technical Evaluation and Preliminary Determination for Project No. 0170004-016-AC dated March 19, 2007, is a true and correct copy from the Department of Environmental Protection's files.

Executed this 30th day of March, 2007

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

A. A. Linero, Program Administrator
Permitting South Section
Records Custodian
Bureau of Air Regulation
Division of Air Resource Management
2600 Blair Stone Road, MS 5505
Tallahassee, Florida 32399-2400
Telephone: (850)488-0114

TECHNICAL EVALUATION
&
PRELIMINARY DETERMINATION

PROJECT

Project No. 0170004-016-AC
Air Permit No. PSD-FL-383
Progress Energy Florida, Inc. – Crystal River Power Plant
ARMS Facility ID No. 0170004
FGD/SCR Projects for Units 4 and 5

COUNTY

Citrus County, Florida

APPLICANT

Progress Energy Florida, Inc.
Crystal River Power Plant
100 Central Ave, CN77
St. Petersburg, FL 34428

PERMITTING AUTHORITY

Florida Department of Environmental Protection
Division of Air Resource Management
Bureau of Air Regulation - Air Permitting North
2600 Blair Stone Road, MS #5505
Tallahassee, FL 32399-2400

March 19, 2007

Limestone Preparation System

Wet ball mill grinding systems will produce the limestone slurry. Filtrate-recycle water from the FGD system will be used to prepare the limestone slurry to conserve make-up water for FGD system mist eliminator washing. The design limestone slurry will consist of 25 to 30% solids and have a design feed rate of approximately 352 gpm at specific gravity of 1.22. Fugitive dust emissions are minimized by enclosures and the addition of water for the slurry.

Dewatering System

The gypsum slurry from the FGD system will be delivered by bleed pumps to the dewatering system, which will consist of a filter feed tank, hydro-cyclones, vacuum belt filters, vacuum pumps, filtrate tanks, filtrate pumps, lined piping, and associated valves. The incoming gypsum slurry will contain 18 to 22% suspended solids. Using a series of hydro-cyclones and four horizontal vacuum belt filters, the dewatering system will remove water until the slurry contains approximately 90% solids. Filtrate removed from the slurry will be stored and pumped back to the limestone preparation system or the absorber module. The de-watering system will be located inside a building. Fugitive dust emissions are negligible because the system is enclosed and wet.

Gypsum Handling System

Reversible collection belt conveyors (G1A and G1B) collect dewatered gypsum from the vacuum belt filters at the dewatering system. Under normal operating conditions, conveyors G1A and G1B feed gypsum onto the belt of transfer conveyor G2, which transfers the gypsum onto a belt feed conveyor for delivery to an adjacent (proposed) wallboard plant. In the reverse direction, gypsum conveyor G1A and G1B feed gypsum onto the belt of conveyor G3, which delivers gypsum to the emergency gypsum pile. The emergency gypsum pile will be located southwest of the dewatering facility and will be used primarily to store the gypsum upon loss of the gypsum transfer and feed conveyors. In addition, the emergency pile may be used to store "off-specification" gypsum if needed. Trucks will remove gypsum from the emergency gypsum stockpile. Fugitive dust emissions will be minimal because the dewatered gypsum still contains 10% water.

Fuel Blend – Request for Blend of up to 50% by Weight Sub-Bituminous Coal

Currently, Units 4 and 5 are authorized to fire bituminous coal (e.g., Highlands No. 9), a bituminous coal and bituminous coal briquette mixture, on-specification used oil, No. 2 fuel oil (as a startup fuel), and natural gas (as a startup and low-load flame stabilization fuel). The applicant proposes to fire a blend of up to 50% by weight sub-bituminous coal with bituminous coal. The maximum sulfur content of the blend will comply with the requested maximum sulfur content of 3.13% by weight. In support of the request, the plant previously obtained an air construction permit and conducted a trial burn of 18% by weight Powder River Basin coal (a sub-bituminous coal) with bituminous coal. The applicant proposes to begin firing such blends upon issuance of the final permit granting authorization. The proposed new blend would only be fired in Units 4 and 5.

Although performance tests showed marginal emissions impacts from firing this fuel blend, the tests were only conducted with a blend of 18% by weight of sub-bituminous coal. Based on the tests, the Department will authorize the firing of a blend of up to up to 20% by weight of sub-bituminous coal with bituminous coal. However, the draft permit authorizes an additional trial burn allowing a temporary period to fire a blend of up to 50% by weight of sub-bituminous coal with bituminous coal for the purpose of conducting additional performance tests in support of a permanent request for this higher blend.

Fuel Blend - Request for Blend of up to 30% by Weight Petroleum Coke

The applicant also proposes to fire a blend of up to 30% by weight petroleum coke with authorized coal blends. The petroleum coke would have a maximum sulfur content of 6.0% by weight. The maximum sulfur content of the petroleum coke/coal blend will be limited to the requested maximum sulfur content of 3.13% by weight. The applicant proposes to begin firing such blends after completing installation of the FGD, SCR, and alkali injection systems and improvements to the existing electrostatic precipitators (ESPs). The proposed new blend would only be fired in Units 4 and 5.