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April 7, 2009

LARRY CRETUL  
Speaker of the  
House of Representatives



RECEIVED-FPSC  
09 APR -7 PM 3:22  
COMMISSION  
CLERK

Ms. Ann Cole  
Commission Clerk and Administrative Services  
Room 100, Easley Building  
Florida Public Service Commission  
2540 Shumard Oak Blvd.  
Tallahassee, FL 32399-0850

Re: Docket No. 070703-EI

Dear Ms. Cole:

Enclosed for filing, on behalf of the Citizens of the State of Florida, are the original and 15 copies of the Amended Direct Testimony of David J. Putman.

Please indicate the time and date of receipt on the enclosed duplicate of this letter and return it to our office.

Sincerely,

Joseph A. McGlothlin  
Associate Public Counsel

COM 5  
ECR 2  
GCL 2  
OPC  
RCP  
SSC  
SGA 1  
ADM  
CLK CF Reporter

Enclosures

JAM:bsr

DOCUMENT NUMBER-DATE  
03064 APR-7 8  
FPSC-COMMISSION CLERK

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

In Re: Review of coal costs for Progress )  
Energy Florida's Crystal River Units 4 )  
And 5 for 2006 and 2007 )  
\_\_\_\_\_ )

Docket No. 070703-EI

Filed: April 7, 2009

**AMENDED DIRECT TESTIMONY**

**OF**

**DAVID J. PUTMAN**

**ON BEHALF OF THE CITIZENS OF THE STATE OF FLORIDA**

DOCUMENT NUMBER-DATE

03064 APR-7 8

FPSC-COMMISSION CLERK

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**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.

DOCUMENT NUMBER-DATE  
03064 APR -7 8  
FPSC-COMMISSION CLERK

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

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

21

22 **Q. HOW HAVE YOU GONE ABOUT THE REVISED CALCULATION?**

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

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

4  
5 I would point out that an assumption that the additional Btus would be comprised  
6 entirely of bituminous coal would have the effect of reducing the portion  
7 consisting of sub-bituminous coal below the 20% level that the Commission said  
8 should form the basis of a refund calculation in the narrative portion of its order  
9 (just as an assumption that the differential in Btus would be made up of entirely of  
10 sub-bituminous coal would increase the portion above 20%). An alternative,  
11 which I believe would be most consistent with the Commission's intent, would be  
12 to assume the difference in Btus would be made up of the same blend of 20% sub-  
13 bituminous and 80% bituminous coal. I have made that calculation as well. The  
14 results of both calculations appear separately on my Revised Exhibit \_\_\_\_\_  
15 (DJP- 7), attached.

16  
17 **Q. WHAT ARE THE IMPACTS OF THESE CALCULATIONS ON THE**  
18 **AMOUNT OF COAL COST-RELATED OVERCHARGES THAT YOU**  
19 **RECOMMENDED IN YOUR EARLIER TESTIMONY?**

20 A. If the adjustment proceeds from the assumption that the differential in Btus  
21 consists entirely of the more expensive bituminous coal that was actually  
22 delivered in 2006 and 2007, then the revised differentials in coal costs for 2006  
23 and 2007, respectively, are \$14,705,117 and \$13,039,488, or a total of  
24 \$27,744,605. If instead the differential in Btus is assumed to be made up of a

1 20/80 blend, then the revised differentials in coal costs for 2006 and 2007,  
2 respectively, are \$15,436,386 and \$13,647,445 and the total for the two years is  
3 \$29,083,830.

4  
5 **Q. PLEASE CONTINUE.**

6 A. The modification affects the calculation of the impact of the alternative coal on  
7 the cost of SO2 emissions allowances, as well. I have revised Exhibit \_\_\_(DJP-  
8 11) to show the impacts under the “all bituminous” and “20/80 blend”  
9 approaches to the Btu differential. In each scenario, the additional cost of SO2  
10 emissions allowances is somewhat lower than the values shown in my original  
11 testimony. For the “all bituminous” Btu differential case, the excess cost of SO2  
12 emissions allowances for 2006 and 2007 are \$1,178,424 and \$5,048,555,  
13 respectively, or a total of \$6,226,980 for the two year period. If one assumes the  
14 Btu differential is supplied with a 20/80 blend, the values for 2006 and 2007 are  
15 \$1,154,166 and \$5,337,520, or a total of \$6,491,686.

16  
17 **Q. PLEASE SUMMARIZE THE IMPACTS OF YOUR AMENDED**  
18 **CALCULATIONS ON THE OVERALL REFUND TO CUSTOMERS**  
19 **THAT YOU RECOMMEND.**

20 A. The impacts are summarized on my Revised Exhibit \_\_ (DJP-13), attached.  
21 Using the “all bituminous” approach to supplying the Btu differential, the total  
22 refund, excluding interest, is \$33,971,584. Under the assumption that the Btu  
23 differential would be supplied with a 20/80 blend of the alternative sub-

1 bituminous coal and bituminous coal, the corresponding value would be  
2 \$35,575,517.

3

4 **Q. DOES THAT COMPLETE YOUR AMENDED TESTIMONY?**

5 **A. Yes.**

**DOCKET NO. 070703-EI**  
**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a copy of the foregoing has been furnished by U.S. Mail to the following parties on this 7th day of April, 2009.

Keino Young, Esquire  
Lisa Bennett, Esquire  
Division of Legal Services  
Florida Public Service Commission  
2540 Shumard Oak Blvd.  
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Tallahassee, FL 32399-1050

  
Joseph A. McGlothlin



**Cost of Tons Actually Purchased and Delivered to Crystal River That Could Have Been Replaced by a Lower Cost Coal.  
 Comparison of actual delivered cost vs. evaluated cost of coal not purchased  
 BTU's ARE BALANCED WITH PURCHASE OF ADDITIONAL BITUMINOUS COAL**

Line  
 1 2006 Water Tons delivered to Crystal River # 4 & # 5 = 2,689,454 X 20 % = **537,890** Tons available to be blended prior to shipment to the Plant.  
 2 2007 Water Tons delivered to Crystal River # 4 & # 5 = 2,626,932 X 20 % = **525,386** Tons available to be blended prior to shipment to the Plant.  
 3  
 4

**YEAR 2006**

**Cost of Coal Actually Purchased and Delivered To Crystal River**

YEAR	Highest Cost Supplies Actually Delivered	Tons	Btu/lbs	MMBtu's	Costs Delivered at IMT			Other Costs \$/MMBtu	Gulf Barge Transport \$/MMBtu	Delivered Cost for Purchased Coal \$/MMBtu	Delivered Cost at Crystal River Purchased Coal \$
					Cash \$/ton	Cash \$/MMBtu	Delivered \$				
2006	1st Highest Cost	186,430	12,402	4,624,210	\$73.28	\$2.95	\$13,661,590.40				
2006	2nd highest Cost	221,017	12,399	5,480,780	\$72.74	\$2.93	\$16,076,776.58				
	<b>TOTALS</b>	<b>407,447</b>	<b>12,400</b>	<b>10,104,989</b>		<b>\$2.94</b>	<b>\$29,738,366.98</b>	<b>\$0.06</b>	<b>\$0.30</b>	<b>\$3.30</b>	<b>33,376,163</b>

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

YEAR	Replacement Sub-Bituminous	Tons	Btu/lbs	MMBtu's	Cash \$/ton	Cash \$/MMBtu	Cash Cost	Evaluated Cost/ton	Evaluated \$/MMBtu	Evaluated Cost At Crystal River Un Purchased Coal
2006	Kennecott-Cahokia	37,890	9,963	754,996	\$39.81	\$2.00	\$1,508,400.90	\$39.22	\$1.97	1,486,046
	<b>TOTALS</b>	<b>537,890</b>	<b>9,393</b>	<b>10,104,996</b>			<b>\$18,993,400.90</b>		<b>\$1.85</b>	<b>18,671,046</b>

**ADDITIONAL COST in 2006 DUE TO PURCHASE OF HIGHER PRICE COAL:**

**14,705,117**

**YEAR 2007**

**Cost of Coal Actually Purchased and Delivered To Crystal River**

YEAR	Highest Cost Supplies Actually Delivered	Tons	Btu/lbs	MMBtu's	Costs Delivered at IMT			Other Costs \$/MMBtu	Gulf Barge Transport \$/MMBtu	Delivered Cost for Purchased Coal \$/MMBtu	Delivered Cost at Crystal River Purchased Coal \$
					Cash \$/ton	Cash \$/MMBtu	Delivered \$				
2007	1st Highest Cost	295,880	12,394	7,334,273	\$76.93	\$3.10	\$22,762,048.40				
2007	2nd highest Cost	80,010	12,420	1,987,448	\$76.61	\$3.08	\$6,129,566.10				
	<b>TOTALS</b>	<b>375,890</b>	<b>12,400</b>	<b>9,321,722</b>		<b>\$3.10</b>	<b>\$28,891,614.50</b>	<b>\$0.08</b>	<b>\$0.29</b>	<b>\$3.47</b>	<b>32,340,652</b>

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

YEAR	Replacement Sub-Bituminous	Tons	Btu/lbs	MMBtu's	Cash \$/ton	Cash \$/MMBtu	Cash Cost	Evaluated Cost/ton	Evaluated \$/MMBtu	Evaluated Cost At Crystal River Un-Purchased Coal
2007	PT Kideco Jaya Agung	375,386	8,700	6,531,716	\$56.02	\$3.22	\$21,029,123.72	\$40.58	\$2.47	15,233,164
	<b>TOTALS</b>	<b>525,386</b>	<b>8,871</b>	<b>9,321,716</b>			<b>\$27,782,123.72</b>		<b>\$2.07</b>	<b>19,301,164</b>

**ADDITIONAL COST in 2007 DUE TO PURCHASE OF HIGHER PRICE COAL: 13,039,488**

**ADDITIONAL COST in 2006 and 2007 DUE TO PURCHASE OF HIGHER PRICE COAL: 27,744,605**

49

**NOTES**

- Line
- 1 Actual tons delivered by water to Crystal River # 4 and # 5 in 2006: See response to OPC's Interrogatories # 4
  - 2 Actual tons delivered by water to Crystal River # 4 and # 5 in 2007: See response to OPC's Interrogatories # 4
  
  - 9 Highest cost supply source delivered to IMT in 2006 per FERC 423 data. See OPC's Request for Documents # 28
  - 10 Second highest cost supply source delivered to IMT in 2006 per FERC 423 data. See OPC's Request for Documents # 28
  - 11 2006 totals and averages. Includes "other Transportation Costs", (see OPC's Request for Documents # 28), and Cross Gulf Transportation Rates. (See OPC's Request for Documents # 25), Calculates Actual Delivered Cost at CR for 2006
  
  - 19 Lowest cost coal bid to PEF on April 2004 RFP. Costs are from the evaluation spread sheet developed by PEF coal group (See OPC's Request for Documents # 1). Bid is for coal to be delivered in 2006.
  - 20 Second lowest cost coal bid to PEF on April 2004 RFP. Costs are from the evaluation spread sheet developed by PEF coal group (See OPC's Request for Documents # 1). Bid is for coal to be delivered in 2006.
  - 21 Totals for 2006. Tons (537,890 tons) are equal to 20 % of the water tons delivered to Crystal River in 2006.  
 PEF had an open position for 650,000 tons for 2006 and a Price Reopener on a contract when they purchased coal from the April 2004 RFP for 2006.  
 Line calculates the Evaluated cost of un purchased coal had it been purchased and delivered.
  
  - 23 Line makes the comparison of Actually Delivered Coal to CR 4 and 5 with the Evaluated Cost of Un-Purchased coal in accordance with the "Cost Effectiveness Analysis" adopted by the commission in Order 07-0816-FOF-EI. (See page39)
  
  - 31 Highest cost supply source delivered to IMT in 2007 per FERC 423 data. See OPC's Request for Documents # 28
  - 32 Second highest cost supply source delivered to IMT in 2007 per FERC 423 data. See OPC's Request for Documents # 28
  - 33 2007 totals and averages. includes "other Transportation Costs" (see OPC's Request for Documents # 28) and Cross Gulf Transportation Rates (See OPC's Request for Documents # 25). Calculates Actual Delivered Cost at CR for 2006
  
  - 40 Lowest cost coal bid to PEF on February 2006 RFP. Costs are from the evaluation spread sheet developed by PEF coal group (See OPC's Request for Documents # 1 and # 2). Bid is for coal to be delivered in 2007.
  - 41 Second lowest cost coal bid to PEF on February 2006 RFP. Costs are from the evaluation spread sheet developed by PEF coal group (See OPC's Request for Documents # 1 and # 2). Bid is for coal to be delivered in 2007.
  - 42 Totals for 2007. Tons (525,386 tons) are equal to 20 % of the water tons delivered to Crystal River in 2007  
 Line calculates the Evaluated Cost of un purchased coal had it been purchased and delivered.
  - 45 Line makes the comparison of Actually Delivered Coal to CR 4 and 5 in 2007 with the Evaluated Cost of Un-Purchased coal in accordance with the "Cost Effectiveness Analysis" adopted by the commission in Order 07-0816-FOF-EI. (See page39)
  - 47 The difference in total dollar cost between coal actually bought and delivered to Crystal River in 2006 and 2007 and the total evaluated cost of the same tons of sub-bituminous coal that were bid to PEF, but not purchased.

Blend	12,400	0.8	9,393	0.2	11,799
	12,400	0.8	8,871	0.2	11,694

**Cost of Tons Actually Purchased and Delivered to Crystal River That Could Have Been Replaced by a Lower Cost Coal.  
 Comparison of actual delivered cost vs. evaluated cost of coal not purchased  
 BTU'S ARE BALANCED WITH AN ADDITIONAL PURCHASE OF A 20 % SUB-BITUMINOUS / 80% BITUMINOUS BLEND**

Line

1 2006 Water Tons delivered to Crystal River # 4 & # 5 = 2,689,454 X 20 % = **537,890** Tons available to be blended prior to shipment to the Plant.  
 2 2007 Water Tons delivered to Crystal River # 4 & # 5 = 2,626,932 X 20 % = **525,386** Tons available to be blended prior to shipment to the Plant.  
 3  
 4

**YEAR 2006**

**Cost of Coal Actually Purchased and Delivered To Crystal River**

YEAR	Highest Cost Supplies Actually Delivered	Tons	Btu/lbs	MMBtu's	Costs Delivered at IMT			Other Costs \$/MMBtu	Gulf Barge Transport \$/MMBtu	Delivered Cost for Purchased Coal \$/MMBtu	Delivered Cost at Crystal River Purchased Coal \$
					Cash \$/ton	Cash \$/MMBtu	Delivered \$				
2006	1st Highest Cost	186,430	12,402	4,624,210	\$73.28	\$2.95	\$13,661,590				
2006	2nd highest Cost	132,490	12,399	3,285,487	\$72.74	\$2.93	\$9,637,323				
	Additional Purchase	110,782	12,399	2,747,172	\$72.74	\$2.93	\$8,058,283				
	<b>TOTALS</b>	<b>429,702</b>	<b>12,400</b>	<b>10,656,869</b>		<b>\$2.94</b>	<b>\$31,357,196</b>	<b>\$0.06</b>	<b>\$0.30</b>	<b>\$3.30</b>	<b>\$35,193,668</b>

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

YEAR	Replacement Sub-Bituminous	Tons	Btu/lbs	MMBtu's	Cash			Evaluated Cost/ton	Evaluated \$/MMBtu	Evaluated Cost At Crystal River Un Purchased Coal
					\$/ton	\$/MMBtu	Cash Cost			
2006	Kennecott-Cahokia	500,000	9,350	9,350,000	\$34.97	\$1.87	\$17,485,000	\$34.37	\$1.84	\$17,185,000
2006	Kennecott-Cahokia	37,890	9,963	754,996	\$39.81	\$2.00	\$1,508,401	\$39.22	\$1.97	\$1,486,046
	Additional Purchase	27,696	9,963	551,870	\$39.81	\$2.00	\$1,102,578	\$39.22	\$1.97	\$1,086,237
	<b>TOTALS</b>	<b>565,586</b>	<b>9,421</b>	<b>10,656,867</b>			<b>\$20,095,979</b>		<b>\$1.85</b>	<b>\$19,757,283</b>

**ADDITIONAL COST in 2006 DUE TO PURCHASE OF HIGHER PRICE COAL:**

**\$15,436,386**

**YEAR 2007**

**Cost of Coal Actually Purchased and Delivered To Crystal River**

YEAR	Highest Cost Supplies Actually Delivered	Tons	Btu/lbs	MMBtu's	Costs Delivered at IMT			Other Costs \$/MMBtu	Gulf Barge Transport \$/MMBtu	Delivered Cost for Purchased Coal \$/MMBtu	Delivered Cost at Crystal River Purchased Coal \$
					Cash \$/ton	Cash \$/MMBtu	Delivered \$				
2007	1st Highest Cost	271,086	12,394	6,719,680	\$76.93	\$3.10	\$20,854,646				
2007	2nd highest Cost	-	12,420	0	\$76.61	\$3.08	\$0				
	Additional Purchase	126,992	12,420	3,154,481	\$76.61	\$3.08	\$9,728,857				
	<b>TOTALS</b>	<b>398,078</b>	<b>12,402</b>	<b>9,874,161</b>		<b>\$3.10</b>	<b>30,583,503</b>	<b>\$0.08</b>	<b>\$0.29</b>	<b>\$3.47</b>	<b>\$34,236,943</b>

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

YEAR	Replacement Sub-Bituminous	Tons	Btu/lbs	MMBtu's	Cash \$/ton	Cash \$/MMBtu	Cash Cost	Evaluated Cost/ton	Evaluated \$/MMBtu	Evaluated Cost At Crystal River Un-Purchased Coal
2007	PT Kideco Jaya Agung	375,386	8,700	6,531,716	\$56.02	\$3.22	\$21,029,124	\$40.58	\$2.47	\$15,233,164
	Additional Purchase	31,748	8,700	552,415	\$56.02	\$3.22	\$1,778,523	\$40.58	\$2.47	\$1,288,334
	<b>TOTALS</b>	<b>557,134</b>	<b>8,862</b>	<b>9,874,132</b>			<b>\$29,560,647</b>		<b>\$2.09</b>	<b>\$20,589,498</b>

**ADDITIONAL COST in 2007 DUE TO PURCHASE OF HIGHER PRICE COAL: \$13,647,445**

**ADDITIONAL COST in 2006 and 2007 DUE TO PURCHASE OF HIGHER PRICE COAL: \$29,083,830**

**NOTES**

- Line
- 1 Actual tons delivered by water to Crystal River # 4 and # 5 in 2006: See response to OPC's Interrogatories # 4
  - 2 Actual tons delivered by water to Crystal River # 4 and # 5 in 2007: See response to OPC's Interrogatories # 4
  
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 PEF had an open position for 650,000 tons for 2006 and a Price Reopener on a contract when they purchased coal from the April 2004 RFP for 2006.  
 Line calculates the Evaluated cost of un purchased coal had it been purchased and delivered.
  
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  - 42 Lowest cost coal bid to PEF on February 2006 RFP. Costs are from the evaluation spread sheet developed by PEF coal group (See OPC's Request for Documents # 1 and # 2). Bid is for coal to be delivered in 2007.
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  - 44 Additional purchases of Sub-Bituminous coal to be part of a blend to Balance Btu's of Bituminous coal replaced with lower cost Sub-bituminous coal
  - 45 Totals for 2007. Tons (525,386 tons) are equal to 20 % of the water tons delivered to Crystal River in 2007  
 Line calculates the Evaluated Cost of un purchased coal had it been purchased and delivered.
  - 48 Line makes the comparison of Actually Delivered Coal to CR 4 and 5 in 2007 with the Evaluated Cost of Un-Purchased coal in accordance with the "Cost Effectiveness Analysis" adopted by the commission in Order 07-0816-FOF-EI. (See page39)
  - 50 The difference in total dollar cost between coal actually bought and delivered to Crystal River in 2006 and 2007 and the total evaluated cost of the same tons of sub-bituminous coal that were bid to PEF, but not purchased.

Blend	12,400	0.8	9,393	0.2	11,799
	12,400	0.8	8,871	0.2	11,694

**Excess 2006-2007 Costs Related to SO2 allowances at CR 4 and CR5**  
**BTU's ARE BALANCED WITH PURCHASE OF ADDITIONAL BITUMINOUS COAL**

**YEAR 2006**

Highest Cost Supplies			Total			Allowance Cost	Total Allowance
Actually Delivered	Tons	Btu/Lb	MMBtu	Lbs SO2/MMBtu	Tons SO2	\$/Ton SO2	Cost in \$
1st Highest Cost	186,430	12,402	4,624,210	1.04	2,404.59	\$977.00	\$2,349,284
2nd highest Cost	221,017	12,399	5,480,780	1.09	2,987.02	\$977.00	\$2,918,323
TOTALS	407,447	12,400	10,104,989		5,391.61		\$5,267,607

Year

2006

**Bids with lowest**

2006

**Evaluated Cost**

Not Purchased			Total			Allowance Cost	Total Allowance
	Tons	Btu/Lb	MMBtu	Lbs SO2/MMBtu	Tons SO2	\$/Ton SO2	Cost in \$
Kennecott-Cahokia	500,000	9,350	9,350,000	0.80	3,740.00	\$977.00	\$3,653,980
Kennecott-Cahokia	37,890	9,963	754,996	1.18	445.45	\$977.00	\$435,202
TOTALS	537,890	9,393	10,104,996		4,185.45		\$4,089,182

**Excess 2006 Costs Related to SO2 allowances at CR 4 and CR5**

**\$1,178,424**

2006

2006

**YEAR 2007**

Highest Cost Supplies			Total			Allowance Cost	Total Allowance
Actually Delivered	Tons	Btu/Lb	MMBtu	Lbs SO2/MMBtu	Tons SO2	\$/Ton SO2	Cost in \$
1st Highest Cost	295,880	12,394	7,334,273	1.13	4,143.86	\$1,091.00	\$4,520,956
2nd highest cost	80,010	12,420	1,987,448	1.12	1,112.97	\$1,091.00	\$1,214,251
TOTALS	375,890	12,400	9,321,722		5,256.84		\$5,735,208

Year

2007

**Bids with lowest**

**Evaluated Cost**

Not Purchased			Total			Allowance Cost	Total Allowance
	Tons	Btu/Lb	MMBtu	Lbs SO2/MMBtu	Tons SO2	\$/Ton SO2	Cost in \$
PT Adaro-Indonesia	150,000	9,300	2,790,000	0.10	139.50	\$1,091.00	\$152,195
PT Kideco Jaya Agur	375,386	8,700	6,531,716	0.15	489.88	\$1,091.00	\$534,458
TOTALS	525,386	8,871	9,321,716		629.38		\$686,652

**Excess 2007 Costs Related to SO2 allowances at CR 4 and CR5**

**\$5,048,555**

2007

2007

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

**\$6,226,980**

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

**BTU'S ARE BALANCED WITH AN ADDITIONAL PURCHASE OF A 20 % SUB-BITUMINOUS / 80% BITUMINOUS BLEND**

**YEAR 2006**

Highest Cost Supplies		Total				Allowance Cost	Total Allowance	
Actually Delivered		Tons	Btu/Lb	MMBtu	Lbs SO2/MMBtu	Tons SO2	\$/Ton SO2	Cost in \$
Year	1st Highest Cost	186,430	12,402	4,624,210	1.04	2,404.59	\$977.00	\$2,349,284
2006	2nd highest Cost	132,490	12,399	3,285,487	1.09	1,790.59	\$977.00	\$1,749,407
2006	Additional Purchase	110,782	12,399	2,747,172	1.09	1,497.21	\$977.00	\$1,462,773
	<b>TOTALS</b>	<b>429,702</b>	<b>12,400</b>	<b>10,656,869</b>		<b>5,692.39</b>		<b>\$5,561,463</b>

Bids with lowest		Total				Allowance Cost	Total Allowance	
Evaluated Cost		Tons	Btu/Lb	MMBtu	Lbs SO2/MMBtu	Tons SO2	\$/Ton SO2	Cost in \$
Not Purchased								
	Kennecott-Cahokia	500,000	9,350	9,350,000	0.80	3,740.00	\$977.00	\$3,653,980
2006	Kennecott-Cahokia	37,890	9,963	754,996	1.18	445.45	\$977.00	\$435,202
2006	Additional Purchase	27,696	9,963	551,870	1.18	325.60	\$977.00	\$318,115
	<b>TOTALS</b>	<b>565,586</b>	<b>9,421</b>	<b>10,656,867</b>		<b>4,511.05</b>		<b>\$4,407,297</b>

**Excess 2006 Costs Related to SO2 allowances at CR 4 and CR5**

**\$1,154,166**

**YEAR 2007**

Highest Cost Supplies		Total				Allowance Cost	Total Allowance	
Actually Delivered		Tons	Btu/Lb	MMBtu	Lbs SO2/MMBtu	Tons SO2	\$/Ton SO2	Cost in \$
Year	1st Highest Cost	271,086	12,394	6,719,680	1.13	3,796.62	\$1,091.00	\$4,142,111
2007	2nd highest cost	-	12,420	0	1.12	0.00	\$1,091.00	\$0
2007	Additional Purchase	126,992	12,420	3,154,481	1.12	1,766.51	\$1,091.00	\$1,927,262
	<b>TOTALS</b>	<b>398,078</b>	<b>12,402</b>	<b>9,874,161</b>		<b>5,563.13</b>		<b>\$6,069,373</b>

Bids with lowest		Total				Allowance Cost	Total Allowance	
Evaluated Cost		Tons	Btu/Lb	MMBtu	Lbs SO2/MMBtu	Tons SO2	\$/Ton SO2	Cost in \$
Not Purchased								
	PT Adaro-Indonesia	150,000	9,300	2,790,000	0.10	139.50	\$1,091.00	\$152,195
2007	PT Kideco Jaya Agung	375,386	8,700	6,531,716	0.15	489.88	\$1,091.00	\$534,458
2007	Additional Purchase	31,748	8,700	552,415	0.15	41.43	\$1,091.00	\$45,201
	<b>TOTALS</b>	<b>557,134</b>	<b>8,862</b>	<b>9,874,132</b>		<b>670.81</b>		<b>\$731,854</b>

**Excess 2007 Costs Related to SO2 allowances at CR 4 and CR5**

**\$5,337,520**

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

**\$6,491,686**



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

**BTU'S ARE BALANCED WITH PURCHASE OF ADDITIONAL BITUMINOUS COAL**

	Excess Coal Costs	Excess SO2 Costs	Total Refund Request
2006	\$14,705,117.00	\$1,178,424.00	\$15,883,541.00
2007	\$13,039,488.00	\$5,048,555.00	\$18,088,043.00
Total	\$27,744,605.00	\$6,226,979.00	\$33,971,584.00

**BTU'S ARE BALANCED WITH AN ADDITIONAL PURCHASE OF A 20 % SUB-BITUMINOUS / 80% BITUMINOUS BLEND**

	Excess Coal Costs	Excess SO2 Costs	Total Refund Request
2006	\$15,436,386.00	\$1,154,166.00	\$16,590,552.00
2007	\$13,647,445.00	\$5,337,520.00	\$18,984,965.00
Total	\$29,083,831.00	\$6,491,686.00	\$35,575,517.00