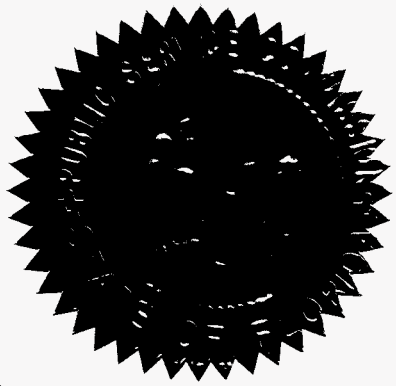
BEFORE THE
FLORIDA PUBLIC SERVICE COMMISSION

DOCKET NO. 070703-EI

In the Matter of:

REVIEW OF COAL COSTS FOR PROGRESS ENERGY FLORIDA'S CRYSTAL RIVER UNITS 4 AND 5 FOR 2006 AND 2007.
_____/



VOLUME 2

Pages 163 through 351

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PROCEEDINGS:	HEARING
BEFORE:	CHAIRMAN MATTHEW M. CARTER, II COMMISSIONER LISA POLAK EDGAR COMMISSIONER KATRINA J. McMURRIAN COMMISSIONER NANCY ARGENZIANO COMMISSIONER NATHAN A. SKOP
DATE:	Monday, April 13, 2009
TIME:	Commenced at 9:30 a.m. Concluded at 5:14 p.m.
PLACE:	Betty Easley Conference Center Room 148 4075 Esplanade Way Tallahassee, Florida
REPORTED BY:	JANE FAUROT, RPR Official FPSC Reporter (850) 413-6732
APPEARANCES:	(As heretofore noted.)

I N D E X

WITNESSES

EXHIBITS

NUMBER:		ID.	ADMTD.
54	Coal Cost/Quantity Gradient	245	
7-13			264

PROCEEDINGS

CHAIRMAN CARTER: We are back on the record.

And when we last left, I think, Mr. Burnett, you're recognized.

MR. BURNETT: Thank you, sir.

We would call Mr. Jamie Heller.

CHAIRMAN CARTER: Okay. Mr. Heller.

JAMES N. HELLER

was called as a witness on behalf of Progress Energy Florida, and having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. BURNETT:

Q. Sir, will you please introduce yourself to the Commission and provide your business address.

A. My name is James N. Heller. My business address is 4803 Falstone Avenue, Chevy Chase, Maryland.

Q. And you have already been sworn in as a witness, sir?

A. Yes, I have.

Q. Who do you work for and what is your position?

A. I work for Hellerworx, and I am the President.

Q. And have you filed prefiled direct testimony and exhibits in this matter?

A. Yes, I have.

Q. Do you have a copy of your prefiled direct testimony and exhibits with you now?

A. I do.

Q. Do you have any changes to make to your prefiled direct testimony?

A. No, I don't.

Q. If I asked you the same questions in your prefiled direct testimony today, would you give the same answers that are in your prefiled testimony?

A. Yes, I would.

MR. BURNETT: Sir, we request that the prefiled direct testimony be entered in the record as if it were read today.

CHAIRMAN CARTER: The prefiled testimony of the witness will be inserted into the record as though read.

IN RE: REVIEW OF COAL COSTS FOR PROGRESS ENERGY FLORIDA'S CRYSTAL RIVER UNITS 4 AND 5 FOR 2006 AND 2007

FPSC DOCKET NO. 070703-EI

DIRECT TESTIMONY OF

JAMES N. HELLER

I. INTRODUCTION AND QUALIFICATIONS

Q. Please state your name and business address.

A. My name is James N. Heller. My address is 4803 Falstone Avenue, Chevy Chase, Maryland.

Q. How are you employed?

A. I am the President of Hellerworx, Inc.

Q. What do you do?

A. I provide consulting services to assist power generators, transportation companies and energy producers in solving economic and technical problems related to energy and transportation markets and environmental compliance issues.

Q. Have you been retained by Progress Energy Florida ("PEF") in this proceeding?

A. Yes.

Q. What were you asked to do?

A. I was asked to compare the delivered coal costs PEF actually incurred by using Central Appalachian and imported coal at Crystal River units 4 and 5 ("CR4 and CR5") during 2006 and 2007 with the evaluated coal costs that would have been incurred if a 20% blend of Powder River Basin ("PRB") coal had been used at CR4-5 during the same time period. These comparisons are consistent with and follow the "Cost Effectiveness Test" performed by Staff in their Primary Recommendation in Docket 060658 as used in Order 07-0816-FOF-EI, pages 37-39 and Attachment A. [1] My testimony supports the testimony of PEF witness Sasha Weintraub which has been filed pursuant to a Florida Public Service Commission ("PSC" or "Commission") requirement that PEF "address whether [PEF] was prudent in its 2006 and 2007 coal purchases for CR4 and CR5." [2] I have performed two versions of this coal cost comparison. The first version uses the comparison methodology developed by the Commission in its October 10th, 2007 order in this matter (Order 07-0816-FOF-EI, or the "October 10th order.") without any adjustments or modifications. The second version starts with the

[1] July 19, 2007 Staff Recommendation in Docket 060658 pages 90-92 and PSC Order No. PSC-07-0816-FOF-EI, October 10, 2007 pages 37-39.
[2] PSC Order No. PSC-07-0816-FOF-E1, October 10, 2007, pages 41-42.

Commission methodology, but corrects a mathematical error in that methodology while still being consistent with Order PSC-07-0816-FOF-EI in Docket 060658.

Q. What is your educational background?

A. I have a Bachelor of Science degree in Electrical Engineering from Northwestern University (1970) and a Master of Business Administration from Harvard Business School (1972).

Q. What has been your professional experience that assists you in providing this testimony?

A. During my career, I have performed numerous studies and provided information and consulting services for electric utilities, energy companies, developers and transportation companies related to coal and coal transportation markets. I have worked for many electric utilities in Florida on matters related to coal and transportation procurement including new plant siting.

I have analyzed Central Appalachian and Powder River Basin coal markets on numerous occasions. I have assisted clients in the negotiation of coal and transportation contracts, in the analysis of coal supply and transportation alternatives, and in strategic planning matters related to environmental compliance and fuel procurement.

Aside from my work with electric generators and coal suppliers, I have also worked for the Electric Power Research Institute and various federal agencies on coal supply and transportation related studies. I have provided expert

testimony on coal market matters before various state commissions, federal courts, the Federal Energy Regulatory Commission, the US Surface Transportation Board and various domestic and foreign arbitration panels.

I have done work previously for Florida Power Corporation, Progress Energy and Electric Fuels. Some of this previous work has dealt with coal supply and transportation matters related to the Crystal River units. I also submitted testimony[3] and testified[4] on behalf of PEF in the prior Crystal River Coal Procurement Proceeding.

II. PURPOSE, SUMMARY AND APPROACH TO TESTIMONY

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to compare the delivered coal costs PEF actually incurred by using Central Appalachian and imported coal at CR4 and CR5 during 2006 and 2007 with the evaluated costs that would have been incurred if a 20% blend of Powder River Basin ("PRB") coal had been used at CR4-5 during the same time period. My analysis is consistent with the "Cost Effectiveness Test" Staff performed in their Primary Staff Recommendation in Docket 060658 and as the Commission implemented it in Order 07-0816-FOF-EI, pages 37-39 and Attachment A.

[3] PSC Docket No. 060658-EI, Document No. 00436-07 filed January 16, 2007 and Document No. 02042-07 filed March 6, 2007.
[4] PSC Docket No. 060658-EI, Hearing Transcript, Document No. 03174-07 dated April 13, 2007, pages 914-1025.

Q. On what materials did you rely?

A. I relied on PEF's historical delivered coal price data for CR4 and CR5, as reported to the Federal Energy Regulatory Commission ("FERC") for the 2006-2007 time period. I also requested and reviewed selected information regarding PEF's cost of transporting Central Appalachian and imported coals to CR4 and CR5 during 2006 and 2007 that I believe is relevant to estimating the transportation costs for PRB coal. I also requested and reviewed information with regard to PRB coal bids received by PEF during this period, and PEF's analysis of those bids. I also requested and reviewed PEF's as received coal quality analysis for a test shipment of PRB coal to Crystal River during May 2006. In addition to the materials received from PEF, I gathered information from coal publications and data bases about PRB coal market prices and transportation rates during the 2006-2007 time frame. This is the type of information upon which I regularly rely.

Q. What analysis did you perform with the materials that you collected?

A. I compared the incremental costs of coal actually purchased and delivered to CR4 and CR5 with the cost of PRB coal on an "as-burned" basis. In other words, if PEF had purchased PRB coals for CR4 and CR5, the PRB shipments would have displaced other coals. Presumably, the coals displaced would have been those that were the highest priced coals delivered to the units. I then calculated the difference in the incremental costs of the delivered coals and the PRB coals on an "as-burned" basis.

Q. How did you perform the analysis?

A. I reviewed the delivered prices of coal to CR4 and CR5 during the 2006-2007 period and identified the mix of coals burned at the plant. I reviewed information as to whether the coals were delivered by rail or water. I also considered the price of the coals actually delivered. These coals were either from Central Appalachia (CAPP) or were imports from South America. Central Appalachia refers to a coal supply region including eastern Kentucky, West Virginia, Virginia and Tennessee which is the primary eastern US low sulfur bituminous coal producing region. I ranked these coal deliveries over time in terms of their delivered costs. I also examined the PRB coal bids received by PEF during 2006 and 2007 to determine how the evaluated cost of PRB coals would have compared with the evaluated cost of the most expensive coals that were actually delivered.

Q. Did you perform the analysis on a delivered price or "evaluated" price basis?

A. I performed the comparisons on an "as-burned" or "evaluated" price basis. This is because in comparing coals of very different characteristics, it is important to understand how they affect boiler operations and unit output (October 10th Order pages 29-30, 37). A relatively low Btu, high moisture coal like a PRB coal generally has a negative impact on boiler performance and plant operating costs, while its lower sulfur content has a positive impact on emissions. PEF analyzed these differences in coal quality characteristics and calculated adjustments to evaluate these differences and express them on a cents per million Btu basis. I understand that PEF uses the Vista model, which was developed by Black and

Veatch for the Electric Power Research Institute (EPRI), to estimate the impact of variations in coal quality upon generation costs. The Vista model is an updated, Windows-enabled version of the Coal Quality Impact Model (CQIM) that PEF previously used to perform these analyses. The Vista models (or similar models) are widely used for performing such analyses.

Q. Please provide a summary of your testimony.

A. Using the coal price comparison methodology in the Commission's October 10th order, the all-in cost of burning a 20% blend of PRB coal at Crystal River 4-5 during the 2006-2007 period is estimated to be about $3.1 million more expensive than the cost of burning the Central Appalachian and imported coals that were actually used at Crystal River 4-5 during this period. When PEF's proposed mathematical corrections are included, the comparison shows that the PRB coal blend would have been about $4.6 million more expensive than the Central Appalachian and imported coals during 2006-2007.

Q. Are you sponsoring any exhibits to your testimony?

A. Yes. I am sponsoring the following exhibits that I have prepared or that were prepared under my supervision and control:

- Exhibit No. __ (JNH-1), Resume of James N. Heller;
- Exhibit No. __ (JNH-2), which is a summary of PRB delivered and evaluated prices, using the methodology in the Commission's October 10th order;

- Exhibit No. __ (JNH-3), which is an economic analysis of the impact of substituting a 20% blend of PRB coal for the coal actually delivered to CR4 and CR5 during 2006 and 2007, using the methodology in the Commission's October 10th order;
- Exhibit No. __ (JNH-4), which is a summary of PRB delivered and evaluated prices, including PEF's proposed corrections;
- Exhibit No. __ (JNH-5), which is an economic analysis of the impact of substituting a 20% blend of PRB coal for the coal actually delivered to CR4 and CR5 during 2006 and 2007, including PEF's proposed corrections;
- Exhibit No. __ (JNH-6), which shows the Commission's original and PEF's adjusted capital recovery requirements associated with using a 20% blend of PRB coal at CR4 and CR5 during 2005;
- Exhibit No. __ (JNH-7), which shows PEF's adjusted capital recovery requirements associated with using a 20% blend of PRB coal at CR4 and CR5 during 2006 and 2007.

All of these exhibits are true and correct to the best of my knowledge.

III. RESULTS USING THE METHODOLOGY IN THE COMMISSION'S OCTOBER 10TH ORDER

Q. What analysis did you conduct of actual coal deliveries?

A. I reviewed the FERC Form 423 data for 2006 and 2007 coal deliveries to Crystal River. This provided information about the coal quantities, sources, quality parameters, and prices for the various coal shipments. My review focused on waterborne deliveries of compliance coals, since these are the coals that could potentially have been displaced by PRB coal. My analysis assumed that, if PRB coal had been used at Crystal River 4-5 during 2006 and 2007, the PRB coal deliveries would have displaced the most expensive deliveries of waterborne compliance coal that actually occurred during each year. The cost effectiveness analysis I performed for PRB coal deliveries to Crystal River 4-5 during 2006 and 2007 used the same methodology I performed in the previous Crystal River Coal Procurement proceeding, which was accepted by the Commission (October 10th Order page 39).

Q. How did you analyze PRB coal prices F.O.B. mine?

A. I based my analysis for 2006 on the test PRB coal delivery received by PEF in May 2006. I based my analysis for 2007 on the bids for 2007-2009 delivery of PRB coal that were submitted to PEF by Louis Dreyfus on February 14, 2006.

PEF's FERC Form 423 data shows that the May 2006 test coal shipment was delivered to IMT at a price of $47.34/ton. On an as-received basis, this coal contained 8,585 Btu/lb., 0.415% sulfur (or 0.97 lbs. SO_2/MMBtu), 6.65% ash, 27.83% moisture, and 31.33% volatile matter. This was the coal price and quality information I used in my analysis for 2006.

My analysis for 2007 was based on three Louis Dreyfus bids for 2007-2009 delivery of PRB coal that were submitted to PEF on February 14, 2006. Louis Dreyfus offered three options: 1) a three-year, fixed price contract for 150,000 tons/year of coal during 2007-2009, priced at $11.75/ton; 2) a three-year contract with volumes similar to option 1, but prices indexed to changes in OTC prices for 8,400 Btu/lb. PRB coal; and 3) a two-year contract for 150,000 tons/year, with 2007 pricing at $10.75/ton and 2008 pricing indexed to changes in OTC prices for 8,400 Btu/lb. PRB coal. The coal quality specifications for all three of these bids were 8,200 Btu/lb., 1.2 lbs. SO_2/MMBtu, 6.5% ash, and 30% moisture. In my analysis for 2007, I have used the 2007 price of $10.75/ton that Louis Dreyfus offered under option 3, without attempting to estimate the 2008 price that would have applied under this agreement. Since the 2007 price under the option 3 agreement represented a discount of approximately $1.00/ton relative to the 2007 index price, my analysis probably understates the average cost PEF would have incurred over the life of this proposed agreement.

Q. How did you analyze the rail transportation rate to move coal from the PRB to the river?

A. Since PEF's 2006 FERC Form 423 data reported the cost of the 2006 PRB coal shipment delivered to IMT, a rail rate estimate was not needed for 2006. For 2007, I assumed that PEF's rail rate would have been similar to the rates applicable to other shipments of PRB coal to competitively-served destinations during the same period. Although the details of particular rail contracts are

almost always confidential, I estimate that a typical or "market" rail rate for PRB coal movements to the St. Louis area during 2007, with railcars supplied by the railroad, would have been about 19 mills per ton-mile, including railcar costs and the fuel surcharge. Over a typical rail routing for this movement (Union Pacific to Cora Dock, a distance of approximately 1,124 miles), this would have been a rail rate of approximately $21.36/ton.

Q. How did you analyze the rail-to-barge transfer cost?

A. Since PEF's 2006 FERC Form 423 data reported the cost of the 2006 PRB coal shipment delivered to IMT, an estimate of rail-to-barge transfer costs was not needed for 2006. For 2007, I assumed the rail-to-barge transfer costs would be similar to the rates used at the Kanawha River Terminals (KRT) which is also a rail-to-barge terminal, and was owned by Progress Energy until late 2007. The rail-to-barge transfer costs were estimated at approximately $1.16/ton in 2007.

Q. What did you use for the barge rate?

A. The barge rates for the St. Louis area – Davant, Louisiana movement during 2007 were based on PEF data which showed that PEF's rates for this movement averaged about $7.62/ton during 2007. Since PEF's 2006 FERC Form 423 data reported the cost of the 2006 PRB coal shipment delivered to IMT, an estimate of the St. Louis area – Davant barge rate was not needed for 2006.

Q. How did you calculate the rates for the inland barge to Gulf barge transfer at Davant?

A. These costs were based on the actual average transloading costs incurred by PEF at the terminals owned by IMT and TECO (now United Bulk Terminal). These costs averaged $1.72/ton during 2007. Since these costs are included in PEF's FERC Form 423 data for 2006, an estimate of transloading costs was not needed for 2006.

Q. How did you estimate the fees for blending PRB coal at IMT or United Bulk Terminal?

A. PEF incurs no additional costs for coal blending at IMT. At United Bulk Terminal, PEF's current blending costs are $0.25/ton for a two-coal blend and $0.35/ton for a three-coal blend. Since the 2006 PRB coal shipment was routed via IMT, I have assumed a zero blending cost for both 2006 and 2007.

Q. What items are included in "other costs," and how did you calculate those items?

A. These costs include Gulf barge demurrage and other miscellaneous costs which primarily relate to Gulf barge transportation. These costs are calculated based on the actual costs incurred by PEF during 2006 and 2007. These costs totaled $1.43/ton during 2006 and $1.90/ton during 2007.

Q. How did you calculate the rates for the cross-Gulf barging?

A. These rates were based on PEF's actual average cross-Gulf barge rates for movements from the IMT or United Bulk terminals to Crystal River during 2006 and 2007, adjusted as needed to account for the fact that the lower heat content (i.e., lower Btu/lb.) of the PRB coal requires an increase in the total waterborne coal tonnage delivered in order to deliver the same total fuel requirement (total Btu's). The estimated cross-Gulf barge rates for PRB coal deliveries are $10.30/ton in 2006 and $7.22/ton in 2007.

Q. What other adjustments did you make to the PRB delivered prices?

A. As I indicated previously, to properly compare the PRB coals with the other coals it is important to do this on an "evaluated" basis using the Vista results. This accounts for the expected negative impact of the relatively low-Btu, high moisture coal on boiler performance and plant operating costs.

Since the PRB coal offered by Louis Dreyfus for 2007-2009 delivery was a relatively low-Btu, high moisture, and high sulfur product, it incurred a relatively high operating cost penalty. Specifically, PEF's evaluation sheet for this bid shows that, excluding SO_2 costs, the evaluated cost of the Louis Dreyfus coal was about $4.99/ton or $0.30/MMBtu higher than the delivered cost.

Furthermore, since the sulfur specification for the Louis Dreyfus coal (1.2 lbs. SO_2/MMBtu, was actually higher than PEF's "baseline" SO_2 specification for the Crystal River 4-5 units (which is 0.70% sulfur at 12,000 Btu/lb., or 1.17 lbs. SO_2/MMBtu), I have assigned an additional penalty related to SO_2 allowance costs to the Louis Dreyfus coal. Based on the SO_2 allowance price included in

PEF's evaluation of the Louis Dreyfus bids ($1,514/ton SO_2 for 2007), I have estimated the SO_2 penalty for the Louis Dreyfus coal at $0.37 per ton of coal. Thus, in total, the evaluated cost for the Louis Dreyfus coal is $5.36 per ton, or $0.33 per MMBtu, higher than the delivered cost.

Since the 2006 test shipment of PRB coal involved a very small quantity of coal (3,300 tons) purchased on the spot market, PEF did not perform a Vista analysis for this coal. However, since the quality characteristics of PRB coal are very different from the quality characteristics of the Central Appalachian and imported coal PEF has burned at Crystal River 4-5 in the past, my analysis assumes that PEF would have run a Vista analysis for its 2006 PRB coal deliveries if it had purchased PRB coal in the quantity assumed by the Commission (480,000 tons) (October 10th Order pages 37-38). Therefore, I have estimated the evaluated cost for the 2006 PRB coal deliveries (excluding SO_2 costs) by entering the as-delivered specifications for the 2006 test shipment of PRB coal into the bid evaluation sheet PEF used to evaluate the Louis Dreyfus bids in February 2006.

SO_2 allowance prices declined substantially between the time the Louis Dreyfus bids were evaluated in mid-February 2006 and the submission of the Peabody Coaltrade bid in early May 2006. PEF evaluates the SO_2 emissions costs associated with its coal bids using the latest forecast of annual average SO_2 allowance prices available from JD Energy, Inc. For the Peabody Coaltrade bid dated May 2, 2006, PEF's evaluation would have been based on the March 2006 forecast from JD Energy, which forecast an average SO_2 allowance price of

$977/ton SO_2 for the full year 2006. This was the SO_2 allowance price assumption I used in my analysis for 2006.

Since the PRB coal delivered in May 2006 had a higher heat content (8,585 Btu/lb.) and lower SO_2 content (0.97 lbs. SO_2/MMBtu) than the Louis Dreyfus coal, it incurs a lower operating cost penalty (October 10th Order page 40). Inclusive of SO_2 costs, the evaluated cost for the 2006 PRB coal is estimated to be $0.16/MMBtu higher than the delivered cost.

Q. What were the results of your PRB delivered price analysis?

A. Exhibit No. __ (JNH-2) shows the results of this analysis on a delivered price and an evaluated price basis. As the Commission acknowledged on page 37 of the October 10th order, the evaluated price basis is the proper one for comparison with CAPP and imported coals.

Q. How did you treat the capital costs associated with a conversion to PRB coal?

A. The Commission estimated in its October 10th order that the incremental capital costs associated with burning PRB coal were approximately $0.03/MMBtu. In Exhibits JNH-2 and JNH-3, which were prepared using the Commission's methodology, I have used this estimate (October 10th Order page 38). However, as discussed in more detail in the next section of my testimony, PEF believes this estimate is too low.

Q. When the Commission's methodology is used, what do the results show?

A. Based on the results of the Commission's "Cost Effectiveness Test", PEF would not have elected to burn PRB coal in 2006 or 2007. The results in Exhibit No. __ (JNH-3) show that, when the Commission's methodology for delivered coal price comparison is used, and the Commission's estimate of the expected capital costs associated with burning a 20% blend of PRB coal is taken into account, the all-in cost of burning a 20% blend of PRB coal at Crystal River 4-5 would have been about $0.33/MMBtu more expensive than the cost of Central Appalachian and imported coal during 2006. Using these same assumptions, the PRB coal would have been about $0.04/MMBtu more expensive than the Central Appalachian and imported coal during 2007. Thus, for the 2006-2007 period as a whole, the Commission's methodology shows that the all-in cost of burning a 20% blend of PRB coal would have been approximately $3.1 million higher than the cost of burning Central Appalachian and imported coal at Crystal River 4-5 .

IV. RESULTS INCORPORATING PEF'S PROPOSED ADJUSTMENTS

Q. What adjustments to the Commission's October 10th order is PEF proposing?

A. PEF believes that there should be adjustments to revise the Commission's estimate of the capital costs associated with burning a 20% blend of PRB coal at Crystal River 4-5 ($0.03/MMBtu) to a level of capital costs that would actually be incurred to burn such a blend, while still being consistent with Order PSC-07-0816-FOF-EI. Specifically, PEF believes Staff made a mathematical error when

calculating their return requirements that should be fixed for the purposes of this Docket.

Q. Can you explain the error PEF believes Staff made in their Capital Revenue Requirements calculation?

A. Yes. In Docket 060658, PEF presented capital revenue requirements associated with burning a 50% blend of PRB coal. I then put forth revenue requirements associated with capital changes needed to be able to burn a 50% blend based on the mid-point of the PEF presented data which included a low cost estimate of $48.6M and a high cost estimate of $73.7 million. Therefore, my calculation of the revenue requirements for capital additions needed to burn a 50% blend of PRB coal were based on a cost of $61.2 million. On page 38 of Order No. PSC-07-0816-FOF-EI, there is discussion of what adjustments should be made to my calculations to represent capital additions necessary to use only a 20% PRB blend. The Order indicates that 10% of the capital costs needed for a 50% PRB blend will be needed for a 20% PRB blend. The Order then goes on to site the Sargent & Lundy report which indicated that $10.6 million in capital costs would need to be incurred to burn blends of less than 30% PRB coal. This discussion leads me to believe that the intent of the order was to calculate the revenue requirements based on 10% of the capital cost additions that I presented, or approximately $6.12 million dollars. This would make sense when checked against the Sargent & Lundy estimate for a 30% blend, in fact, two thirds of the Sargent & Lundy estimate is $7.1 million. What was missed is that even though the capital

investment may be ten percent of that required for a 50% blend, it will be spread over less tons and therefore, the capital revenue requirements per MMBtu will not be ten percent of the 50% blend.

Q. If you follow the language of Order PSC-07-0816 what should the capital revenue requirements be per MMBtu?

A. I have attached Exhibit JNH-6 which shows the original revenue requirements calculation for 2005 as presented in Docket 060658 in Column A, and the adjustments as they should have been made to represent the capital revenue requirements as discussed in the Order in Column B. I also illustrated what the Order did that lead to the incorrect capital revenue requirements used in the Order's Attachment A in Column C. I have also attached Exhibit JNH-7 which shows the Capital Recovery Requirements for a 20% PRB coal blend in $/MMBtu for 2006 and 2007 based on the tons of PRB coal that PEF could have taken as I presented it in Exhibit JNH-5. The capital recovery requirement is $0.12/MMBtu in both 2006 and 2007.

Q. Did you make any other adjustments to come up with the above mentioned capital revenue requirements?

A. Yes, as can be seen if you compare JNH-6 and JNH-7 there are two additional adjustments. First, I adjusted the accumulated depreciation to be consistent with an in-service date of 2003 consistent with Order PSC-07-0816 in Docket 060658. This assumes three and a half years of accumulated depreciation consistent with

what would have been included in PEF's 2005 Rate Case in Docket 050078. The other adjustment is to make the rate of return consistent with the rate of return approved in the Settlement in this Docket.

Q. When PEF's proposed adjustment is included, what do the results of the coal price comparison show?

A. The results in Exhibit No. __ (JNH-4) and Exhibit No. ___ (JNH-5) show that, when PEF's proposed adjustments to the coal price comparison methodology used in the Commission's October 10th order are included, the all-in cost of burning a 20% blend of PRB coal at Crystal River 4-5 would have been about $0.42/MMBtu more expensive than the cost of Central Appalachian and imported coal during 2006. Using these same assumptions, the PRB coal would have been about $0.13/MMBtu more expensive than the Central Appalachian and imported coal during 2007. Thus, for the 2006-2007 period as a whole, PEF's adjusted methodology shows that the all-in cost of burning a 20% blend of PRB coal would have been about $4.6 million higher than the cost of burning Central Appalachian and imported coal at Crystal River 4-5.

Q. Does this conclude your testimony?

A. Yes.

BY MR. BURNETT:

Q. Mr. Heller, do you have a summary of your prefiled direct testimony?

A. I do.

Q. Will you please provide that summary to the Commission.

A. Good day, Commissioners.

The purpose of my direct testimony is to compare the delivered cost that PEF actually incurred by using Central Appalachian and imported bituminous coal at Crystal River Units 4 and 5 during 2006 and 2007 with the evaluated cost that would have been incurred if a 20 percent blend of Powder River Basin coal had been used at Crystal River 4 and 5 during the same time period.

In performing this analysis, I have used the cost-effectiveness test performed by Staff in their primary staff recommendation in Docket 060658, which the Commission implemented in its October 10th, 2007, order. The results of my analysis show that PEF saved its customers several million dollars by burning blends of Central Appalachian and imported bituminous coal instead of Powder River Basin coal in 2006 and 2007.

In performing my analysis, I relied on actual purchases and other objective factual information. For

example, I relied upon PEF's actual historical coal price data, PEF's real cost of transporting Central Appalachian and imported coals for 2006 and 2007, PRB coal bids actually received by PEF during this period, as received coal quality analysis for PRB coal received at Crystal River, actual SO2 allowance prices and information from industry-recognized coal publications and databases, the report "Powder River Basin Coal Market Prices and Transportation Rates in 2006 and 2007".

With this data, I compared the cost of coal actually delivered to CR4 and 5 with the cost of PRB coal on an as-burned basis. I then calculated the difference between these costs. I performed the comparison on an as-burned or an evaluated price basis just as the Commission did in Docket 060658. Consistent with the procedure used in Docket 060658, my review focused on waterborne deliveries of compliance coal, since these are the coals that could potentially have been displaced by PRB coal.

My analysis assumed that if PRB coal had been used at Crystal River 4 and 5 during 2006 and 2007, the PRB coal deliveries would have displaced the most expensive deliveries of waterborne compliance coal that actually occurred during each year. I then added the

incremental capital cost of three cents per million Btu associated with burning PRB coal according to the Commission's methodology. Using the coal price comparison methodology in the Commission's October 10th order, the all-in cost of burning a 20 percent blend of PRB coal at Crystal River 4 and 5 during the 2006 and 2007 time frame is about $3.1 million more expensive than the cost of burning the Central Appalachia and imported coals that were actually used at Crystal River 4 and 5 during this period.

Based on the results of the Commission's cost-effectiveness test, Progress Energy should not have elected to burn PRB coal in 2006 and 2007. That concludes my summary, and I'm happy to answer any questions.

MR. BURNETT: We tender Mr. Heller for cross-examination, sir.

CHAIRMAN CARTER: Thank you.

Commissioner Skop, you're recognized.

COMMISSIONER SKOP: Thank you, Mr. Chairman. Good afternoon, Mr. Heller.

THE WITNESS: Good afternoon.

COMMISSIONER SKOP: Just a few quick questions with respect to your prefiled testimony and your exhibits. If you could please turn to Exhibit JNH-3,

please.

THE WITNESS: Yes.

COMMISSIONER SKOP: And I think on that exhibit, and correct me if I'm wrong, I think that you're trying to show the delivered price for CAPP coal in the year 2007 and then doing a comparison that evaluated price for using PRB, and then calculating or showing that the -- basically, the CAPP coal would have been more cost-effective than having to use the PRB, is that correct?

THE WITNESS: For 2006 and 2007, that's correct.

COMMISSIONER SKOP: Okay. With respect to the numbers that you used to derive your evaluated price for PRB coal, those numbers, are those based in any part on a spot price quote or on actual delivery that was made?

THE WITNESS: The Powder River Basin prices that I used are different in 2006 and 2007. In 2006, I used the actual delivery of the test coal from Peabody Coal Trade and used that as the basis for the Powder River Basin coal pricing.

In 2007, I had a bid from the 2006 RFP that was provided by Louis Dreyfus and I used that actual bid as the basis of the calculation for the delivered PRB price in 2007.

COMMISSIONER SKOP: Okay. Let's focus on the 2006 price which was based on actual delivery. I guess to me, in this case, and obviously any refund amount would turn on whether it was prudent to burn PRB, or whether to burn a blend of bituminous coal, or whatever was the most cost-effective option, but at least if PRB is called into question, then, you know, the evaluated price and the source of that, I think, becomes the driver in determining what refund, if any, would be required.

On that spot price delivery, that was for a small quantity, is that correct?

THE WITNESS: That's correct.

COMMISSIONER SKOP: And that was approximately 3300 tons?

THE WITNESS: That's exactly right.

COMMISSIONER SKOP: Okay. And on that spot price, I guess in trying to analogize a spot price small quantity versus a large price or a purchase in volume, and it would just, I guess, kind of seem to me that a coal mine really wouldn't engage in price gouging on a small quantity of coal in the expectation that it might gain a long-term customer. Has that generally been your experience?

THE WITNESS: In terms of the pricing for the

test shipment, they might be aggressive on that in order to gain a long-term contract.

COMMISSIONER SKOP: Okay. So they wouldn't just artificially inflate the price for a spot delivery on a small quantity.

THE WITNESS: It actually depends on where they are in the process. But generally in a test shipment, when you are looking at the prospect of obtaining a new customer, they are likely to be pretty aggressive in terms of making sure that at least the test coal gets burned.

COMMISSIONER SKOP: Okay. And to that point, assuming for the sake of discussion that $3.63 price is a good spot price indicative of a long-term delivery, but for a small quantity, should that spot price be adjusted downward slightly to account for increased volume, if there were to be a long-term contract?

THE WITNESS: No, I wouldn't do that. I actually had a -- when I took a look at how to set the price for 2006 or what to use, there were a number of factors that I thought about. I knew no matter what I did I was going to get criticized. If I used a small volume of coal, I would be criticized for using something that wasn't indicative of a much larger contract. And if I were to ignore that and use a price

that I would choose, it is particularly difficult because during the period of time when I would be looking for prices, Progress Energy actually did solicit in 2005 and got no responses.

And I know what was going on in the market in 2005 and the first part of 2006. There were record prices being paid for Powder River Basin coal. So if I used a high price, I would have been criticized for that. If I were to go back nine months, the price would be lower. And it turned out that the spot shipment is reflective of the pricing that was going on during that period, and it was also able to be shipped, which was no mean feat, because in 2005 and the beginning of 2006 getting Powder River Basin transportation was difficult.

So it was able to be arranged by the producer, and the pricing looked to me to be indicative of what pricing would be during that period. And it was an actual transaction, and that's what I chose to use when I had data available.

COMMISSIONER SKOP: Okay. And would you also agree that within the record evidence there is some evidence to suggest that for a larger quantity of coal, a much larger tonnage delivery, that the pricing during that period would be lower in terms of dollars per MMBtu?

THE WITNESS: If you're referring to the evidence this morning about the Triton bid?

COMMISSIONER SKOP: Yes.

THE WITNESS: Again, that was the result of a 2004 solicitation. And the market price for Powder River Basin coal changed dramatically between 2004 and 2005 and 2006. So that evidence is relevant, I think. The difference in prices is not so much the result of a difference in quantity as it is a difference in the time at which the price was solicited.

COMMISSIONER SKOP: Okay. And I appreciate that. And I'm not being critical. Just from my perspective, I'm trying to ascertain what the, you know, appropriate decision would be supported by the record evidence in terms of how the Commission should address the issue before it.

If I understand, you know, I have heard OPC's argument, and I'm familiar with that, and it seems like the Progress argument is two-fold, or a two-pronged argument. First and foremost, that the evaluated price of PRB during the time in question was prohibitive over and above using the straight CAPP coal, and then also, too, the Indonesian coal in 2007 was not available. And it seems like the crux of that, too, is a showing that I think Mr. Weintraub just mentioned on Staff

Interrogatory 29A and 29B, showing how the blend of bituminous coals was, in itself, more cost-effective than having to seek PRB or other coals. Is that your general understanding?

THE WITNESS: Yes. What Mr. Weintraub does in terms of the bid evaluation and the decision process is, and what the timing is that they choose to go out and get coal, is something I have to -- as the analyst I live with, I don't drive that decision. So during the time that they went out for coal in late 2005, which would have been for 2006 delivery, there was no PRB coal bid into them, which isn't a surprise to me, given what was going on in the marketplace.

COMMISSIONER SKOP: And I think probably three more questions and, again, I'm trying to keep this short. I want to go back and focus on the 2006, and I know that that is about the best record evidence we have to actual delivery in the time frame in question, although the volume is small. But am I to correctly understand that if I look at Column 5 on that exhibit, which is the 3.63, and then the delivered price during that period for CAPP coal was $3.30, so would it be correct to understand that anything above $3.30 for alternate coal would be cost prohibitive?

THE WITNESS: Anything that was above $3.30

would have made it to the detriment of the company to have burned the alternative coal, that's correct.

COMMISSIONER SKOP: So if $3.30 was the threshold mark, at or below that price Progress would be prudent for burning CAPP coal alone, and actually -- I'm sorry, I'm getting myself confused, because I'm looking at the data. Hold on for one second.

So anything above $3.30 would have made burning PRB cost prohibitive, is that correct?

THE WITNESS: It would have been a loser. And so there is quite a bit of margin in there in 2006 in terms of the cost of PRB versus the alternative.

COMMISSIONER SKOP: Okay. I'm going to, if I may, and I think I have cleared this with our legal staff; basically, I'm trying to discern what's going on between the actual physical price we have and the chart that was shown this morning. And what I did is a simple straight-line graph to kind of show the two data points that I think have been at issue this morning. And I would like to distribute that to my colleagues, and also the witness and counsel, if we could, please.

And this is not for the record, this is just for purposes of discussion. And while they are doing that, it's my understanding, too, from reading the testimony that the approximate tonnage of PRB and,

again, the 80/20 blend, subject to the constraints of the waterborne delivery, subject to all the things that have been articulated, the maximum amount of coal that could have been PRB in any given year would have been about 450,000 tons, is that correct?

THE WITNESS: That's correct.

COMMISSIONER SKOP: Okay. I'll wait for this is be passed out, and I'll try and draw at least some sort of conclusion whether you can help me out with this.

I guess if you could please look at this chart, and I guess what's attempted to have been done to accomplish by this chart is to plot the data point from this morning, which would have been about three million tons at the stated price, and then also to plot the spot delivery that you mentioned, which is the 3.63 for about 3300 tons. And, again, the scale is not as good as it could be, but I think that it shows an illustration. And I guess if you could look at the -- since 450,000 tons was the maximum PRB that could have been delivered, if you could interpolate where that would reflect on that straight line in terms of a delivered coal cost in dollars per MMBtu, and roughly estimate that, where that would fall on that line or the intersection of the line.

THE WITNESS: It would be somewhere around $3.40.

COMMISSIONER SKOP: That's about the same number I would get to. I guess we interpolate the same. So, basically, if you were trying to correct between a large volume purchase of PRB and the spot price, although I think you have testified that no such correction would be necessary. But if you wanted to take the further step to try and look at that and articulate where you might make some sort of adjustment to account for the spot price at a small volume, even with that correction, that cost would still be prohibitive and above the $3.30 price for CAPP coal, is that correct?

THE WITNESS: It would be, according to the analysis that you have given me. Again --

COMMISSIONER SKOP: So if CAPP coal -- you evaluated the cost of PRB at $3.63; the price for CAPP coal at that time was $3.30.

THE WITNESS: Correct.

COMMISSIONER SKOP: If you were to correct for a larger volume where you would hope the price would go down from that which you found, even doing that correction, according to the straight line data points between the two actual data points we have, that price

would be roughly $3.40, which would still be in excess of the delivered price for CAPP coal in that period, is that correct?

THE WITNESS: Yes, following your methodology.

COMMISSIONER SKOP: Okay. It was not mine. I'm just trying to rationalize where the truth lies, and so I thought that that would be a graphical way to kind of illustrate and help me talk through between trying to rationalize the small spot delivery that you are citing versus the large delivery that OPC was quoting and trying to adjust accordingly for delivery volume. But even in making that adjustment, which goes a step beyond what you are suggesting, I think you are still above that $3.30 cut-off point.

THE WITNESS: I think the way you have done this would be highly punitive in terms of the manner in which volume would be adjusted with price. But I see what you're trying to do, and I think the answer would be somewhere in the 3.40 range, and it would still make Powder River Basin coal more expensive than the alternative, and I think it would be.

COMMISSIONER SKOP: So under the scenario you would still in 2006 burn 100 percent CAPP coal, because it would be the most cost-effective alternative?

THE WITNESS: CAPP or import. You would not

be burning PRB coal.

COMMISSIONER SKOP: Thank you.

CHAIRMAN CARTER: Mr. McGlothlin.

CROSS EXAMINATION

BY MR. McGLOTHLIN:

Q. By way of clarification, Mr. Heller, your responses to the Commissioner in which you conclude that the PRB coal would not be cost-effective proceeds from the assumption that you have chosen the right proxy for what the PRB would have cost in '06 and '07, correct?

A. I think the fundamental understanding of the question was based on what I used as the proxy.

Q. And you understand that's something that is very much in dispute in this case, do you not, sir?

A. I understand that OPC has an objection to it.

Q. I have some questions about your testimony. I want to start with a few just to frame the conversation to ensue. As I understand it, in your testimony you set about to compare the cost of the bituminous coal that was actually delivered in 2006 and separately for 2007 with the cost of what a blend containing 20 percent sub-bituminous coal would have cost had it been substituted for the most expensive bituminous coal delivered, correct?

A. More precisely, what I'm doing is looking at

the coal you displace, which is bituminous coal, with the Powder River Basin coal that would become the blend coal. That's how I look at what the impact is as to whether or not there is a savings.

Q. And to do that you first quantified the most expensive 20 percent of the tons of bituminous coal that were actually delivered in this period, correct?

A. Yes. The way I do it is the same way I did it in the original methodology, which is if the company were to go out and purchase Powder River Basin coal to blend, then they would eliminate coals that were already being delivered to the plant. And, logically, if they could, I assume they would eliminate the most expensive coals first, which creates the greatest gap relative to the Powder River Basin coal and produces the maximum amount of savings, if you will, that the Powder River Basin coal would generate. That's how you would do it.

Q. Now, you have read Mr. Putman's testimony, and I'm sure you are familiar with the fact that with respect to the quantification of the cost of the bituminous coal actually delivered, there is little to no difference between your results and his, correct?

A. I think that's the way it began, yes.

Q. So the central debate concerns the choice of the appropriate value to represent what the blend would

have cost had the company acquired that to displace the top 20 percent most expensive tons of the bituminous coal, correct?

A. No. I think there is actually two areas of difference. One is the selection of the replacement coal, and second is the methodology for doing the Btu replacement.

Q. Okay. Bearing on the first aspect of that, for 2006 you had a choice to make, and you chose to use the spot purchase of 3300 tons, correct?

A. I'm using the pricing for that as the surrogate for the pricing for the year, that's correct.

Q. You could have used the bids to the 2004 RFP which were received at the time the company was making decisions for volume quantities of coals to be delivered in 2006, correct?

A. Well, the deliveries that would have come from the 2004 RFP extended into 2006, but they would have been -- they were all, I think, 2005/2006 or 2005/2006/2007 deliveries. So the way that I did the methodology was I would look at the bids that came in for what would be the logical next time period, which would have been the September 2005 RFP, but there were no PRB bids that came in for that.

Q. But there were --

A. That would have been the one I would have chosen.

Q. There were bids received in the 2004 RFP for delivery in 2006, am I right?

A. Again, there would have been -- there would have had to have been -- I assume they would have been delivered in 2005, and then those deliveries would have continued into 2006.

Q. So that was available to you, was it not, that information?

A. That information was certainly available, but that option, to me, doesn't -- isn't consistent with the methodology that I had been following to try and develop a market price in the proceeding for what would be the surrogate coal.

Q. With respect to 2007, you did use an RFP that was issued in 2006, did you not?

A. That's correct, and the first year of deliveries under that RFP would have been 2007. That was the year in which it was intended to be delivered.

Q. Okay. So with respect to each of those RFPs, 2004 and 2006, each encompassed a time frame that included one of the years under consideration, am I right?

A. They did both consider 2006. But I think as

Mr. Weintraub pointed out, there were probably left-overs from prior RFPs who would also have gone into 2006.

My difficulty as an analyst, and I know I would take -- there would be criticism of this, is what is the most appropriate surrogate price to use that would be representative of what likely would have happened. And the 2005 RFP, which was designed for 2006, had it produced a price is what I would have used. The 2004 one, which would have had to have gotten through 2005 to get to 2006, didn't strike me as the best surrogate to use.

Q. But didn't you consider using the proposal submitted to the 2004 RFP as the basis for the 2006 value?

A. No. I think I answered that the 2005 is what I would have used, that was the RFP that was closest. 2004, to me, did not seem appropriate. The market changed a world during this period of time, as I said before. And so I don't want to be -- it was -- if the market is relatively flat over this period of time it is easy. The period of time in which I pick a Powder River Basin price doesn't matter very much, and that applied to many of the years during which the analysis was done.

During the period of 2004, '05, '06, and it

actually continued into '07, Powder River Basin prices spiked and became essentially unavailable during part of this period of time, came down again, and have gone back up again. So timing is important, and I don't -- it's really Progress Energy that chooses when they go out for RFPs.

And, again, the RFP, which would have been intended for the 2006 deliveries, would have been the 2005 RFP, and there weren't bids submitted. So I could have picked the prices at the end of 2005, which would be in the 20-something dollar range, probably, or high teens. I could have picked an average of the year. I could have picked something in early 2006. It was difficult, and I picked what I considered to be representative of what the coal price would have been during the period, recognizing that the volume is small.

Q. Mr. Heller, do you have the transcript of the deposition of January 16th available to you there, sir?

A. I do.

Q. Please turn to Page 39 of the transcript. At Line 21 I asked this question, "Did you consider using the proposal submitted to the 2004 RFP as the basis for the 2006 PRB blended price when you set out to conduct your analysis?"

Would you read the answer that follows it,

beginning on Line 24?

A. I said, "I thought about that as an option, actually any year that I had a bid, a PRB bid that ran into a future year was a possibility. But I thought in terms of being able to defend the logic of -- in other words, without the benefit of hindsight, how would I judge what the utility did. The method I chose I thought was the most defensible."

Q. So you did consider the 2004 information, but you thought hindsight would be involved in your use of that?

A. Again, I looked at that, I looked at what the RFPs were, but that wasn't what I considered to be the appropriate metric to use for this.

Q. And the reason you gave during the deposition was that you thought hindsight would be involved, isn't that correct?

A. I also said I thought -- what I said at the end is I chose the method that I thought was the most defensible. And I did say that if I choose a prior period without a good basis for it, then as the nature of this exercise is that there is an opportunity to use hindsight, and that isn't -- what I have done is try and follow a methodology originally to try and avoid that.

Q. I want to ask some questions about your use of

the word hindsight in this context. In terms of looking for a good basis to use the information, consider that in April of 2004 Progress Energy issued an RFP for the purpose of making a decision with respect to a substantial portion of the deliveries to Crystal River 4 for the years '05, '06, and '07. Wouldn't that be a good basis for reviewing and using the information received during that RFP?

A. That is a possible basis. The problem is you have got a 2004 price decision, and I skipped 2005 because I'm not looking at that. So what you essentially end up with in 2006 is a residual of the 2005 contract. That isn't what I understand is the -- that isn't what I think is the best way to look at what the pricing would be in 2006.

Q. In 2006 looking at 2007, you chose as a proxy the Louis Dreyfus bid, correct?

A. Yes, and I explained that the 2006 bid was for 2007. That was the first year of delivery.

Q. But that was a two-year proposal, was it not?

A. It was a two-year, but the first year of delivery was the target year, 2007, and the pricing was -- again, I described in my testimony the manner in which the pricing is done. That was not difficult, actually, to use the 2006 bid for an RFP intended for

2007 and the bid for beginning in 2007.

Q. You say 2007 was the target year. Do you mean by that that 2007 was one of the years that was included in the term of the offer?

A. Not one of the years, it was the first year.

Q. Okay. With respect to the April 2004 RFP, you are aware, are you not, that some of the Powder River Basin producers offered to supply coal to CR4 and 5 during all three years of the term for which the company was soliciting bids?

A. I'm aware of that.

Q. So with respect to a target year, would it be equally defensible to assume that the deliveries began in '05 and continued through '06?

A. No. I was looking for an '06 price, that is what I was tasked to do, not '05. If somebody bids in '04, and you ask them to skip '05, if you will, and quote a price which is going to be almost two years in the future, I have no idea if that is something that a producer would generally do. My experience is that's almost a different kind of a request.

Q. Well, with respect to your use of the word hindsight, again, referring to Mr. Putman's testimony, you are aware, are you not, sir, that Mr. Putman used the values for '06 that were bid by the producers of

sub-bituminous coal there, but did not assume that Progress Energy should have purchased coal for delivery in '07, even though it was offered at the time?

A. I'm not sure I understood your question. I'm sorry.

Q. All right. Let me break it down to a couple of smaller questions. You recall that the term of the RFP was for deliveries in '05, '06, and '07?

A. That's correct.

Q. And you are aware that Mr. Putman uses for purposes of his proxy the bids for the '06 time frame?

A. He uses the 2004 bids, and he uses the prices from those to develop the 2006, his 2006 price.

Q. Yes. You're aware that the time period encompassed by this proceeding includes both '06 and '07?

A. I'm aware of that.

Q. And relating back, again, to the 2004 RFP, the RFP solicited bids for all three years, correct?

A. It solicited bids covering 2005, 2006, 2007; not 2006/2007. In other words, they were for getting delivery in 2005.

Q. Yes, sir. And you're familiar with the fact that Progress Energy elected not to purchase coal from that RFP for delivery in '07?

A. I don't recall what they -- which ones they selected, but -- that, actually, is an example of the prerogative that I think belongs to the people who are doing the soliciting as to their perception of the market, when to go out for an RFP. Even though they're offered for three years, they may not not take the third year, or -- but it doesn't, it's something quite different when you, essentially, push the bid, the starting bid out almost two years. That, to me, is something quite different.

Q. Well, if you'll accept for the purpose of the question that Progress Energy elected not to purchase from that RFP for deliveries in '07, and my point to you is that to have attributed to Progress Energy a purchase in '07 from that 2004 RFP simply because those were attractive prices relative to what happened next, that would have been hindsight, would it not?

A. Frankly, the distinction between that and what you're doing in 2006 isn't quite clear to me. Both of them take advantage of the -- of a delay in the, you know, receipt of the coal which is over an extraordinary long period, I think.

Q. But with respect to the 2004 RFP, we know -- and it is not a matter of hindsight, we know that Progress Energy had established 2004 at a decision point

for the purpose of securing portions of the 2006 deliveries to Crystal River 4 and Crystal River 5, correct?

A. Where deliveries also occurred in 2005, they also went into 2006. Those two years together, that's correct.

Q. Okay. With respect to your choice of the spot purchase, by 2006, do I understand correctly that the market price of Powder River Basin coal had increased beyond what it had been at the time of the 2004 RFP?

A. It increased above the price it had been at the 2004 RFP, and it had also declined substantially from the peak it had been at prior to the time they took the spot delivery in 2006.

Q. Now that's information that was not known to Progress Energy at the time it conducted the RFP, correct?

A. That's correct, they wouldn't have known what the market price was going to be.

Q. But it is known to you at the time that you are selecting your proxy, correct?

A. That's correct. The question, though, is what constitutes a reasonable proxy for what Progress Energy would have -- what they would have received had they purchased coal for delivery during 2006. And, again,

there was no response to the 2005 RFP, which is to say it wasn't available. There is very high pricing during that period of time, substantially higher than what I used. There is also pricing during that period of time which was lower than what I used. I think it's a very peculiar and difficult situation to do 2006, and I think the way it is done is appropriate. I think going back to 2004 and using that bid solicitation for beginning deliveries in 2006 is inappropriate.

Q. Would you agree that the purchase of the 3,300 tons of the test burn coal, that transaction was not even on the table at the time the utility made commitments with respect to purchases from the 2004 RFP for deliveries in 2006?

A. Right. That was -- there was nothing offered in 2005, so I could have said there was nothing available, and that it wasn't possible to get coal in 2006. But recognizing that this process that the Commission uses benchmarks each year relative to what the PRB deliveries would have been, and that -- so I needed a price that to me was the most appropriate price to use, and that is how I have cast it and defended it.

Q. Now, what happened to the price of Powder River Basin coal between 2005 and 2006, the time of the 2006 RFP?

A. Between 2005 and early 2006, pricing came down a bit and availability appeared, because they had a bidder in the 2006 RFP. But they didn't get a lot of bids; it was clearly still a pretty difficult market.

Q. Now, with respect to the choice of the proxy for 2007, you chose the bid submitted by Louis Dreyfus, the coal broker for delivery of Powder River Basin coal in 2007, did you not?

A. That coal was bid for 2007. That was the response to the RFP. I thought that was clearly the appropriate price to use.

Q. And you did not consider the less expensive bids for Indonesian coal because Progress Energy told you to limit your consideration to Powder River coal, correct?

A. Progress Energy told me to take the methodology that the Commission had established up through 2005 and apply it to 2006 and 2007. That methodology focused on Powder River Basin coal, and that's what I did.

Q. My question is did Progress Energy tell you to limit your consideration to Powder River coal?

A. Effectively by telling me to extend the Commission order, they did. To consider the Indonesian coal is a totally -- and there is other testimony, but

it is totally different coal than the Powder River Basin coal.

Q. My question is simply did the utility instruct you to limit your consideration to Powder River Basin coal?

MR. BURNETT: Mr. Chairman, if the witness could finish his answer. I don't believe he was finished.

MR. McGLOTHLIN: It seems to me he has answered a very different question, Chairman Carter. My question was limited.

CHAIRMAN CARTER: I'm going to help you out. If you can answer the question yes or no, answer it yes or no. And you will be allowed to explain your answer, but if you can answer yes or no, let's do that.

Mr. McGlothlin, you may proceed.

THE WITNESS: The instructions given to me were to take the Commission's methodology and extend it forward, and that meant Powder River Basin coal. The Indonesian coal is different, the Kennecott coal is different. There was much testimony in the prior proceeding about the technical issues around burning other coals. That wasn't what I was asked to address here. I was asked to address moving this forward into the next two years. That was not a new technical

assessment of different types of coal, so that is what I did.

MR. McGLOTHLIN: With respect to the --

CHAIRMAN CARTER: One moment, Mr. McGlothlin. Would you yield for a moment?

Commissioner Skop.

COMMISSIONER SKOP: Thank you, Mr. Chairman.

Mr. Heller, you just spoke about your review of the prior docket and the testimony about the coal. Did you review that testimony in its entirety in preparing your testimony?

THE WITNESS: That would be a difficult -- I have read all that, because I participated in the docket. I did read everything at the time. I looked at sections before I testified to it.

COMMISSIONER SKOP: So you're familiar, generally, with Witness Sansom's testimony, Witness Barsin's -- I think I'm saying his name right -- Barsin's testimony, and also Mr. Putman's testimony, is that correct?

THE WITNESS: I was certainly focused on Mr. Sansom's testimony.

COMMISSIONER SKOP: Okay. And in that prior proceeding, did they ever raise the issue of using alternate coal in terms of Indonesian coal or Springhill

coal? I reviewed that testimony extensively, but I don't remember seeing that. Is that your recollection?

THE WITNESS: That is my clear recollection. They did not raise Indonesian coal, and they focused on Wyoming Powder River Basin coal, and there was extensive technical discussion about what it would cost to burn that coal in the boiler. And that -- if you want to look at a different coal, then you need to hear testimony, I guess, on what the different coal would do in the boiler, and that wasn't what I was asked to do here.

COMMISSIONER SKOP: Okay. So your, I guess, direction was basically keying off what the Commission discussed in the prior docket, and not expanding the scope of that to consider coal from places outside of what was discussed in the prior docket, is that correct?

THE WITNESS: Actually, I couldn't do that. If they -- I was involved heavily in one of the first uses of Spring Creek coal, and the company that bought it couldn't burn it. I'm well aware of the problems that surround Spring Creek coal. I'm also aware of the difficulties associated with Indonesian coal. So they are different coals. And the focus of the testimony last time wasn't on those coals, it was on the Wyoming PRB type coals.

COMMISSIONER SKOP: Okay. And I see my copies came in, so I'm going to just ask one more question and I'll be done with my questions and turn it over to Mr. McGlothlin.

Again, the issue I'm struggling with here is looking at what the Commission discussed in the prior docket. And, again, I took a very strong aggressive approach in my concurring opinion, I think a very strong approach. But in the interest of trying to be fair, I'm looking at issues in this docket that were not previously raised, and trying to understand how those fit into the scheme of things in terms of whether they just were merely used to maximum the amount of the refund, and obviously each party has its own position.

Progress would say no refund at all, where OPC would seek to maximize the amount of the refund, but I don't recall those issues being an issue in the prior docket, and so I'm trying to gain a better appreciation and understanding, you know, of what the notion of fairness holds in this docket. And that's where initially I had looked at some of the concerns that we got into this morning, and I'm trying to better understand the positions of each of the respective parties.

I know OPC has articulated their position, and

Progress has articulated their position, so my final question, I guess, to you would be, I know that you -- there has been a lot of discussion here and on the cross-examination of where the appropriate evaluated price or PRB would be, whether you should have used a 2004 RFP, or whether you should use the spot price in 2006. Assuming -- and I know that we talked about this little graph that we prepared, or I prepared, just as a demonstrative exhibit to try to rationalize, well, if I don't agree with your point, and if I adopted OPC's point, where does that leave me in the grand scheme of things under the required tonnage of coal?

But just for the sake of discussion, there has been a document that was previously discussed by Mr. Weintraub, and that was the Progress response to staff Interrogatory 29 in Part A where Progress alleges that basically the numbers supporting this show that a blend of bituminous coal, domestic and foreign, still would have been cheaper than the PRB.

And so I guess what I'm asking, if you could take a look at that document briefly, and assuming for the sake of discussion that I reject your contention of the spot price in its entirety and I adopt the OPC position, which is basically shown by the upper point of that graph, which is about $2.38 per MMBtu, in relation

to the staff interrogatory response of 29A, is each of those prices with the exception of one price lower than the point that OPC had made in terms of trying to say that the 2004 RFP price should have been used? So I guess what I'm saying is this the fallback, assuming that -- and I'm not doing a good job of this, because I'm having to do this on the fly. I didn't have a year and a half to prepare for this case.

But I guess what I'm looking at is generally we reject your contention, we adopt the OPC contention that the 2004 RFP price should have been used. Progress didn't buy coal in 2004, so they covered. But, in effect by covering in the manner in which they did as shown on 29A, each of those prices seemed to be, in my mind, with the exception of one, lower than what OPC is contending the 2004 RFP price would be. So maybe you could shed some light on that for me because, again, I'm trying to understand how these pieces fit together.

THE WITNESS: You're correct, that they all are lower. You are also correct in that I am -- my job is sort of an artificial one. The real answer is when Progress Energy and Mr. Weintraub make judgments as they go along about what the cheapest alternative for the company is each time they do a procurement and decide what their cheapest alternative or set of alternatives

are, that's really where the decision gets made about what is optimal for the company.

What I have been asked to do, which is what leads to some of these difficulties, is to try and create a hypothetical construct of what if they had done something different, which is what the Commission asked through this methodology that we go back and test. But that's not, I don't think, really the way prudence would normally be looked at. It would be looked at on these piecemeal decisions as to what these, you know, individual decisions as to what the cheapest alternative is for the company at the various decision points in time when there is an RFP that they get responses for, when they make a spot purchase. So I think you're correct in -- I'm sorry.

COMMISSIONER SKOP: And, again, I guess the last time it was clear cut to me. This time not so much. And I'm trying to discern the position of the parties in the interest of fairness, and I'm seeing a lot of contradictory evidence. And I think that it's going to fall on staff's shoulders to kind of flesh that out. But I'm trying in my own mind to prepare, and understand, and give each witness and their testimony, you know, the due credit, and try and integrate those between the conflicting viewpoints. But, I guess, you

know -- I tend to -- I'm struggling.

THE WITNESS: The answer to 29 is really a description of when they had a decision to make, when Progress Energy had a decision to make did they choose an option that was less expensive than the PRB option that opened to them. And the way I understood Mr. Weintraub describing what he does, he looks for flexibility, he looks for other options, and they developed some. They developed an option of a very low quality bituminous coal. And so if that is cheaper than the PRB alternative, that is what they chose to do, and it's what they should have chosen to do.

COMMISSIONER SKOP: Like I say, I'm not very happy with the fact that, again, if you had the capability to burn it to begin with, you should have burned it. But, again, it seems to me from the interrogatory response to 29, even if we don't get there with your testimony, falling back to 29A, they still covered at a lower cost, even though they didn't buy it in 2004, in 2006 and 2007 they covered using a bituminous coal blend at a lower cost than they could have locked in on PRB in 2004.

THE WITNESS: That's correct. Those are the decisions they made, and that's what to look at. You're correct in looking at that.

COMMISSIONER SKOP: Thank you.

CHAIRMAN CARTER: Mr. McGlothlin, you may proceed.

BY MR. McGLOTHLIN:

Q. Mr. Heller, with respect to your proposed treatment of capital costs in the overall scheme of things, would you agree with me that the Commission determined in the last case that had the capital improvements associated with the 20/80 blend been in place no later than 2003, the company would have been able to accomplish fuel savings during the period '03, '04, and '05 by virtue of being positioned to burn a blend of coal during those years?

A. That's my understanding.

Q. With respect to your -- as I understand your testimony, you contend that the quantified capital costs should be something of an adder to the cost of the sub-bituminous coal for comparison purposes, do you not?

A. Yes, because that was a necessary investment in order to be able to burn the coal.

Q. Now, isn't it true that, first of all, your testimony is written in August 2008, is that correct?

A. Yes.

Q. Isn't it true that as of January 16th, 2009, which was the date of your deposition, until that date

you were not aware that the refund calculated by the Commission excluded capital costs as a component?

A. I think what I said in my deposition, I believe, is that I focused on how they had used capital costs as a surrogate, but I wasn't familiar with the details of how the refund worked relative to the capital cost component.

Q. If you would, turn to your deposition, Pages 84 and 85.

And you will see in the middle of Page 84 I asked you the question with which I began this line, and you said as you said today, I think that was the conclusion. And then I asked in terms of calculating the refund to customers, after quantifying the capital costs, the Commission removed the capital costs from the refund amount based on its conclusion that those costs would be recovered through base rates and not through fuel costs. And would you read your answer on Page 85?

A. I said, "I have read what you said, I haven't really studied that. I'd rather -- I just haven't studied that. I read that part of the order; I just haven't studied how that is done."

Q. And the next question and answer, please.

A. "If you know, are you aware that the final refund amount was exclusive of any capital cost?"

And I said, "I'm not."

Q. With respect to your Exhibit JEH-6 --

A. Yes.

Q. Give me a moment to shuffle papers.

On JH-6 you have set out certain items of plant that would be what you described as capital driven revenue requirements associated with burning PRB at Crystal River Units 4 and 5, correct?

A. That's correct.

Q. Would you agree with me that if those capital items were added prior to 2003, they would be in place today?

A. If they were added -- yes. Obviously if they were spent earlier, you would still have the costs, but they would have been spent. The question is when you do the evaluation of whether or not you consider Powder River Basin coal or a blend as being competitive with the alternative, should you include in that the cost, the capital cost associated with that. And I think it's appropriate that you do that, even though the capital has already been spent.

And if it was to be done differently, then I presume the Commission in their order would have included the capital costs only in the first year, and then not done it in 2004 and 2005, but they included it

each year. So, again, and my job is extending what the Commission did, I include it in 2006 and 2007.

Q. Well, I think you agreed with an earlier question --

CHAIRMAN CARTER: Excuse me, Mr. McGlothlin, if you would yield for a moment, please, sir.

Commissioner Skop.

COMMISSIONER SKOP: Thank you, Mr. Chairman.

Just a quick question, Mr. Heller. On this question, I guess I had looked at your testimony and also looked at Mr. Putman's direct testimony. I guess he has some issues to this exact point. I just want to make sure I understand that when you're speaking about capital costs that you did in Exhibit JNH-6, that those are the incremental capital costs in terms of, you know, ancillary, making sure that the housekeeping things, and making sure you keep dust at a minimum. They are not major capital retrofits necessary to burn the coal, is that correct?

A. The best I can say is I think that's so, because the Commission only took 10 percent of what was presented in there as the actual capital costs. And so the retrofits were not nearly as major as were discussed originally.

COMMISSIONER SKOP: Okay. All right. Thank

you.

CHAIRMAN CARTER: Mr. McGlothlin.

MR. McGLOTHLIN: Yes.

BY MR. McGLOTHLIN:

Q. With respect to your treatment of capital items -- let me back up for just a second. I think in response to an earlier question you agreed that had the money been spent and the plant put in service as of 2003, that investment would have been made and that plant would be in service from that point forward, including the time frames encompassed by this proceeding, correct?

A. The capital would have been spent.

Q. And, in fact, with respect to the treatment of accumulated depreciation, your exhibits take into account the fact that the depreciation expense would be incurred each year and that the accumulated depreciation would increase each year, correct?

A. Yes. Again, I was following the Commission's methodology as I understood it.

Q. If we assumed that those costs had been incurred and were in place and are reflected in base rates over the useful life of the related items, would you agree that they take on the nature of fixed costs?

A. Well, it depends on what they are for. If

they are, you know, if it's fixed investment in the plant, then, yes, they are fixed costs. The carrying costs of them become on-going. The decision that you make each year as to whether or not those -- it was prudent for the company to burn Powder River Basin coal or not I think appropriately includes what that incremental cost is. That's the threshold you would have to get over in order to make it economic.

Q. Well, fixed costs take on the nature of sunk costs, do they not?

A. That's where we disagree. It's sunk in the sense that the money was spent, but I think it's inappropriate to treat it as a sunk cost for the purpose of this kind of analysis where each time you're looking at whether or not the company made the appropriate decision in terms of burning Powder River Basin coal or not. In order for them to have the option, they would have had to have spent the money.

Q. Well, take the scenario in which it does not burn Powder River Basin coal. Does the company still incur those fixed sunk costs?

A. Had they spent the money --

Q. Yes.

A. -- they would have incurred the costs.

Q. Now, take the scenario in which they do burn

PRB coal. Do they incur the same costs?

A. If they do burn PRB coal, they incur the same portion of those fixed costs, but the threshold question that you are asking as to whether or not there was a savings, whether or not it was appropriate to have spent the money and you recover it through the savings in the fuel costs, if that's the analysis you're looking at, and that's my understanding of the Commission methodology, then you need to consider it.

Q. Well, if the costs are incurred in either scenario, don't they have the effect of canceling each other out?

A. No. Because you are looking at whether or not it was worth it to spend the capital to be able to burn the PRB coal. If it turns out there is no savings there, in other words, the two fuels are identical, then in that year you would judge that it wasn't worthwhile to have spent the capital to be able to burn PRB coal, because there would be no benefit. The customer would be behind, or somebody would be behind.

Q. Well, I think we've established that with respect to those components of the capital items that are fixed in nature, the utility is going to incur those in either scenario. If it burns the coal, it incurs them; it doesn't burn the PRB coal, it incurs them,

correct?

A. That's correct. The costs would be incurred whether or not they burn the PRB coal.

Q. And under the approach that the Commission took in the order, the company would recover those costs through base rates, whether or not it burned PRB coal in a given period, correct?

A. I think those are your questions to me about the refund, and I said I focused on the test here. And the test that they use is would there be sufficient savings to, essentially, pay for the capital that has been spent. And they looked at it each year. They didn't stop that test after 2004. They applied it again in 2005, as well. They didn't stop after 2003, they applied it each year. Because what you're looking for is is it incrementally -- is there a savings to be had each year by moving to Powder River Basin coal, and I think this is the appropriate way to analyze it.

Q. If the question is is there a savings, doesn't that imply that there is to be a cost/benefit comparison?

A. I think that's correct.

Q. And in the case of fixed costs that have been quantified and included in base rates, the fixed costs are going to be incurred whether or not the coal is

going to be burned, correct?

A. The Commission could have developed that methodology, that wasn't what they did. At least that's my understanding that wasn't what they did.

Q. Well, do you understand that -- as of January 16th of this year, do you understand that the Commission ruled that fixed costs would be collected through the base rates and then excluded those costs from the calculation of the refund amount?

A. That may all be true. My focus here is on the test, the cost-effectiveness test that the Commission asked for, and these costs appropriately belong in the cost-effectiveness test.

MR. McGLOTHLIN: Could I have a moment, please?

CHAIRMAN CARTER: While Mr. McGlothlin is looking over his notes, I would advise staff and the parties to make sure that your mikes are off. I'm getting some feedback, and I want to make sure that our court reporter is able to transcribe without getting that. So just out of an abundance of caution.

Let's take five minutes.

(Recess.)

CHAIRMAN CARTER: We are back on the record. When last we left, Mr. McGlothlin was looking over his

notes.

You're recognized, sir.

MR. McGLOTHLIN: I have no further questions.

CHAIRMAN CARTER: Ms. Bradley.

MS. BRADLEY: Thank you, Mr. Chairman.

CROSS EXAMINATION

BY MS. BRADLEY:

Q. I just have one brief question for you. When you are looking at your coal procurement, do you just look at the coal that you bought the last time, or do you look at all available options that might give you the cheapest best coal at that particular time?

A. Are you asking me in terms of the job I did here, or are you asking what Mr. Weintraub would do in his job as actually buying the coal?

Q. To the extent you are looking at it and making a judgment on it, what would a person do?

A. What I'm doing in this exercise is I am looking at the price of the coal that would have been bought or was bought for the period of time in question. And I'm looking only at the PRB mix relative to what they actually took deliveries for during that period.

Mr. Weintraub, I would think in his job would look at the PRB mix not relative to what was actually delivered during that time period, but the other options

he had available to him. So I may find that PRB delivered in 2006 is cheaper than the cost of coal that was actually delivered in 2006, but there may have been another option available to Mr. Weintraub of cheap Central Appalachian coal that may have been a better option. I am only looking at the one I was asked to, which is the 20 percent PRB blend. I'm looking at that relative to what was actually delivered.

Q. So in evaluating coal procurement, you would look to see whether or not they looked at all the options available to them?

A. Yes, I think that's the appropriate thing. Mr. Weintraub said there was benefit in flexibility, and so he looks at all different kinds of things, all different options, and I think that's appropriate.

Q. And he's not limited to what he bought the last time. He has an open field, so to speak?

A. Well, there are limitations, which is I don't think he was saying he would never look at Indonesian coal. I think what he was saying is if you look at Indonesian coal, then there is a process you need to go through to see if you can burn it. I described a case of somebody who didn't do that and ended up with a long-term contract they couldn't burn coal for. So that's an important process which has to do with test

burning and figuring out how the coal actually performs and performs relative to the other coals that you have got.

That is a whole different process than what I was asked to do here, which was to look at a 20 percent Powder River Basin coal as part of a blend, and I'm not questioning whether or not that works, that has pretty much been decided, and then I look at the relative prices of those two. Mr. Weintraub may look at other options and should.

MS. BRADLEY: Okay. Thank you.

CHAIRMAN CARTER: Thank you.

Mr. McWhirter.

CROSS EXAMINATION

BY MR. McWHIRTER:

Q. Mr. Heller, I understand your educational training is in the area of electrical engineering?

A. Yes, sir.

Q. And I also understand your area of expertise is in coal and coal transportation?

A. Yes, sir.

Q. Have you proffered yourself in this case as an expert qualified to render opinions with respect to other regulatory matters such as the criteria to be used in establishing base rates or rate design?

A. No.

Q. Do you have available to you a copy of the order entered in Docket 060658, Order Number 816?

A. I don't have it here with me.

Q. I'm going to -- I don't have one to hand you, but I'm going to read you the first full sentence on Page 40, and so counsel can look at that along with us to be sure that I'm reading it correctly.

That first full sentence says, "For purposes of cost-recovery, we removed the operational and capital costs required to upgrade CR4 and CR5 to burn PRB because these types of costs are normally recovered via base rates." Do you want me to read that again or were you able to --

A. This is at the top of Page 40?

Q. The top of Page 40, the first full sentence, it starts on the first line.

A. I see.

Q. Why don't you read it.

A. I see that.

Q. Now, did you remove capital costs and operational costs of CR4 and CR5 from your analysis?

A. Can I take a look at the first part of the paragraph?

Q. Beg your pardon?

A. I want to look at the first part of the paragraph. (Pause.)

Is there a question?

Q. Well, my question to you was did you remove capital costs and operating costs of CR4 and CR5 from your analysis?

A. Not from the cost-effectiveness test.

Q. All right. PRB coal has to be blended so that it's only 20 percent of the mix as I understand it, and that's what you did?

A. That's correct.

Q. And where does that blending take place?

A. It would -- the assumption is it would occur in New Orleans either at IMT or UBT, the two terminals there.

Q. And where are those terminals located with respect to the terminal that Progress Energy used to own?

A. IMT is the one that they owned an ownership interest in.

Q. So Progress Energy sold the facilities to IMC and now pays for that blending on the facilities they used to own, is that correct?

A. I don't believe they ever owned all of it. IMT is International Marine Terminals, which was a joint

venture, and I believe it involved Progress Energy and two other companies, one of which was a coal company, and I can't remember the third. And so they only ever had, I believe, a partial interest in it.

Q. Did you do any analysis to determine whether those prices were reasonable or whether they were prices that were established to be high enough to cover the cost of buying Progress Energy's facility?

A. Are you talking about --

Q. The IMC charges.

MR. BURNETT: Mr. Chairman, I'm going to object. I think, from the best I could understand, Mr. McWhirter is trying to ask this expert if he did an analysis on what we sold an interest in a dock for. If that is the case, that is wholly outside of this.

CHAIRMAN CARTER: Mr. McWhirter.

MR. McWHIRTER: Well, I probably asked a garbled question. What I really want to know is if he did an analysis to determine if the prices being charged for blending the coal were reasonable and proper based upon customary standards in the industry.

CHAIRMAN CARTER: That's an excellent question.

MR. McWHIRTER: Thank you.

THE WITNESS: There are two terminals down

there that compete and their prices are quite similar. And I believe, based on the work that I do looking at other terminals, that they would be -- you would call them competitive rates. I also would note that I put zero in there for blending at the terminal which I was incredulous about, but -- (simultaneous conversation) -- charged for blending.

Q. You can't do better than zero, and I appreciate that.

A. There is nothing charged for it, even though -- if there were a large quantity of coal moved through there, I believe they would, but they don't.

Q. Did --

A. I'm sorry. If a large quantity of PRB coal moved through there, I think would be a charge. But there is no charge now, so I include none.

Q. Good. Thank you.

CR4 and 5 were built about 20 years ago in the mid-'80s, is that correct?

A. I believe that's correct.

Q. And have they operated continuously since then? For instance, did they operate, except for time when they were down for maintenance, through the years 2003, 2004, 2005, 2006, and 2007?

A. To the best of my knowledge.

Q. And when the utility goes out to bid for coal, it does multiyear bids irrespective of the regulatory regimen of this Commission, isn't that correct?

A. I believe they choose what the vintage is if they want; one-year coal, two-year coal, two years with an option for a third year. That's part of the art of how they buy coal.

Q. And Mr. Putman's testimony, as I understand from that testimony and from Mr. McGlothlin's questions, dealt with the bid that was received in 2004 which you determined was not appropriate for your analysis, is that correct?

A. That's correct, that's what they focused on.

Q. If you had deemed that bid to be appropriate for your analysis, would it have changed the results in your analysis?

A. If I had taken the Kennecott bid which they used, I would have -- I know enough about that coal that I would have had to have stopped and asked them could you burn it. And if -- my understanding was that it wasn't, again, in the role of what I was asked to do, which is to look at the, you know, kinds of coals that were discussed in the last docket and burning those, then if that were the coal that they had, you know, selected, then I would have used it in my analysis. But

it would have been -- I couldn't -- it wouldn't have been appropriate for me to have done what you're saying, because that coal I know is not the same as the coals that were considered previously.

Q. Well, now, you said you would have asked them can you burn this coal. What would have prohibited them from burning this coal?

A. You'll get out of my art very quickly, but it's a very high sodium content coal. And I have clients who have had difficulty burning that coal.

Q. Is it an air permit problem or is it some other problem?

A. You will have a better witness than me, but there is slagging and fouling problems there.

Q. In other words, you would have asked that question, but you don't know the answer?

A. I know enough to ask the question and know that it's not like the coals that were considered as blend coals.

Q. But if utilities buy coal on multiyear contracts, coal prices change from year to year, do they not? In fact, the reason there is a cost-recovery clause is because they are volatile, is that not correct?

A. Coal prices do change year to year, that's

correct.

Q. So if there was a three-year bid, and you are asked to examine only the years 2006 and 2007, you said you ignored that bid because, as I understand it, there was no appropriate other contract for that period, is that correct?

A. No, I think I said two things.

Q. Okay.

A. One, with regard to the Kennecott bid, I said there was an issue surrounding the quality of the coal. The question on the vintage of the bid is if you get a bid in 2004 for delivery in 2005, 2006, and 2007, it's the company's decision whether or not they contract for one year or two year or three years, and whether they solicit a bid for one year or two years or three years.

I'm not dealing with 2005. I am asked the question each year did the company act -- in terms of the methodology that the Commission has asked to test cost-effectiveness, I have to look and see in that year does it look like it was cost-effective for them to have burned Powder River Basin coal in a blend versus the alternative.

Since they didn't take any bids -- let me say something that may be helpful. The other coals that I am comparing against, which are the coals -- the

high-priced coals I'm bumping off may be the result of older solicitations where they actually bought coal, so it's kind of easy. I know what happened.

Here I'm dealing in a hypothetical world. They didn't buy Powder River Basin coal. If they had bought it, they could have bought it, you know, maybe in 2002 if they had a bid that was five years or maybe they could have bought it in 2003. I know they couldn't have bought it in 2005, because they tried, and it wasn't available for 2006. So I'm stuck in this hypothetical world of what would have happened in 2006.

And I have discussed the way I have dealt with it as clearly as I can, and I've explained that -- take a 2004 solicitation for delivery in 2005, '06, and '07, and skip the first year, which is what I would have to do, because I'm not dealing with 2005, to me is not a reasonable thing to do. To have had a bid in 2005 and selected that for delivery in 2006, just like I did when there was a 2006 bid for delivery in 2007, would have worked fine, but there weren't any responses in 2005.

Q. Well, if you had a bid a year earlier and they could have bought and used coal if they had had the proper permits in 2005, '06, and '07, wouldn't it be inappropriate, in your opinion, to disregard the year 2005? It looks to me like if they did the wrong thing

in 2005, that carries over to 2006 and 2007, and 2006 and '07 shouldn't be forgiven just because they did the wrong thing in 2005. It sounds like I'm testifying, but I'm thinking out loud with you, and I would like you to correct my thinking where it is wrong.

MR. BURNETT: Mr. McWhirter read my mind. Objection to his testimony; ambiguous, vague, and confusing, and I'm not even sure if it was a question.

MR. McWHIRTER: Well, I can break it down into several questions and go a little bit longer, I just thought you could test my thinking and show where it's wrong.

BY MR. McWHIRTER:

Q. The plant was operating in 2005, is that correct?

A. That's correct.

Q. And the Public Service Commission had a hearing that dealt with the period up to 2005, is that correct?

A. That's correct.

Q. And do you know whether this Powder River Basin coal bid was examined by the Commission in the earlier proceeding that dealt with 2005?

A. It was not.

Q. And do you know why it was not?

A. Again, the Kennecott bid was not what was being considered. It was not considering Montana coal.

Q. So your opinion is that in this hearing when you examine Progress Energy's fuel prices, you can only examine their purchases based upon the availability of Powder River Basin coal, and if they made mistakes in other areas, that can't be considered?

A. No, that's hardly what I'm saying. What I'm -- the Commission, I think, can consider whatever it chooses to. But what I was asked to do here is to look at what was done in the prior years to test a Powder River Basin blend where the technical issues, apparently, had been settled, and then look at whether or not the company, had they burned PRB coal in a blend, would have saved money relative to what they actually did burn.

Q. That's a fair response. You were only asked to look at the Powder River Basin comparison, and, therefore, you ignored all other purchases whether they be foreign purchases, domestic purchases, or otherwise that might have been cheaper, is that correct?

A. Not quite. To the extent that the actual deliveries included foreign purchases that were made, they are part of what I compare against. To the extent that, you know, Mr. Weintraub chose to look at

Indonesian coal, that's, you know, perfectly -- that's what he should do. That's perfectly appropriate. But in the context of introducing Indonesian coal here and saying it's the blend coal, and there's no capital cost associated with it is not what I read -- it's not what I understood my assignment to be. So I didn't consider the Indonesian coal. That isn't to say Mr. Weintraub shouldn't have considered it, he did. But for purposes of what I'm doing here, no, it doesn't belong.

Q. All right. That fairly answers my question. At the beginning of your testimony you were handed a piece of paper that doesn't have a number or a name on it, but at the top of it it says coal cost/quantity gradient. Do you still have that piece of paper?

A. I do.

Q. And did you prepare that?

A. No.

Q. Was that prepared under your direction and supervision?

A. No.

Q. Did you independently examine the information contained in it?

A. No, I didn't prepare this. I understand what it's doing, but I didn't prepare it.

Q. Have you seen this exhibit any time before

today?

A. No.

MR. McWHIRTER: Mr. Chairman, can we give a number to that exhibit?

CHAIRMAN CARTER: Do you want to mark this one?

MR. McWHIRTER: It's called "Coal Cost/Quantity Gradient."

CHAIRMAN CARTER: Number 54. Okay.

(Exhibit 54 marked for identification.)

BY MR. McWHIRTER:

Q. Do you know who prepared this exhibit so that we can put them on examination by voir dire?

A. Is that a question?

MR. McWHIRTER: Commissioner Skop raised his hand, let the record reflect.

I have no further questions.

CHAIRMAN CARTER: Thank you, Mr. McWhirter.

Commissioner Skop, you're recognized.

COMMISSIONER SKOP: Thank you, Mr. Chairman.

I just want to go again briefly through, and I guess since Mr. McWhirter brought it up, I think I'll speak to it briefly and try and gain an understanding while I have this opportunity, and then I'll speak to the OPC witness when they present their testimony. But

with respect to this chart that was prepared by myself and my aide based upon record evidence just to show a visual representation about the two data points that I think that we have. We have the OPC point which came from OPC DJP-6, I think, for the most part, and then the spot price, which is at the bottom right point of that chart that shows Mr. Heller's spot price evaluation. And I guess from what I was looking at is on Mr. Heller's Exhibit JNH-3, you indicated the evaluated price for PRB was $3.63 for 2006 based upon the actual coal that was purchased. Is that correct, again?

THE WITNESS: That is correct.

COMMISSIONER SKOP: And what I attempted to do, and I had asked you previously if an adjustment should be made or was appropriate to be made for differences in small volume versus a large multiyear volume purchase. And you said, I believe, no adjustment was required, is that correct?

THE WITNESS: I said in this case I thought no adjustment was required.

COMMISSIONER SKOP: So then I went a step beyond that and asked you to interpret the point that would lie at the intersection of the slope of the line of the two points between OPC's number and your number for the volume of coal subject to the waterborne

delivery constraint which would correspond to approximately 450,000 tons per year. Do you remember that?

THE WITNESS: I do.

COMMISSIONER SKOP: And you, I believe, testified that to the best of your knowledge, and granted this scale is not the best in the world, that the intercept on that slope would approximately correspond to a price of $3.40 per MMBtu, is that correct?

THE WITNESS: It is.

COMMISSIONER SKOP: And that price was still in excess of the delivered price for CAPP coal, is that correct?

THE WITNESS: It is. The top point which is -- is that 233 MMBtu?

COMMISSIONER SKOP: I believe it is like 228 or 226. We've got, I think, some backup numbers behind the data, but I would have to look at the Excel spreadsheet to determine that; but I think 228, subject to check, is a rough number.

THE WITNESS: I'm not sure if that is delivered to IMT or if it is delivered all the way to the plant. If it's not delivered all the way to the plant, then that data point would move to the right.

COMMISSIONER SKOP: Yes. Okay. I understand. Fair enough. But I think the point I was trying to make, assuming that your spot price controls, CAPP coal is still the most cost-effective alternative.

THE WITNESS: Yes. And that adjustment, if it's needed, would make your point more strongly.

COMMISSIONER SKOP: Assuming we do interpolation, CAPP coal is still the most cost-effective alternative based on the slope of that line, is that correct?

THE WITNESS: Yes.

COMMISSIONER SKOP: Okay. Now, assuming for the sake of discussion that we completely ignore your testimony in itself and adopt the OPC position in the light most favorable to OPC, which is the top point. So, therefore, OPC alleges that the price for PRB based on the 2004 RFP was the price that should be used. Is that your understanding of what OPC is alleging?

THE WITNESS: Yes. For 2006, that's what they are alleging.

COMMISSIONER SKOP: Okay. And I guess where that is putting me, and I'm trying to walk through how to understand this in my mind, if we reject your testimony, accept OPC's in the light most favorable to them, then by virtue of the evaluated data in the

Progress response to Staff Interrogatory 29A, then those costs in that column of dollars per MMBtu delivered to terminal are still lower than the price that we would assume for the 2004 RFP, is that correct?

THE WITNESS: That's correct.

COMMISSIONER SKOP: Okay. So, basically, in a nutshell, although Progress probably should have bought some coal in 2004 and didn't do so, they effectively covered later at a lower cost, lower than what they could have bought the PRB for to begin with, is that correct?

THE WITNESS: Except for the first part. I can't agree with, you know --

COMMISSIONER SKOP: Okay.

THE WITNESS: But the rest you are correct, they covered in a way that was cost-effective relative to that.

COMMISSIONER SKOP: So, again, the numbers shown in 29A, and this is where I will ask the OPC witness, the numbers in 29A, basically, would suggest that the price is lower than the price of the PRB. I'm not so sure whether those numbers need to account for the differences in SO2 allowances or not, because, again, that is based on a blend of bituminous coal versus, you know, a blend. So there may be some

difference in SO2 allowances, but I guess would it be your understanding based upon the data that you have seen that the blend of bituminous coal that was used in those years is cheaper than the 80/20 blend of using Powder River Basin coal?

THE WITNESS: Yes. If the decisions that were made to burn a relatively low-cost alternative coal was cheaper than the PRB alternative, that is correct.

COMMISSIONER SKOP: Okay. I am just trying to fit the pieces of the puzzle together. I mean, this hadn't really dawned on me until today trying to -- because, again, the last time it was pretty crystal clear. This one is a little bit more difficult.

But, again, the graphical representation of Mr. McWhirter was just merely an attempt by myself to kind of graphically illustrate the relative different positions of the parties. And then if we need to interpolate, we can interpolate. But, again, based on 29A, interpolation may not be necessary. But, again, I'll go from that. Thank you.

CHAIRMAN CARTER: Commissioners, I'm going to go to staff unless there is anything further from the bench.

Staff, you're recognized.

MS. BENNETT: Thank you.

CROSS EXAMINATION

BY MS. BENNETT:

Q. Good afternoon, Mr. Heller. My first few questions focus on the most accurate way to evaluate the all-in production costs of coal when comparing CAPP to PRB. And when I use the term all-in production costs, I mean all of the costs involved in bringing the coal to plant, and I'm going to include in that definition SO2 allowances. Are you with me so far?

A. Yes.

Q. Okay. If I wanted to accurately compare the all-in production cost of using one Btu of PRB with one Btu of CAPP, would that comparison include just the SO2 allowances for one Btu of PRB, or would -- let me continue -- or would it also include the one Btu of CAPP with its SO2 allowances? Did I confuse you?

A. I think so.

Q. Okay. If I wanted to accurately compare the all-in production costs, would SO2 allowances be included in the CAPP costs as well as the PRB costs?

A. They should be, if that is -- they should be in that comparison.

Q. Okay. And where in your schedules do you show the SO2 costs for the CAPP coal that is being displaced by PRB coal?

A. The analysis of the -- in the bid sheet is done relative to a standard which has in it an SO2 target, which I think is 1.2 pounds or very close to that. It's basically a compliance coal is what is being looked at. So when you evaluate each of the -- when you evaluate the Powder River Basin coal relative to the standard Central Appalachian coal, in their bid analysis they penalize it or reward it in the comparison with the difference between the SO2 content of the standard Central Appalachian coal and then the actual SO2 content of the Powder River Basin coal. If they are looking at a Central Appalachian coal, in their analysis they will also penalize that Central Appalachian coal or reward it if the SO2 amount varies from the target.

Q. Okay. I guess I'm being a lot more nit-picky. I'm talking about specifically in your schedules, do you include SO2 allowances for the CAPP coal?

A. No. All I am including is the penalty implicitly -- or benefit implicitly assigned to the Powder River Basin coal because of the difference between its SO2 content and the SO2 content of the target Central Appalachian coal.

Q. So then back to my original question, are you comparing the SO2 allowances for PRB, one Btu of PRB with one Btu of CAPP?

A. There's two ways to do that analysis. One is to start with zero SO2 and assign the total amount of the SO2 allowance cost to both the CAPP coal and to, let's say, the Powder River Basin coal and run the analysis that way. Or you could assign a zero cost, if you will, to the Central Appalachian coal and then a plus or minus adder to the Powder River Basin coal. This analysis does the latter.

Q. Okay. Would you agree that the actual market prices for SO2 allowances is a reasonable proxy for emission allowances for 2006 and 2007?

A. For the purposes of determining whether or not there is a damage, you could look at the actual SO2 allowance prices that would have been paid. In trying to look at whether or not it was the right decision, the evaluation for -- that was done, you would take a look at what you thought the price of SO2 allowances would be at the time you do the evaluation. So they're kind of two different purposes.

Q. For the purpose of the damages portion, did you look at the actual market prices?

A. I didn't have a damage, so I was just looking at whether or not -- I was looking at the threshold test. And so the threshold test had in it what was the perception of SO2 allowance prices at the time the

comparison was made.

Q. And so I take it from your answer then you used the forecast SO2 allowances, is that correct?

A. Yes, because those were implicit in the bid evaluations.

Q. Okay. These next few questions deal with some very specific questions on the methodology of calculating the revenue requirements associated with burning PRB coal at Crystal River, so I want you to turn to your Schedule JNH-7. Let me know when you get there.

A. I am.

MS. BENNETT: And, Commissioners, I think it is probably easiest in your books with the testimony, it is JNH-7 of his direct testimony.

BY MS. BENNETT:

Q. Specifically, I want you to look at Rows 11 and Rows 12. And, first, I want to make certain that I understand correctly. The dollars per MMBtu in Row 12, they're derived from multiplying the dollar amount in Row 11 by the heat content of the coal, is that correct?

A. Did you say dividing by?

Q. I'm sorry, I meant multiplying.

A. You take the dollars per ton in Row 11, and you divide by the heat content of the PRB coal, and that gives you the number in 12.

Q. So I should have meant divide, not multiply?

A. Yes.

Q. And in your schedule, what is the heat content of the coal on a Btu per pound basis for 2006 which is used to go from 11 to 12?

A. It's about 8,500. I think it is 8,585.

Q. Okay. What about for 2007?

CHAIRMAN CARTER: While he's doing that, Commissioners, just FYI for planning purposes, I know I didn't say this to you earlier, but in view of I didn't give you a heads up, we probably won't go beyond 5:00 or 5:30, in that range. And plus with the tornado warning, we probably are going to -- instead of bringing in another court reporter, we're probably going to -- I would like to see where we are around 5:00, and we may just break at that point in time.

Staff, you may continue.

MS. BENNETT: Okay. I think he's still calculating.

THE WITNESS: It's about 8,000. It's a little over 8,000, but I will get that for you exactly.

BY MS. BENNETT:

Q. Okay. Are the heat contents of these coals found somewhere else in your schedules?

A. Yes, they are.

Q. Could you show me where those are?

A. The heat content of the Louis Dreyfus bid, which is the one that was used for 2007, is an 8200 Btu coal, and the Btu that was used for 2006 was the 8,585, which is the test shipment of Peabody coal.

Q. I'm sorry, would you repeat that?

A. I'm sorry. It's the test shipment of Peabody coal.

Q. If the Commission were to use a different heat content, would that change your number in Row 12?

A. Yes. If they were to use a different heat content, it would change the number calculated in cents per million Btu.

Q. Okay. So if the Commission uses a higher heat content, then the dollars per MMBtu in Row 12 would be lower, is that correct?

A. That is correct.

Q. Okay. My next set of questions deals with some differences in your testimony and Witness Weintraub's testimony as it relates to the tonnage that should be shipped in Crystal River. Do you happen to have a copy of Mr. Weintraub's testimony SAW-5 with you? If not, I have a copy.

A. I don't.

MS. BENNETT: Commissioners, this question

will deal with JNH-5 and SAW-5, if you want to follow.

THE WITNESS: I have SAW-5.

BY MS. BENNETT:

Q. In SAW-5, Column 1 for 2006, the tonnage is 440,000, is that correct?

A. 440,600, yes.

Q. And in 2007 it is 462,000, is that correct?

A. That's correct.

Q. But in your Schedule JNH-5, Column 9, you report the tons for 2006 as 490,000; and for 2007 as 520,000, is that correct?

A. That's correct.

Q. For the purposes of the Commission's determination of whether PRB would be more cost-effective than the coal actually burned, which tonnage is accurate?

A. The tonnage that's presented in JNH-5 follows the Commission methodology of targeting the 20 percent of the 2.4 million tons of coal to be delivered each year. And rating that at 17.6 million Btus per ton, that produces a target of 8.448 trillion Btus in Column 8. The PRB tons in Column 9 tell you how many tons of that particular quality of coal are going to be needed in order to deliver the total number of Btus to the plant that are being displaced by the Powder River Basin

coal. So because the Btu content of the actual coal being used as a replacement coal in 2007 is different than 2006, you end up with different numbers of tons.

In Mr. Weintraub's testimony, which I believe is rebuttal to Mr. Putman, there were some other items, I think, that he considered. One of them was whether or not -- his column is marked delivered via IMT or UBT, which means it was not delivered to Mobile. And when I did my analysis, I didn't exclude the Mobile tonnage, even though it would probably be -- it would certainly produce a better result for the company to exclude it, but the order was silent on that kind of an adjustment.

In addressing Mr. Putman's way of dealing with tonnage and displaced tonnage, it's necessary to take account of what's shipped through Mobile and what isn't. So that would be -- that would be one of the reasons there would be a difference.

Also, the coals that were being addressed, the Btu of the coals that Mr. Putman was addressing, but that is a different issue, were different than the Btus of the coals that I was looking at. But particularly it's the actual tonnages delivered by water to IMT or UBT is what Mr. Weintraub was looking at. And when I followed the Commission's methodology, I didn't look at the actual waterborne tonnage, I looked at what the

target was, which was this 8.448 trillion Btus. That's the 20 percent of the 4.2 million tons of coal delivered by water at the 17.6 million Btu level.

Q. Okay. I think that answers my question. I do have some additional questions in reference to your April 1st deposition -- and do you have that with you?

A. Yes.

Q. In your April 1st deposition, we talked about the cost of spot prices in 2006 and 2007. Do you recall that? Spot PRB coal prices.

A. Yes, I think you asked me that.

Q. And you stated that you reviewed the prices of coal, PRB coal in several different publications, is that correct?

A. Yes.

Q. And as a result of your review of those publications, I asked for some late-filed exhibits. Do you recall those?

A. I do.

Q. And the late-filed exhibits were for 2006/2007 spot purchases of PRB for 8,800 Btu at .8 SO2. And I wanted to know what the dollar per ton FOB mine basis -- I've got myself confused now. Do you have those late-filed exhibits with you that are attached to the deposition?

A. Yes.

Q. Okay. The first one, Late-filed Exhibit Number 1, could you tell the Commission what the average for 2006 for 8,800 Btu of .8 pounds of SO2 spot PRB coal price in dollars per ton FOB mine, the average price for 2006?

A. $12.84.

Q. Okay. And turning to Late-filed Exhibit 3, what was the range of prices for 2006 for that same kind of coal?

A. It ranged from a low in 2006 of $9.45 and a high in 2006 of $20.66.

Q. Then we also discussed the 2007 average 8,800 Btu, .8 pounds of SO2 spot PRB coal prices and a dollar per ton FOB mine. What was the average price for 2007?

A. The average spot price was $9.65 a ton.

Q. And the range for those?

A. The range of those prices was a low of $8.35 a ton and a high of $11.50 a ton.

Q. Okay. And my final question, Mr. Heller, is do you believe the Vista model results from 2004 and 2005 are a reasonable proxy for PRB actual costs?

MR. McGLOTHLIN: Could I ask for some clarification of that? When you say Vista model, are you referring to a complete model run or the spreadsheet

that's used sometimes? There has been some confusion on that.

MS. BENNETT: I'm referring to the results, the spreadsheet results.

THE WITNESS: The process that's used, that the model uses to adjust for ash Btu, sulfur, grindability, I doubt those would change much, and the sulfur we discussed before in terms of the sulfur adjustment, the price that goes in there is the price that they do at the time of the bid evaluation. And, so, if you are using the 2006 forecast to evaluate the bid evaluation, I think that's appropriate.

MS. BENNETT: Okay. I have no further questions.

CHAIRMAN CARTER: Thank you. Commissioners, before I go back to Mr. Burnett, is there anything further from the bench?

Mr. Burnett.

MR. BURNETT: Thank you, sir.

REDIRECT EXAMINATION

BY MR. BURNETT:

Q. Mr. Heller, if you would turn with me to your Exhibit 3 in your direct testimony. Just let me know when you are there.

A. Yes.

Q. Mr. McGlothlin spent a substantial amount of time asking you questions about capital costs and the like. I'd like to draw your attention to damages. You have got there on JM-3, damages excluding Commission's estimated capital recovery requirement. What does that mean?

A. That's Column 10 of the sheet, and it is the calculation excluding the capital component that I was being asked about before. So it says that rather than the company having avoided having spent $3.1 million more than -- burning PRB coal than it would have burned in the alternative, it says that it would have spent 2.6 million more burning PRB coal than it would have in the alternative. That excludes all the capital costs.

Q. So let me just make sure I understand the bottom line. Is what you are saying that even if you take out the capital costs, all the capital costs Mr. McGlothlin was asking you about, the refund amount is still a negative number?

A. That's correct.

Q. I'd like to also ask you about what is now marked as Exhibit 54, which is the Coal Cost/Quantity Gradient sheet. Do you still have that?

A. I do.

Q. The top point on that sheet that is around the

3 million-ton range, if that cost is the cost just to get the coal to IMT, the International Marine Terminal, would that be the total cost to get that coal to Crystal River?

A. No, that would be a portion of the cost.

Q. And if you added -- assuming there was a cost to get it to Crystal River, if you added that cost would that make those lines go closer together or farther apart?

A. It would make the upper point move to the right. The line would be more vertical, and the effect of that would be that the impact of tonnage would be even less.

Q. So the approximate $3.40 per MMBtu number that Commissioner Skop roughly came up with, would that number increase or decrease?

A. That number would increase.

MR. BURNETT: That's all I have, sir.

CHAIRMAN CARTER: Thank you. All right.

Let's get ourselves together here, boys and girls. Let's deal with exhibits. Mr. Heller is back for cross-examination -- I mean, excuse me, for rebuttal, so you will be on recess as opposed to ending the school day.

Mr. Burnett, exhibits.

MR. BURNETT: Yes, sir. We would move his prefiled testimony as well as Exhibits 7 through 13 into evidence, sir.

CHAIRMAN CARTER: Are there any objections? Without objection, show it done.

(Exhibit Numbers 7 through 13 admitted.)

CHAIRMAN CARTER: Now, let's do this, Commissioners -- Commissioner Skop is not here. I'm inclined not to -- Mr. McWhirter, I'm inclined not to move this document into --

MR. McWHIRTER: I think that's a good idea, Mr. Chairman.

CHAIRMAN CARTER: I beg your pardon?

MR. McWHIRTER: I say I think that's a good idea.

CHAIRMAN CARTER: Okay, good. So we will just -- it still will be a placeholder, Commissioners and staff, but it will just not be entered. Okay.

You're on recess.

Call your next witness.

While they are calling the next witness, Commissioners, my goal tomorrow is -- I mean, I didn't give you a heads up today, so tomorrow we can kind of crank it and make some progress and get on through. I think we can knock the ball out of the park tomorrow.

So bring your sandwich, and we're going to work on. I believe we can bring this in for a landing tomorrow.

Call your next witness. Actually I'm talking to Mr. McGlothlin.

MR. McGLOTHLIN: We call David Putman.

CHAIRMAN CARTER: Okay. Mr. Putman.

MR. McGLOTHLIN: While Mr. Putman is taking the stand, could I ask staff to ID the numbers in the Comprehensive Exhibit List that are associated with his prefiled testimony.

CHAIRMAN CARTER: Okay. Fourteen through 29, is that correct? That's what I'm showing, 14 through 29.

MS. BENNETT: That's correct.

MR. McGLOTHLIN: Okay. Thank you.

DAVID J. PUTMAN

was called as a witness on behalf of the Citizens of the State of Florida, and having been duly sworn, testified as follows:

DIRECT EXAMINATION

BY MR. McGLOTHLIN:

Q. Mr. Putman, were you sworn previously?

A. I was.

Q. Please state your name and address.

A. My name is David Putman. The address is 2236

Royal Crest Drive, Birmingham, Alabama.

Q. Mr. Putman, on behalf of the Office of Public Counsel, did you prepare and submit testimony and amended testimony in this proceeding?

A. Yes, I did.

Q. And did you also prepare the exhibits that have been marked 14 through 29?

A. Yes, I did.

Q. Do you have any -- bearing in mind that the amended testimony has the effect of modifying the first submission, do you have any additional changes to make at this point?

A. Not beyond the amended testimony.

MR. McGLOTHLIN: I request that the original testimony and the amended testimony be entered into the record at this point.

CHAIRMAN CARTER: The prefiled testimony of the witness will be inserted into the record as though read along with the amended testimony as presented.

MR. McGLOTHLIN: Yes. And let me ask the court reporter to include only the revised exhibits when we get to that point.

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.

AMENDED DIRECT TESTIMONY

OF

DAVID J. PUTMAN

On Behalf of the Office of Public Counsel

Before the

Florida Public Service Commission

Docket No. 070703-EI

Q. PLEASE STATE YOUR NAME AND ADDRESS.

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

Q. DID YOU PREFILE TESTIMONY EARLIER IN THIS PROCEEDING?

A. Yes. I submitted testimony on behalf of the Office of Public Counsel. The testimony was prefiled on February 2, 2009.

Q. WHAT IS THE PURPOSE OF YOUR AMENDED TESTIMONY?

A. My purpose is to revise the total amount of the refund of overcharges related to the cost of coal at Crystal River Units 4 and 5 and associated costs of SO2 emissions allowances in 2006-2007 that appeared in my original testimony, as a result of a modification to the calculation that underlay my earlier recommendation.

Q. PLEASE DESCRIBE THE MODIFICATION TO THE CALCULATION METHODOLOGY TO WHICH YOU REFER.

A. A central issue of calculation methodology in this proceeding relates to the difference in Btu content (per pound or per ton) between the bituminous coal that was actually delivered to the units in 2006-2007 and the more economical sub-bituminous coal that I contend the utility should have bought had it prudently positioned itself to take advantage of the flexibility of Crystal River Units 4 and 5. My objective has been to apply to the circumstances of 2006 and 2007 the method of identifying overcharges that the Commission employed in Docket No. 060658-EI. At the time I prepared my testimony I believed the intent of the Commission in Docket No. 060658-EI was to calculate a refund by substituting sub-bituminous coal for the highest costing 20% of the tons of coal actually delivered, on a ton-for-ton basis. Based on a review of PEF's rebuttal testimony and further consideration, I now agree that in the refund calculation of Docket No. 060658-EI there was implicit recognition of the additional tons of coal needed to match the total Btus actually delivered in the period. I therefore am revising the total refund to take those additional Btus into account. This has the effect of an offset to my earlier calculation, and serves to reduce the amount of refund. The change affects my Exhibits ___(DJP-7), ____(DJP-11), and ____DJP-13), which I have revised and which are attached.

Q. HOW HAVE YOU GONE ABOUT THE REVISED CALCULATION?

A. The difference in Btus can be "made up" in a variety of ways. One way is to assume that they would consist of the same highest costing tons of bituminous

coal actually delivered that the comparison methodology identifies as the coal that the alternative coal would displace. That appears to be the assumption underlying the refund made in the last case, and I have made a calculation on that basis.

I would point out that an assumption that the additional Btus would be comprised entirely of bituminous coal would have the effect of reducing the portion consisting of sub-bituminous coal below the 20% level that the Commission said should form the basis of a refund calculation in the narrative portion of its order (just as an assumption that the differential in Btus would be made up of entirely of sub-bituminous coal would increase the portion above 20%). An alternative, which I believe would be most consistent with the Commission's intent, would be to assume the difference in Btus would be made up of the same blend of 20% sub-bituminous and 80% bituminous coal. I have made that calculation as well. The results of both calculations appear separately on my Revised Exhibit _____ (DJP- 7), attached.

Q. WHAT ARE THE IMPACTS OF THESE CALCULATIONS ON THE AMOUNT OF COAL COST-RELATED OVERCHARGES THAT YOU RECOMMENDED IN YOUR EARLIER TESTIMONY?

A. If the adjustment proceeds from the assumption that the differential in Btus consists entirely of the more expensive bituminous coal that was actually delivered in 2006 and 2007, then the revised differentials in coal costs for 2006 and 2007, respectively, are $14,705,117 and $13,039,488, or a total of $27,744,605. If instead the differential in Btus is assumed to be made up of a

coal actually delivered that the comparison methodology identifies as the coal that the alternative coal would displace. That appears to be the assumption underlying the refund made in the last case, and I have made a calculation on that basis.

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bituminous coal and bituminous coal, the corresponding value would be $35,575,517.

Q. DOES THAT COMPLETE YOUR AMENDED TESTIMONY?

A. Yes.

BY MR. McGLOTHLIN:

Q. Mr. Putman, have you prepared a summary of your testimony in this proceeding?

A. Yes, I have.

Q. Please give the Commissioners your summary.

A. How are you this afternoon? It's raining outside, but we will go on.

In my testimony, I support my conclusion that the same imprudence that the Commission determined in Docket 060658 that began in 2003 continued to effect customers' coal costs adversely in 2006 and 2007.

In my testimony, I describe the manner in which I compared the costs of coal actually delivered to Crystal River 4 and 5 during 2006 and 2007 with the costs of alternative sub-bituminous coal that was available to Progress Energy at the time of its procurement decisions.

I also compare and contrast my approach with that of Progress Energy's Witness Jamie Heller, and explain why the alternatives he selected are inappropriate for the purpose. In my analysis I did not question or adjust the timing of Progress Energy's procurement decisions. I limited my review to considerations of whether Progress Energy purchased the most economical fuel available at the time of those

decisions.

Also, I did not alter or adjust any aspect of Progress Energy's evaluation assumptions, their methods, or computations. Where Progress Energy concluded a particular coal was the most economical on an evaluated basis, which encompasses the coal cost, transportation of the coal, and the impacts of the coal on unit operations I accepted Progress Energy's conclusions and Progress Energy's evaluated cost value.

Not surprisingly, Mr. Heller and I using the same actual data from FERC sources reached the same conclusion with respect to the cost of the bituminous coal that was actually delivered in '06 and '07. The differences between his testimony and mine lie principally in the identification of the alternative coal that should be compared to those actual costs.

I will begin with 2006. Progress Energy made the procurement decisions for a significant portion of the 2006 supply of coal to Crystal River 4 and 5 in early 2004. In early 2004, several producers of Powder River Basin coal responded to Progress Energy's April RFP and offered to supply coal in 2005, '06, and '07. All of their bids were far more economical than the cost of the coal that Progress Energy procured for delivery in 2006.

Of these several PRB offers, I chose the bids that Progress Energy identified as the lowest cost on an evaluated basis. These were two bids by Kennecott coal. Compared to the cost of the 100 percent bituminous coal that was actually delivered by barge in 2006, a blend consisting of 20 percent Kennecott coal and 80 percent bituminous coal would have saved customers $14.7 million or $15.4 million, depending on how you make up the Btus between the coal purchased and the coal displaced.

For 2006, Mr. Heller chose to use as his alternative coal the purchase of 3,300 tons of Peabody coal in 2006 that Progress Energy acquired for the May 2006 test burn. The choice is inappropriate. The Peabody coal was not even on the table in 2004 when Progress Energy made its decision for 2006 deliveries. The tiny quantity is not representative of the terms Progress Energy could obtain with a typical quantity purchase. The Peabody coal contained more sulfur than typical for PRB coal, and the Peabody purchase was a spot transaction, not a contract purchase. Most significant of all, the Peabody purchase was not the most economical coal that was available to Progress Energy during the relevant time frame. By ignoring the most economical source, Mr. Heller overstated the cost of alternative sub-bituminous coal in his comparison.

For alternative 2007 deliveries, I used two bids of sub-bituminous coal submitted by Indonesian producers, PT Adaro and PT Kideco, to Progress Energy's February 2006 RFP. Progress Energy rated the bids number one and number two on an evaluated basis. The coals are extremely low in sulfur content and extremely low in ash content, both very desirable characteristics. And the bidders are substantial, significant producers of coal in the international market. Their bids were substantially lower than the bids by bituminous producers.

In addition, this was an opportunity for Progress Energy to establish relationships with coal producers in one of the major coal basins of the world in order to maximize competition and to diversify transportation risk. Compared to the cost of the bituminous coal actually delivered by barge in 2007, a blend containing 20 percent Indonesian sub-bituminous coal and 80 percent bituminous coal would have saved customers over $13 million, or $14.7 million, again, depending on what you use to substitute, either more bituminous coal or the 20/80 blend.

By contrast, for his 2007 comparison, Mr. Heller used a bid by Louis Dreyfus, a coal broker, to supply PRB coal that was submitted to the same

February 2006 RFP in which Progress Energy received the Indonesian offers. He did so because Progress Energy instructed him to limit his consideration to coal from the Powder River Basin when he made his comparison. Again, by ignoring the most economical alternatives that were available to Progress Energy, Mr. Heller overstated the cost of the alternative.

Following the methodology set forth in the final order of the prior case, after quantifying the difference in actual and alternative coal costs, I calculated the cost of the additional SO2 emission allowances that Progress Energy had to purchase because they could not avail itself of sub-bituminous coal in '06 and '07. Based on the same source of the prices of allowances that the Commission used in the last case, the extra costs are 6.2 million or 6.5 million, again depending on the assumption one chooses for replacing the different Btus. The total overcharges that were passed on to the Progress Energy customers are $33.9 million with all bituminous coal makeup, or $35.6 million using a 20/80 blend.

That is my testimony, and I am prepared to answer questions.

MR. McGLOTHLIN: Before we tender the witness, I would like to make this request of the Commission.

Several questions were directed to company witnesses in areas for which Mr. Putman is also qualified and on which he has a very different take, so I hope you will have him -- give him an equal opportunity.

We tender the witness for cross-examination.

CHAIRMAN CARTER: Thank you.

Commissioner Skop.

COMMISSIONER SKOP: Thank you, Mr. Chair.

And, Mr. McGlothlin, you read my mind, so equal opportunity. Good afternoon, Mr. Putman.

THE WITNESS: How are you?

COMMISSIONER SKOP: Pretty good. I just had a few questions. Again, I'm trying to follow along here and be fair to both sides, so I'm going to ask you some of the same pointed questions that I directed to Progress witnesses, and hopefully I guess you will offer your perspective.

I guess you had mentioned in your opening statement how Mr. Heller limited his focus strictly to evaluation of PRB coal, is that correct?

THE WITNESS: That's correct.

COMMISSIONER SKOP: Okay. And in that regard, I guess reading your prefiled testimony, and I believe it was on page -- let me get to it. Give me one second. I believe it was -- there's so much testimony. What I

am looking for is the page that has the response from the Indonesian coal firm on it, if you could help me out, or staff. It's here somewhere. I apologize. Oh, here it is, on Page 19 of the prefiled testimony.

I guess you had looked at Indonesian coal, and on Page 19, Line 23 of your testimony, you indicated that the Indonesian coal company was established in 1992, is that correct?

THE WITNESS: 1982, yes.

COMMISSIONER SKOP: I'm sorry, 1982. Is that correct?

THE WITNESS: That's correct.

COMMISSIONER SKOP: So that would have been before these plants were built, is that correct?

THE WITNESS: That's correct.

COMMISSIONER SKOP: Okay. I guess in reviewing your testimony in the previous docket, both yourself, Mr. Barsin, and Mr. Sansom did not bring the issue of Indonesian coal into the analysis. So I guess one of my questions would be if it were allegedly cheaper in 2006 or 2007 -- or 2007, as you state in your testimony, then why would that not have been at issue or previously brought up in the prior cases?

THE WITNESS: My answer to that is that I came into this case, both then and now, with the issue of

determining what is the cheapest fuel available to Progress Energy to buy that would operate in their plants. It was not to look at any one particular coal, but it was to look at the cheapest coal. That is sort of an answer to an earlier question today. That I think is the duty of the Commission.

And so when we had the case a couple of years ago, the question was what coals were currently at that point in time for the years being covered available. And at that time they had not received any bids from Indonesia, so those were not considered, they were not discussed. That doesn't mean that in earlier years, prior to the time period that was looked at, that they were not available.

My experience is Southern Company is that we met and had long discussions with the same Fred Merrill that we have talked about today about buying Indonesian coal. It was available. It was cheap. We looked at it hard. We did not end up buying it, but we did look at it. It was at that point cheap, and it was -- but it was not brought up because in the time period we looked at in the last docket it was not viewed as an economical source.

COMMISSIONER SKOP: Okay. Fair enough.

With respect to the Spring Hill coal from

Montana, why was that not brought up in the previous case?

THE WITNESS: Again, it was my view of the testimony presented last time that it was about Powder River Basin coal. And as the order itself says on Page 2 that the Commission defined Powder River Basin coal as coal mined in Montana and Wyoming. That's the only definition of where Powder River Basin coal comes from, so it was never my opinion that we did not discuss all Powder River Basin coal. And so, I mean, in my opinion it was presented as part of a Powder River Basin coal.

COMMISSIONER SKOP: Okay. To further accentuate the point I made earlier in terms of the Powder River Basin coal, is the designed fuel for this plant based on a specific mine or a specific region of the Powder River Basin in terms of the PRB coal?

THE WITNESS: Based on one document that I saw today, yes, it was based on a county-wide set of coals. But other documents say it was just based on Powder River Basin coal.

COMMISSIONER SKOP: Okay. And would you agree that the coal from a given mine has unique chemical properties that vary from mine to mine so that, essentially, if you are used to using coal from a given mine, and that is your source, and you have got your

unit tuned to that particular mine, then you really couldn't go out and bring in other coal without doing a test burn to see how that might affect your operations?

THE WITNESS: I would have to politely disagree with that, because as Progress Energy demonstrates, they buy coal from all over the world to burn at their plant, not just from one mine. They buy it from Columbia, they buy it from Venezuela, they buy it from the Central Appalachian, they buy it from lots of places and they are able to burn it.

COMMISSIONER SKOP: Okay. But I guess what I'm asking before they do that do they do a test burn before they just utilize that on a regular basis? Would that be prudent engineering practice?

THE WITNESS: Again, I don't believe for all of those coals they do not test burn. They buy Central App coals over the years from lots of different mines, lots of different suppliers. And for bituminous coal they have never run a test burn since the very beginning until they got into international bituminous coal.

COMMISSIONER SKOP: Okay. Fair enough.

With respect to, I guess, Mr. Weintraub in his deposition provided a late-filed exhibit that, I guess, Mr. McGlothlin has referred to as hearsay evidence, and the Commission will give whatever weight, but that has

been admitted as a late-filed exhibit. How would you respond to the contention that the Indonesian coal was not available in the 2007 time frame?

THE WITNESS: I mean, based on that letter, I agree with the comments that were made earlier. I did talk to Fred Merrill, and we had a discussion, and he said to me the same things he said in that. He did not that have independent recollection of the timing of that deal. As he said in his letter, he focused on a bid made in 2007. What we were talking about is a bid made in 2006. There was no evidence of that bid being withdrawn, so, I mean, I think that Fred is a great guy, but I think he was confused about what the timing was of the issue.

COMMISSIONER SKOP: Okay. And with respect to the evaluated price of PRB coal with respect to the Indonesian coal, does your understanding of the methodology that Progress uses, does that methodology as part of the evaluated price include a premium for delivery interruption risk? For instance, if you are trying to import coal all the way from Indonesia and you were required to have a constant supply so that you could blend it 80/20 as the previous -- as the Commission has previously established as what would be prudent when it is cost-effective to do so, would supply

interruption risk factor into the analysis?

THE WITNESS: It's my understanding that it does not factor in whether that is from around the corner or across the world. It does not take risk into the evaluation that shows up on that spreadsheet.

COMMISSIONER SKOP: Okay. So if you were evaluating domestic procurement of sub-bituminous coal from the PRB region in Montana -- not Montana, but in Wyoming, versus looking at sourcing the coal either as a primary or a secondary source from Indonesian, certainly delivery would be a concern in the evaluation, is that correct?

THE WITNESS: I would agree that risk is always a concern, and we have had a lot of testimony today that Progress -- I mean, that Powder River Basin coal rail delivery became very questionable in the 2005 time period, and hurricanes bringing coal across the Gulf are a risk, rail strikes, union strikes coming out of the Central Appalachian are a risk. There is always risk in deliveries. And should it be taken into account? Absolutely. But it is my understanding they are not taken into account in that evaluation process that we have been shown.

COMMISSIONER SKOP: Okay. And, Mr. Chair, I think I have about five more brief questions, hopefully.

With respect to looking at the Springhill mine, I guess a previous exhibit today that I believe OPC provided, JS-9, showed a comparison of the Peabody PRB versus the Spring Creek coal. How would you respond to the contention that the sodium content of the Spring Creek coal is far in excess of what would be the norm and would cause problems in using the Spring Hill coal, the Spring Creek coal?

THE WITNESS: I would agree that it is higher than most Powder River Basin coals. I would also point out, though, that these plants, these units were designed to burn a wide range of coal, including special design attention spent to slagging and fouling issues. And that this plant, again, paid for by the customers of Progress Energy, was built to burn this kind of coal.

COMMISSIONER SKOP: Okay. Then also, too, in a separate statement you stated that the Peabody coal was not a good proxy and was high in -- on Page 25 of your prefiled testimony, Lines 14 through 20, generally, you criticized the quality of the Peabody coal making specific reference to the sulfur level, and indicating that that was not what would be expected for PRB sub-bituminous coal. And you also further stated on Line 17 that Peabody coal was at or above the baseline value that PEF employs in its evaluation.

Can you, I guess I'm looking at the exhibit that OPC provided on cross-examination, and that was DJP-6, and it shows that the sulfur content in percentage for the various mines including the Peabody mine, and assuming that is the same Peabody mine that you reference in your testimony, how would that sulfur be out of -- above what would be expected for PRB coal?

THE WITNESS: Well, I think actually this -- the Peabody bid, if you're looking at DJP-6, the Peabody bid out of the Antelope mine shows an SO2 number -- let me find it.

COMMISSIONER SKOP: I'm seeing a sulfur percentage of .27 percent.

THE WITNESS: Okay. The Peabody coal that was used in the test burn was well over that. So, I mean, it proves the point that the test coal used from Peabody is higher than all of these other numbers shown on this list of PRB coal.

COMMISSIONER SKOP: Well, again, going back to JS-9. If this is the Peabody PRB, I'm showing a percentage of sulfur there of .4, which, again, seems to fall in the general range of some of the Campbell County coal. So, again, I'm trying to have a better understanding and appreciation of what do you find to be offensive about the sulfur level of the Peabody PRB.

THE WITNESS: Well, it may not seem like much, but the difference between .4 and 3.4 is money going out the stack in emission allowances.

COMMISSIONER SKOP: I understand. Moving on to, again, your analysis, and initially I think that you had looked at offsetting against the 20 percent of the highest incurred bituminous coal, but then, I guess, in your amended direct testimony you changed that to conform to the Commission's evaluation, is that correct?

THE WITNESS: I changed it to balance the Btus, yes.

COMMISSIONER SKOP: Okay. And I guess I'm going to ask the same questions I asked to Mr. Heller. I guess the controversy in this, as I understand your testimony, centers around the choice of coal for 2006, which in your opinion they should have used the Spring Creek coal from Montana, and in 2007 they should have used the Indonesian coal. Is that generally correct?

THE WITNESS: Generally correct. For 2006, I picked the lowest cost evaluated price off of their list, but in reality there was a whole list of other Powder River Basin coals that they could have picked any of and would have been better off than what they did do.

COMMISSIONER SKOP: Would the fact that the performance guarantee for the design fuel blend was

specified for Campbell County in the PRB, which would be Wyoming Campbell County coal versus the use of Montana or northern PRB coal have any difference in the analysis or be relevant to the extent that you are picking on the lowest basis of cost, but how does that correspond to what the specified design fuel blend was?

THE WITNESS: Again, I think the design fuel does not mention the sodium content of the coal. It does mention a geographic location. I'm not sure that's as significant as the quality of the coal coming out of the ground. So what the design specs do show is that that plant was designed for a severe slagging and serious fouling design, indicating that it was built to burn high sodium kind of coals.

COMMISSIONER SKOP: Okay. In the interest of time, I'm not going to reference the Babcock and Wilcox statement for the performance guarantee about the slagging and the fouling. I think that is slightly different, but not enough to spend the time on.

I want to go back to the evaluated price that Mr. Heller used, and he suggested for 2006 that the spot purchase should be used as the appropriate price point for consideration of the Commission to show or illustrate that the PRB was more expensive than the CAPP coal. And how would you respond to Mr. Heller's choice

of using that spot price?

THE WITNESS: I would respond by saying what I did, which was that I looked as this as a continuum review of the prudency of Progress Energy. The Commission last time said that in 2001 and 2002 that there was notice to the company that the Powder River Basin was now possibly an economic alternative, and that Progress Energy should have gotten ready. And that they gave them two years, the years 2001 and 2002, to run a test, get a permit approval, make the changes in the unit necessary to be able to burn Powder River Basin coal.

From 2003 through 2005, the Commission said they were imprudent because they had not done any of that. In 2006, they still had not done any of that. In 2007, only very late in the game after all of the procurements were done did they make those changes. So I view it as a continuum. When 2005 came along, I know we are not testifying about 2005, but when 2005 came along there was an opportunity to buy at very low cost Powder River Basin coal. Because they didn't have a permit, they couldn't buy it. In 2006 and 2007, on that same inquiry they couldn't buy it because they were not in a position with permits and other things to buy it.

So I view that the imprudency began in 2003

and was a continuum all the way through the time period we are looking at now through 2007.

CHAIRMAN CARTER: Would you yield for a moment, please, sir.

COMMISSIONER SKOP: Yes.

CHAIRMAN CARTER: Commissioner Argenziano.

COMMISSIONER ARGENZIANO: Thank you, Mr. Chair.

And I hate to interrupt, but, Commissioner Skop, I'm kind of confused, because you had indicated in much of your line of questioning that the sodium content was important to the design.

COMMISSIONER SKOP: (Inaudible. Microphone off.)

COMMISSIONER ARGENZIANO: I heard that all along. It was kind of like, I guess, your line of questioning. Let me finish it, and then you can maybe -- because I kept hearing you indicate that the type of coal was very important to this plant and may factor into why the company wouldn't look for that type of coal. And this witness just indicated that in his opinion, I didn't hear anybody else's at this point, but in his opinion that the plant was kind of designed for the high sodium. Is that what you indicated?

THE WITNESS: That is correct.

COMMISSIONER ARGENZIANO: And you didn't care about that, and now I want to know why.

COMMISSIONER SKOP: The only thing -- again, I was looking at sulfur, I was looking at the design specification of the mine. But looking at JS-9, which was the exhibit that was provided earlier today, I guess it accentuates the difference in the sodium, which is a metal, between the PRB coal from Peabody and the Spring Creek coal, and some of the properties vary. Some significantly, some more than others. Again, the Btus per pound is much higher.

COMMISSIONER ARGENZIANO: Right.

COMMISSIONER SKOP: Some of the other properties change. But one of the things that, again, that I believe Mr. Putman spoke to, and I have not found it, but the sodium level obviously is somewhat higher, or substantially higher than that of the PRB coal from Wyoming. I don't know if that is a big difference or not. It's just something that I'm trying to kind of articulate because, again, I think that would somehow factor or it seems there has been some testimony to suggest that that factors into the evaluated cost. That is not my primary premise, I'm just trying to understand the position of each of the parties.

COMMISSIONER ARGENZIANO: So then all those

questions about the sodium, or mention of that, and I think in one of these schedules here you had mentioned that, and that is not -- you are not saying that because it was higher sodium would eliminate the company from using that in this particular plant?

COMMISSIONER SKOP: What I'm suggesting is I think my prior questions related -- and I have got a twang, so maybe I was saying -- I was saying sulfur, not sodium. I did remember mentioning sodium in one specific question, but I think generally my comments focused on the sulfur content, because he suggested that the Peabody mine -- their witness suggested the Peabody mine was much higher in sulfur than standard PRB coal, and that is what I was trying to flesh out. Because, again, some of the documents that OPC had presented earlier today, DJP-6, that statement seemed somewhat inconsistent with the data I was seeing.

But, generally speaking, I think a lot of my questions that focus on -- and just from my operational experience was not at issue here, but when I ran a coal-fired cogen plant we had a force majeure event. The mine flooded. We couldn't get coal. And then all of a sudden we had to, you know, scramble. And then as soon as we burned something different our mission profiles went whacko. So, again, I'm trying to

articulate from the witnesses what they feel in terms of the chemical composition as it varies from mine to mine, and how important that is to the extent that you -- if I run out of milk, I can't go to Publix and just get a jug of milk and just pour it on the cereal. It doesn't kind of work that way, you have to do other things, and that is what I'm trying to get the witnesses to discuss the significance of whether you can just use any given coal or whether you have to do a test burn first to make sure that --

COMMISSIONER ARGENZIANO: Yes, I got that. And I know you have to do a test burn. But what I was getting out of your comments from early on was that if it wasn't a particular type of coal it couldn't be used. And I understand the test burns, and that's where my questions came in earlier about the specified design, specific design didn't disallow a higher sodium or other coals to be used as indicated by Progress' witness, too, that they use other coals. I was trying to figure out if you were saying that only a specific coal could be used, forget test years and all that stuff.

COMMISSIONER SKOP: Right.

COMMISSIONER ARGENZIANO: And, Mr. Chair, when he is done with his questions, I have some. But, thank you.

COMMISSIONER SKOP: And I will try and wrap mine up. And just in response to that question, what I was trying to articulate is that if the design heat content is based on fuels and blending from CAPP coal and then a specific vein of coal in the PRB region to get the heat content per pound, and that kind of suggests -- I mean, if they went to the trouble of specifying a certain region in the design specs, certainly you can use other coals if you are able to, perhaps, do so, but the design of the units centered around specific designation to the Campbell County, Wyoming, PRB. But I won't make too much of that.

The points I'm trying to go to is that Mr. Heller's testimony -- and these are the same questions I asked Mr. Heller -- Mr. Heller suggested using a spot price for a 3300-ton purchase of coal as the proxy to use to be a benchmark to evaluate whether it was more cost-effective to use CAPP coal versus PRB. And I guess you disagreed because it was a continuum of when they could have bought coal, getting back to a line of questioning.

The next point I asked Mr. Heller to address was because of the small quantity of coal in that spot purchase, should that be adjusted or interpolated through two data points that the Commission has, based

on the record evidence, to adjust for the volume that might be purchased. I think in your testimony you suggest that on an annual basis that the CR4 and CR5 units would be expected to burn, subject to waterborne delivery constraints, just over, you know, 500,000 tons of coal per year, is that correct?

THE WITNESS: The total tonnage burned is somewhere around 4.2 million tons for the two units. What we're talking about is the 20 percent kind of number, which is 5 to 5.5 million -- 500 to 550,000 tons.

COMMISSIONER SKOP: Okay. All right. So if we have that chart, and I don't know if our legal staff has the same copy, maybe we can give to the witness. We do have one more copy? Can you please give that to the witness.

CHAIRMAN CARTER: It has been marked as Number 50, I believe. Number 54.

COMMISSIONER SKOP: Marked as Exhibit 54.

CHAIRMAN CARTER: Only for identification purposes.

COMMISSIONER SKOP: And, again, to Commissioner Argenziano, I just have two more questions and then I'm done. I'll be happy to turn it over.

Mr. Putman, on that graphical representation

between Mr. Heller's point of the spot purchase, and, generally speaking, the OPC position of the large quantity purchase at a much lower cost in dollars per MMBtu, assuming that we were going to interpolate at the quantity that you suggest subject to delivery limitations of 500,000 tons per year. It would seem to suggest the intersection of the point -- and correct me if I'm wrong, or give me your opinion, that that intersection of the point in the slope of the line or the intercept would be higher than the delivered price of CAPP coal. Would you generally agree with that?

THE WITNESS: I'm going to have to respectfully say that this graph, I'm not sure what it represents, because it has two different times associated with those points.

COMMISSIONER SKOP: Okay.

THE WITNESS: And, in my opinion, based on my experience, time is much more important than quantity. And until the time component is put in there, I can't really honestly respond to it.

COMMISSIONER SKOP: Two more questions, then. So assuming for the sake of discussion we reject Mr. Heller's testimony in its entirety and adopt the position that is most favorable to OPC to the extent that they should have purchased PRB coal based on the

2004 RFP, which I believe represents the upper left point on that graphical representation to the extent that, you know, you are talking about large quantity of coal at a lower cost. But assume that we accept that premise, then in response to that, and that's taking it in the light most favorable to OPC's position, the interrogatory response to Staff Interrogatory 29A, and I don't know if we can get Mr. Putman a copy of that also, too, please.

And this is my last question, I promise.

THE WITNESS: I've got a copy of it now.

COMMISSIONER SKOP: Okay. All right. Thank you. If you could just look at that, and on 29A in the column entitled dollars per MMBtu delivered to terminal, I guess, if I understand this correctly, and, again, throwing out Mr. Heller's testimony for the sake of discussion and merely focusing on OPC's position versus the response on Interrogatory 29A, it would seem to me that Progress is alleging that the delivered price of a blend of bituminous coal, whether it be domestic and foreign or blend that they covered with is actually cheaper than the 2004 RFP quotation price that they could have otherwise procured coal at.

So how would you respond to that? And I guess I'd like to generally understand.

THE WITNESS: I've got several comments to make about it. First, when I look at the PRB delivered to terminal and I see prices in the 2.4, 2.3, I'm not sure where those numbers came from. Again, what I used was the evaluated price on the 2004 bids that were put together by Progress Energy. And they take the price all the way to the plant. And the proposals that I brought forward were in the $1.90 to $2.00 range for the coals that I offered. So I'm not sure. The numbers I saw up here were very different than the numbers that Progress Energy produced back in 2004. So in 2004 they were different. They were in the $2.00 range. That's one point. So I don't agree with the PRB delivered to terminal number.

COMMISSIONER SKOP: Just one brief follow-up, then, to that point.

If Progress were, in fact, as it alleges, able to burn a blend of bituminous coals that was cheaper than burning an 80/20 blend of PRB coals, in your professional judgment and upon a showing supported by evidence, then would it not be prudent to burn the bituminous blend over doing the 80/20 blend?

THE WITNESS: And my response to that is I'm not ready to be brought into an either/or situation. I think what you have -- and I commend Progress Energy for

doing this. Progress Energy did not buy the Powder River Basis coal, but they went out and came up with another idea which was to buy low quality bituminous coal to blend, and that became cheaper than what they were buying. And that was a good thing.

It doesn't mean they couldn't do that and that they could not have also bought the Powder River Basin coal and blended that and brought that into the plant. And in my evaluation that would be cheaper than the blend with the bituminous coal, and both of those blends would have been cheaper than the coal actually purchased and delivered. So they could have done both. The customers would have been better off. Again, I commend Progress Energy for doing that they did, but I don't say that they did a good thing by skipping the PRB coal.

COMMISSIONER SKOP: And I promise, Mr. Chair, just two more brief ones, and then I'm done, because I've over-extended my questions.

To your point, though, about they could have done both, and maybe that's an alternative, but if they came up with an innovative solution to blend bituminous coal versus doing the alternative you suggested, would you agree that the blended bituminous coal had a higher heat content than the blend of the 80/20, which would

have resulted in having to use less overall coal?

THE WITNESS: It they had used the Kennecott coal which had a Btu content of 9300 compared to the 9,000 Massey coal that they used for their blend, then the PRB/Kennecott blend would have had a high Btu probably.

COMMISSIONER SKOP: And that's a good point.

One final point on those numbers. I know that you haven't seen those, and you may agree or disagree with them, but if those numbers are truly accurate in terms of the solution that Progress came up with to use a blend of bituminous coal, would you -- and, again, this is a question I will ask to Mr. Weintraub on rebuttal, but if those numbers -- bituminous coal has higher sulfur content than the blend, so certainly those numbers, if accurate, would probably need to be adjusted or an explanation given as to whether that affected the overall SO2 allowances, is that correct?

THE WITNESS: That would be correct.

COMMISSIONER SKOP: All right. Thank you.

CHAIRMAN CARTER: Thank you.

Commissioner Argenziano, you're recognized.

COMMISSIONER ARGENZIANO: Thank you, Mr. Chair. Just a few questions.

Because to me, all this comes down to

availability and what costs less if it can be used. And let me ask you, you have actually operated a coal plant?

THE WITNESS: I have.

COMMISSIONER ARGENZIANO: For how long?

THE WITNESS: I would say various jobs at Plant Barry for seven years, including the assistant plant manager.

COMMISSIONER ARGENZIANO: And you had coal procurement experience?

THE WITNESS: I had 17 years of coal procurement.

COMMISSIONER ARGENZIANO: Okay. Then I can ask you this question, and I'll ask others, too.

If you have a plant, a coal plant, is it designed or is it an understanding that at some point you may have to change coal sources that you use?

THE WITNESS: They're designed -- and, again, depending on how much money you want, you design them generally for a type of coal, a coal region, a coal supply source, yes.

COMMISSIONER ARGENZIANO: So you're saying that it's designed for a particular region's coal?

THE WITNESS: Correct.

COMMISSIONER ARGENZIANO: And what if that region runs out of that coal?

THE WITNESS: Then you would do something different. Southern Company, also, they designed their plants for certain kinds of coal, but then they found out about Powder River Basin coal, and their supply didn't run out, but they found a cheaper supply, and so they changed and began burning at two plants significant Powder River Basin coal.

COMMISSIONER ARGENZIANO: So in the change, what are we talking about in layman's terms? What type of equipment changes? How extensive, and I know just kind of in a nutshell, if you can, do you have to go about doing in order to switch coals, if it is an extreme switch? Like you indicated that this coal plant may be able to take a higher -- may have been designed for higher sodium, but if it's a different type of coal entirely that prompts a change, is it usually a very extensive change?

THE WITNESS: It can be a very extensive change. It can cost a lot of money. You can pay for that up front, which is what Progress Energy did. They built a plant that could burn a wide range of coals at the Crystal River plant. They paid for it up front and they've been paying for it ever since. Miller and Scherer came along later and had to change, and so they did have to make some significant changes in both the

coal handling equipment and in some of the stuff inside the plant, sub-blowers and other things like that.

They did their evaluation and came out that, yes, you're going to have to spend millions of dollars, but you are going to save so much more than that in fuel costs that it vastly jumped over that hurdle, and you would be saving that money for years and years. But, yes, it's expensive, it can be expensive.

COMMISSIONER ARGENZIANO: Okay. To be fair. But now you're saying that in your opinion the Crystal River plant was designed to handle different types of coal?

THE WITNESS: Yes.

COMMISSIONER ARGENZIANO: Up front?

THE WITNESS: Up front and paid for.

COMMISSIONER ARGENZIANO: Which is a wise thing to, I think.

THE WITNESS: If you use it, it's wise.

COMMISSIONER ARGENZIANO: Right. Hang on one second.

The mention of availability of the Indonesian coal, I'm having a hard time trying to figure out a basis on both sides. One side says it wasn't available, and another side says it could have been if you did the actual bidding in 2006. Could you just be a little bit

more specific for me? Sometimes it takes a little longer to penetrate a thick skull.

THE WITNESS: I want to make two points about the Indonesian coal and it's availability. In my opinion, it was a chance opportunity in 2006 when those bids were received that they received bids for Indonesian coal. Unless Progress Energy made a real effort to make a long-term relationship, it came, it was there, it could have been bought, but probably would not have been there a year later. But, again, that sort of says you have got to be ready.

The other point is in 2006, February of 2006 when those inquiries went out, and those bids came in, it is possibly a coincidence, but I don't think so, that in that same time period right after that, Plant Scherer and Georgia Power began to buy sub-bituminous coal out of Indonesia. So there is a very strong possibility, I don't know it for a fact, but that coal that was offered to Progress Energy got sold to Plant Scherer. And that is why in May when discussions were going on, it may not have been available. But, again, it's a question of you have got to be ready.

COMMISSIONER ARGENZIANO: Timing.

THE WITNESS: Timing is everything.

COMMISSIONER ARGENZIANO: So you allege timing

was maybe asleep at the switch, or whatever, and I'm not putting words in your mouth. Your issue there was timing, unavailability. And you had mentioned before that other coals were available also that would be -- and I don't know word-for-word what you said, but basically was that other coals could have been bought by the company that would have been cheaper than what they did use. Could you elaborate?

THE WITNESS: The plant, again, is a wonderful plant. It was bought to burn a wide range of coal by wise people back in the '80s. They built the capability to receive coal by water, and they built the capability to receive coal by rail. Because of where they are on the Gulf of Mexico, through water they can buy coal from South America, they can buy coal from Indonesia, they can buy coal from South Africa. Another Florida utility did that for ten years, Gulf Power. So they've got, really, the whole world on the ocean.

And then in United States they've got Central Appalachian, they have got Illinois Basin, they've got Powder River Basin, all that coal can flow down river systems and rail systems and be there at the plant. So the plant can buy coal from almost anywhere in the world when it's offered to them.

COMMISSIONER ARGENZIANO: So the time that we

are talking about, the time frame that we're talking about here, let's say -- let's take out the Indonesian component for a moment. In your opinion, there was other coals at that time that could have been purchased that would have been cheaper than what they ultimately used?

THE WITNESS: At that time, based on those bids, those were the cheapest bids.

COMMISSIONER ARGENZIANO: Okay, so those were the cheapest. But let's say those weren't there. Were there others that would have been cheaper than what the company did use? Because I thought I heard you say that before, and I just want to make sure.

THE WITNESS: Okay. I'm not sure I said that. Based on the bids received, the Indonesian bids were the cheapest, and there were some other Central App coals which they bought, and then there was some Powder River Basin coal that was down below that. Depending on how far down that list they wanted to go, they could have gotten into the Powder River Basin coal, if they had had the right permits to do that.

COMMISSIONER ARGENZIANO: Okay. Thank you.

CHAIRMAN CARTER: Thank you. Commissioner Skop.

COMMISSIONER SKOP: Just one more question I

forgot to ask, I believe, Mr. Heller.

I know that in the previous docket the issue about using sub-bituminous coal center around the need for additional housekeeping and grooming to prevent spontaneous self-combustion. I was wondering, and maybe there is an explanation that I don't know of, and you might be able to add to, based on your experience, but in transporting such large quantities of coal, of sub-bituminous coal great distances, is spontaneous combustion an issue, and how is that dealt with?

THE WITNESS: The best way to deal with that in a ship is compaction. You've got to compact the coal in the ship hold in order to drive out the opportunity for oxygen to get to that coal. Just like on a stockpile, you need to compact the stockpile of sub-bituminous coal so that oxygen is forced away. Because it's the oxygen in pockets that cause heating, and then that heating begins to burn the coal, and you get the spontaneous combustion.

Again, Indonesia is the first or second largest exporter of coal in the world, depending on the year. So they ship huge amounts of sub-bituminous coal by ship around the world, and you don't hear about them blowing up ships.

COMMISSIONER SKOP: Okay. Thank you.

CHAIRMAN CARTER: Thank you.

Mr. McWhirter.

MR. McWHIRTER: I have no questions of the witness, Mr. Chairman.

CHAIRMAN CARTER: You're a gentleman and a scholar, Mr. McWhirter. Thank you.

Staff?

MS. BENNETT: I believe Mr. Burnett has questions.

CHAIRMAN CARTER: Sorry, Mr. Burnett.

MR. BURNETT: Mr. Chairman, I think you may have the right idea. I have a substantial amount of questions for this witness. It may make sense to go with staff first, and maybe pick me up tomorrow.

MR. YOUNG: Staff actually has two questions right now.

CHAIRMAN CARTER: Why don't we that, and then we can let Mr. Burnett start fresh in the morning.

You're recognized.

MR. YOUNG: All right.

CROSS EXAMINATION

BY MR. YOUNG:

Q. Good afternoon, Mr. Putman.

A. Good afternoon.

Q. Just two questions. First, earlier you heard

Ms. Bennett's exchange with Mr. Heller about the Vista model spreadsheet results, correct?

A. Yes, I did.

Q. The same question. Do you believe the Vista model results from the spreadsheet from 2004 and 2005 are reasonable proxies for the PRB actual costs?

A. I have become aware that it does not appear to have done a good job in dealing with sodium, so I do not know that. I can say that the Vista as applied, and I'm not sure the Vista model was ever run for the 2004 bids, that's my feeling. But it does not appear to have handled sodium well, because it allows the coal from Spring Creek to be the number one evaluated bid, and it is clear both to me based on my experience as well as everything that has been said about that coal that maybe all the costs involved burning that coal were not considered.

Q. And the final question is are you aware of other companies who have burned Indonesian coal?

A. I know that Tampa Electric burned Indonesian coal for about six years in the late '90s, right down the road. I also know that that coal was burned in plants in Dominica, the Virginia utility, and up in the New Jersey utility, Constellation. So it is being burned today in Virginia and in New Jersey.

MR. YOUNG: Okay. No further questions.

CHAIRMAN CARTER: Thank you.

And what we will do tomorrow, Commissioners, we'll begin with Mr. Burnett doing his cross-examination. And, as I said earlier, our goal tomorrow is to press on. So just kind of eat your Wheaties tomorrow. And with that we are adjourned until tomorrow.

(The hearing adjourned at 5:14 p.m.)

STATE OF FLORIDA)

: CERTIFICATE OF REPORTER

COUNTY OF LEON)

I, JANE FAUROT, RPR, Chief, Hearing Reporter Services Section, FPSC Division of Commission Clerk, do hereby certify that the foregoing proceeding was heard at the time and place herein stated.

IT IS FURTHER CERTIFIED that I stenographically reported the said proceedings; that the same has been transcribed under my direct supervision; and that this transcript constitutes a true transcription of my notes of said proceedings.

I FURTHER CERTIFY that I am not a relative, employee, attorney or counsel of any of the parties, nor am I a relative or employee of any of the parties' attorney or counsel connected with the action, nor am I financially interested in the action.

DATED THIS 29th day of April, 2009.

JANE FAUROT, RPR
Official FPSC Hearings Reporter
(850) 413-6732