American Electric Power 101A Enterprise Drive PO Box 5190 Frankfort, KY 40602-5190 www.aep.com



JAN 2 0 2003

PUBLIC SERVICE COMMISSION

Thomas M. Dorman, Executive Director Attn.: Isaac S. Scott Public Service Commission P. O. Box 615 211 Sower Boulevard Frankfort, KY 40602

January 20, 2004

Re: Monthly Environmental Surcharge Report

Dear Mr. Dorman:

Pursuant to KRS 278.183(3), American Electric Power files herewith an original and five copies of its Environmental Surcharge Report for the month of December 2003. The report is in compliance with the Commission's Order dated March 31, 2003 in Case No. 2002-00169. The report shows the calculation and supporting documentation of American Electric Power's Environmental Surcharge Factor that will be billed with service on and after January 30, 2004.

Sincerely,

Errol K. Wagner

Director Regulatory Services

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CALCULATION OF E(m) and SURCHARGE FACTOR For the Expense Month of December 2003

	CALCULATION OF E(m)					
	E(m) = CRR - BRR					
LINE	1	CRR from ES FORM 3.00	\$1,914,798			
LINE	2	Brr from ES FORM 2.00	\$15,785			
LINE	3	E(m) (LINE 1 - LINE 2)	\$1,899,013			
LINE	4	Kentucky Retail Jurisdictional Allocation Factor, from ES FORM 3.30, Schedule of Revenues, LINE 1	72.6%			
LINE	5	KY Retail E(m) (LINE 3 * LINE 4)	\$1,378,683			
LINE	6	Over/(Under) Recovery Adjustment from ES FORM 3.30	(\$435,244)			
LINE	7	Net KY Retail E(m) (LINE 5 + LINE 6)	\$943,439			
	,	SURCHARGE FACTOR				
LINE	8	Net KY Retail E(m) (Line 7)	\$943,439			
LINE	9	KY Retail R(m) from ES FORM 3.30	\$27,832,680			
LINE	10	Environmental Surchage Factor for Expense Month (Line 8 / LINE 9)	3.3897%			

Effective Date for Billing:	February 2004
Submitted By :	Enof & Wagner
Title:	Director Regulatory Services
Date Submitted:	January 20, 2004

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT BASE PERIOD REVENUE REQUIREMENT For the Expense Month of December 1990

CALCULATION OF BASE PERIOD REVENUE REQUIREMENT

LINE NO.	COMPONENTS	
1	First Component - Associated with Big Sandy ((RB KP(B)) (ROR KP(B))/12)) ES FORM 2.10, Line 11	\$15,625
2	Second Component - Associated with Rockport [((RB IM(B)) (ROR IM(B))/12)) + OE IM (B)] (.15) ES FORM 2.11, Line 12	<u>\$160</u>
3	Total Base Period Revenue Requirement, BRR Record on ES FORM 1.00, Line 2	\$15,785

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT BASE PERIOD REVENUE REQUIREMENT COSTS ASSOCIATED WITH BIG SANDY

For the Month of December 1990

LINE NO.	COST COMPONENT		
	Return on Rate Base (Balances as of December 31, 1990) :		
1 2 3 4 5 6 7 8 9 10 11	Utility Plant at Original Cost Less Accumulated Depreciation Less Acum. Def. Income Taxes Total Rate Base Weighted Average Cost of Capital - ES FORM 2.20 Monthly Weighted Avg. Cost of Capital (5)/12 December 1990 Return on Rate Base (4) * (6)	\$3,920,119 (\$2,995,865) (\$475,467) 12.8200%	\$448,787 1.0683% \$4,794 \$10,597 \$234 \$10,831 \$15,625

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT COSTS ASSOCIATED WITH ROCKPORT

For the Month of December 1990

LINE NO.	COST COMPONENT		
1 .	Return on Rate Base : Utility Plant at Oringinal Cost	\$107,550	
3	Less Accumulated Depreciation Less Accum. Def. Income Taxes	(\$22,554) (\$13,834)	
4 5	Total Rate Base Weighted Average Cost of Capital - ES FORM 2.21	12.6216%	\$71,162
6 7	Monthly Weighted Avg. Cost of Capital (LINE 5/12) Monthly Return of Rate Base (4 * 6)		1.0518% \$748
8	Operating Expenses : Monthly Depreciation Expense		\$313
9	Monthly Indiana Air Emissions Fee Total Operating Expenses (8 + 9)		<u>\$7</u>
11	Total Revenue Requirement, Cost Associated with		<u>\$320</u>
12	Rockport (7) + (10) Kentucky Power Portion of Rockport Total		\$1,068
	Revenue Requirement. Record on ES FORM 2.00, Line 2 (11 * 15%)		\$160

The Base Period Revenue Requirement information will only need to be filed once during the first 2-year period, as part of the first monthly surcharge filing. Attach a schedule similar to Exhibit EKW-2, page 11 of 11 (Wagner Direct Testimony in Case No. 96-489), showing the calculation of the Weighted Average Cost of Capital. These calculations should reflect the provisions of the Rockport Unit Power Agreement, and be as of December 1990.

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT BIG SANDY PLANT COST OF CAPITAL For the Expense Month of December 1990

LINE NO.	Component	Balances	Cap. Structures	Cost Rates		WACC (NET OF TAX)	GRCF	:	WACC (PRE - TAX)
1 2 3 4	L/T DEBT S/T DEBT C EQUITY TOTAL	240,670,885 17,796,815 190,611,826 449,079,526	53.59% 3.96% 42.45% 100.00%	8.20% 9.16% 11.50%		4.39% 0.36% 4.88% 9.63%	1.6545	2/	4.39% 0.36% 8.07% 12.82 %
WACC = Weighted Average Cost of Capital 1/ Rate of Return on Common Equity per Case No. 2002 - 00169 2/ Gross Revenue Conversion Factor (GRCF) Calculation:							11.50%		
1 OPERATING REVENUE 2 UNCOLLECTIBLE 3 INCOME BEFORE STATE TAXES 4 LESS: STATE INCOME TAX 5 (LINE 3 X .0825) 6 INCOME BEFORE FED INC TAX						100.00 0.20 99.80 8.23 91.57			
7 LESS: FEDERAL INCOME TAX 8 (LINE 6 X .34) 9 OPERATING INC PERCENTAGE 10 GROSS REVENUE CONVERSION 11 FACTOR (100%/LINE 9)							31.13 60.44 1.6545		

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT ROCKPORT UNIT POWER AGREEMENT COST OF CAPITAL For the Expense Month of December 1990

LINE NO.	DESC	CAP. BAL.	WEIGHTED CAP. BAL.	CAP. COST RATES		WAC (NET OF TAX)	GRCF		WAC (PRE - TAX)
1 2 3 4 5	L/T DEBT S/T DEBT S/T INV DEBT C EQUITY	162,770,349 0 (26,356,261) 94,919,467 	70.3618% 0.0000% -11.3932% 41.0314% 100.0000% ========	7.7961% 0.0000% 7.7961% 12.1600%		5.4855% 0.0000% -0.8882% 4.9894%	1.608260	2/	4.5973% 8.0243% 12.6216%
1/ 2/ 1 2 3 4 5 6 7 8 9	2/ Gross Revenue Conversion Factor (GRCF) Calculation: 1 OPERATING REVENUE 2 LESS: INDIANA AJUSTED GROSS INCOME 3 (LINE 1 X .0434) 4 INCOME BEFORE FED INC TAX 5 LESS: FEDERAL INCOME TAX 6 (LINE 4 X .35) 7 OPERATING INCOME PERCENTAGE 8 GROSS REVENUE CONVERSION					12.16% 100.00 4.340 95.660 33.481 62.179 1.608260	-		

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT For the Expense Month of December 2003

CALCULATION OF CURRENT PERIOD REVENUE REQUIREMENT

LINE NO.	COMPONENTS		
1	First Component: Associated with Big Sandy Plant ((RB KP(C)) (ROR KP(C)/12)) + OE KP(C) ES FORM 3.10, Line 20		\$2,693,855
2	Second Component: Associated with Rockport Plant [((RB IM(C)) (ROR IM(C)/12)) + OE IM(C) ES FORM 3.20, Line 12		\$3,782
	Third Component: Net Proceeds from Emission Allowances Sales AS 1) SO2 - EPA Auction Proceeds received during Expense Month	\$0	
	2) SO2 - Net Gain or (Loss) from Allowance Sales, in compliance with the AEP Interim Allowance Agreement, received during Expense Month	\$782,839	
	Total Net Proceeds from SO2 Allowances	\$782,839	
	NOx - EPA Auction Proceeds received during Expense Month	\$0	
	2) NOx - EPA Auction Proceeds, received during Expense Month	\$0	
	NOx - Net Gain or Loss from NOx Allowances Sales, received during Expense Month	\$0	
	Total Net Proceeds from NOx Allowances	\$0	
3	Total Net Gain or (Loss) from Emission Allowance Sales	***************************************	\$782,839
4	Total Current Period Revenue Requirement, CRR Record on ES FORM 1.00.		\$1,914,798

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SÜRCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT COSTS ASSOCIATED WITH BIG SANDY

For the Expense Month of December 2003

LINE	COST COMPONENT		
NO.	COST COMPONENT		
	Return on Rate Base :		
1 1	Utility Plant at Original Cost	\$187,009,776	
2	Less Accumulated Depreciation	(\$9,006,209)	
3	Less Accum. Def. Income Taxes	(\$20,895,882)	
4	Net Utility Plant	李家斯等的复数	\$157,107,685
5	SO2 Emission Allowance Inventory from ES FORM 3.11		\$10,936,953
6	ECR & NOx Emission Allowance Inventory from ES FORM 3.12		\$0
7	Cash Working Capital Allowance from ES FORM 3.13, Line11		\$80,387
8	Total Rate Base		\$168,125,025
9	Weighted Average Cost of Capital - ES FORM 3.15	10.20%	
10	Monthly Weighted Avg. Cost of Capital (7)/12		0.85%
11	Monthly Return of Rate Base (6) * (8)		\$1,429,063
	Operating Expenses:		
12	Monthly Depreciation Expense	法是共和国条件	\$564,501
13	Monthly Catalyst Amortization Expense		\$46,030
14	Monthly Property Taxes		\$11,166
15	Monthly Kentucky Air Emissions Fee		\$24,486
16	Monthly Gavin Scrubber Cost from ES FORM 3.14		\$177,920
17	Monthly 2003 Plan Non-Fuel O&M Expenses from ES FORM 3.13		. \$0
18	Monthly SO2 Emission Allowance Consumption		\$440,689
19	Monthly ERC & NOx Emission Allowance Consumption		<u>\$0</u>
20	Total Operating Expenses [Line 12 thru Line 18]		\$1,264,792
21	Total Revenue Requirement - Big Sandy		
1 1	Record on ES FORM 3.00, Line 1		\$2,693,855
		是否使想到多 对形	

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT SO2 EMISSIONS ALLOWANCE INVENTORY

For the Expense Month of December 2003

	(1)	(2)	(3)	(4)	(5)		
	Allowance Activity in	Cumulative	Dollar Value of		Weighted		
	Month.	Balance	Activity	Dollar Balance	Average Cost		
BEGINNING INVENTORY		754,608		\$4,685,726	6.209		
Additions -		20.20					
EPA Allowances	0	88,625	\$0	\$0			
Gavin Reallocation	0	3,853		\$0			
P & E Transfers In	0	312,630	\$0	\$3,639,150	11.640		
Intercompany Purchases		12,132		\$1,615,719	133.178		
Other (List)	8,128	531,985	- \$464,279	\$56,872,873	106.907		
Withdrawals -							
P & E Transfers Out	0	2,415	\$0	\$272,099	112.670		
Intercompany Sales	9,629	51,893	\$740,946	\$4,941,374	95.222		
Off - System Sales SO2 Emissions Allowances	0 -	274,812	\$0	\$28,638,456	104.211		
Consumed By Kentucky Power ENDING INVENTORY - Record	5,727	230,679	\$440,689	\$22,024,586	95.477		
Balance in Column (4) on ES FORM		•					
3.10, Line 5		1,144,034		\$10,936,953	9.560		
Expense Month Member Load Ratio for	or AEP/Kentucky	Power			0.07217		

Columns 1 and 2 -

Record the number of allowances in any transaction (purchase, sale, transfer) which occurred during the Expense Month. Multiple transactions for a given category are to be shown as the total activity for that category during the Expense Month. For each transaction shown in Column 1, update the cumulative balance in Column 2.

Columns 3 and 4 -

For each transaction reflected in Column 1, record the total dollars of the transaction. Multiple transaction for a given category are to be shown as the total dollar amount for that category during the Expense Month. For each transaction shown in Column 3, update the cumulative dollar balance in Column 4. Include transactions that total zero dollars. Record amounts in whole dollars.

Column 5 -

Compute the Weighted Average Cost by dividing the Cumulative Dollar Balance (Co. 4) by the corresponding Cumulative Balance (Col. 2). Perform this calculation for the Beginning Inventory, Ending Inventory and all additions and withdrawals made during the Expense Month. The Weighted Average Cost should be carried out to 3 decimal places.

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT ECR and NOx EMISSIONS ALLOWANCE INVENTORY

For the Expense Month of December 2003

	(1) Allowance Activity in Month	(2) Cumulative Balance	(3) Dollar Value of Activity	(4) Cumulative Dollar Balance	(5) Weighted
·	IVIOTILIT	Dalance	Activity	Dollar Balance	Average Cost
BEGINNING INVENTORY Additions -		0		\$0	0.000
EPA Allowances	0	0	\$0	\$0	
P&E Transfers in	0	0		\$0	
Intercompany Purchases	0	0	\$0	\$0	0.000
		i i			
Other (List)	0	0	\$0	\$0	0.000
Withdrawals -	1				
P & E Transfers Out	0	0	\$0	\$0	0.000
Intercompany Sales	0	0	\$0	\$0	0.000
Off - System Sales	. 0	0	\$0	\$0	0.000
ECR Consumed By Kentucky Power	0	0	\$0	\$0	0.000
NOx Consumed By Kentucky Power	0	0	\$0	\$0	0.000
ENDING INVENTORY - Record Balance in Column (4) on ES FORM 3.10, Line 5		0		\$0	0.000

Columns 1 and 2 -

Record the number of allowances in any transaction (purchase, sale, transfer) which occurred during the Expense Month. Multiple transactions for a given category are to be shown as the total activity for that category during the Expense Month. For each transaction shown in Column 1, update the cumulative balance in Column 2.

Columns 3 and 4 -

For each transaction reflected in Column 1, record the total dollars of the transaction. Multiple transaction for a given category are to be shown as the total dollar amount for that category during the Expense Month. For each transaction shown in Column 3, update the cumulative dollar balance in Column 4. Include transactions that total zero dollars. Record amounts in whole dollars.

Column 5 -

Compute the Weighted Average Cost by dividing the Cumulative Dollar Balance (Co. 4) by the corresponding Cumulative Balance (Col. 2). Perform this calculation for the Beginning Inventory, Ending Inventory and all additions and withdrawals made during the Expense Month. The Weighted Average Cost should be carried out to 3 decimal places.

Note: For any sale or transfer of ERCs or NOx emission allowances, attach to this report documentation showing the currently available market prices for similar ERC or NOx allowances.

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT CASH WORKING CAPITAL ALLOWANCE

For the Expense Month of December 2003

LINE NO.	O&M Expenses		
1 2 3 4	1 997 Plan : Monthly Kentucky Air Emissions Fee Monthly Gavin Scrubber Costs Monthly SO2 Allowance Consumption Total 1997 Plan O&M Expenses	\$24,486 \$177,920 <u>\$440,689</u>	\$643,095
5 6 7 8 9	2003 Plan: Monthly Varible Cladding at Big Sandy Unit 1 Monthly Urea Consumption at Big Sandy Unit 2 Monthly Catalyst Replacement at Big Sandy Unit 2 Monthly ERC & NOx Allowance Consumption Total 2003 Plan O&M Expenses	\$0 \$0 \$0 <u>\$0</u>	<u>\$0</u>
10	Total Monthly O&M Expenses		<u>\$643,095</u>
11	Cash Working Capital Allowance (Line 10 X 1/8)		\$80,387

Total Cost at Line 11 is to be recorded on ES FORM 3.10, Line 7.

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT GAVIN SCRUBBER COSTS

For the Expense Month of December 2003

LINE NO.	COST	AMOUNTS
	Operations :	
1	Disposal (5010000)	\$444,685
2	Lime (5020000)	\$2,773,245
3	Lease (5070000)	\$2,773,245 \$4,917,759
4	Total Operations (1) + (2) + (3)	\$8,135,689
	Maintenance:	φο, 155,069
5	Scrubbers (5120000)	\$195,193
6	1/2 of Maintenance (5) * 50%	\$97,597
7	Fixed O&M (4) + (6)	\$8,233,286
1	Impact on Weighted Average Capacity Rate :	φ0,200,200
8	Ohio Power Steam Capacity (kw)	8,472,000
9	Gavin Scrubber Rate (\$/kw) (7) / (8)	\$0.97
10	Ohio Power Surplus Weighing	82.00%
11	Portion of Weighted Average Capacity Rate	02,0070
Į I	Attributed to Gavin Scrubber (\$/kw) (9) * (10)	\$0.80
	Gavin Costs to Kentucky Power:	40.00
12	Gavin Scrubber Portion (\$/kw) (11)	\$0.80
13	Kentucky Power Capacity Deficit (kw)	<u>222,400</u>
14	Scrubber Cost to Kentucky Power (12) * (13)	\$177,920

Total Cost at Line 14 is to be recorded on ES FORM 3.10, Line 15.

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT BIG SANDY PLANT COST OF CAPITAL

For the Expense Month of December 2003

LINE			Cap.	Cost		WACC			WACC
NO.	Component	Balances	Structure	Rates		(Net of Tax)	GRCF		(PRE-TAX)
		As of 12/31/2002							
		12:0:12002			Н				
1	L/T DEBT	\$466,631,680	57.24%	5.752%		3.29%			3.29%
2	S/T DEBT	\$23,386,094	2.87%	2.062%		0.06%			0.06%
3	ACCTS REC FINANCING	\$27,214,021	3.34%	2.804%		0.09%			0.09%
4	C EQUITY	\$298,018,017	36.56%	11.000%		4.02%	1.6801	2/	6.76%
5	TOTAL	\$815,249,812	100.00%			7.46%			10.200/
	TOTAL	\$613,249,612	100.00 %			7.40%	Į.		10.20%
		l	· · · · · · · · · · · · · · · · · · ·						
									[
	WACC = Weighted Average Cost of Capital								
1/	Rate of Return on Common Equity per Case No. 2002 - 00169								[
2/	Gross Revenue Conversion Factor (GRCF) Calculation:								
1	OPERATING REVENUE								ł
2	UNCOLLECTIBLE						100.00 <u>0.20</u>		ľ
3 4	INCOME BEFORE STATE TAXES						99.80		1
5	LESS : STATE INCOME TAX (LINE 3 X .0825)						<u>8.23</u>		
6	INCOME BEFORE FED INC TAX						91.57		ĺ
7 8	LESS: FEDERAL INC TAX								İ
9	(LINE 6 X .35) OPERATING INC PERCENTAGE						32.05 59.52		
10	GROSS REVENUE CONVERSION						20.02]
11	FACTOR (100%/LINE 9)								
ш				- · · · · · · · · · · · · · · · · · · ·					

The WACC (PRE - TAX) value on Line 6 is to be recorded on ES FORM 3.10, Line 9.

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT COSTS ASSOCIATED WITH ROCKPORT

For the Expense Month of December 2003

LINE NO.	COST COMPONENT		
	Return on Rate Base :		
1	Utility Plant at Oringinal Cost	\$1,380,823	
2	Less Accumulated Depreciation	(\$416,350)	
3	Less Accum. Def. Income Taxes	(\$102,508)	
4	Total Rate Base	THE REPORT OF THE PARTY OF THE	\$861,965
5	Weighted Average Cost of Capital - ES FORM 3.21	12.3110%	
6	Monthly Weighted Avg. Cost of Capital (LINE 5/12)		1.0259%
7	Monthly Return of Rate Base (4 * 6)		\$8,843
<u> </u>	Operating Expenses:		
8	Monthly Depreciation Expense		\$3,872
9	Monthly Indiana Air Emissions Fee		<u>\$12.500</u>
10	Total Operating Expenses (8 + 9)		<u>\$16,372</u>
			1
11	Total Revenue Requirement, Cost Associated with		ľ
()	Rockport (7) + (10)		\$25,215
12	Kentucky Power Portion of Rockport Total		
l I	Revenue Requirement. Record on ES FORM 3.00, Line 2		
	(11 * 15%)		\$3,782

With each monthly filing, attach a schedule similar to Exhibit EKW-2, page 11 of 11 (Wagner Direct Testimony in Case No. 96-489), showing the calculation of the Weighted Average Cost of Capital. These calculations should reflect the provisions of the Rockport Unit Power Agreement, and be as of the Current Expense Month.

AMERICAN ELECTRIC POWER - ENVIRONMENTAL SURCHARGE REPORT CURRENT PERIOD REVENUE REQUIREMENT ROCKPORT UNIT POWER AGREEMENT COST OF CAPITAL

For the Expense Month of December 2003

LINE NO.	Component	Balances	Cap. Structures	Cost Rates		WACC (NET OF TAX)	GRCF		WACC (PRE - TAX)
		As of 12/31/2003							
1 2 3 4 5	L/T DEBT S/T DEBT S/T INV DEBT C EQUITY TOTAL	44,810,136 2,022,903 0 44,797,348 	48.9031% 2.2076% 0.0000% 48.8893% 	4.6619% 1.6130% 4.5302% 12.1600%		2.2798% 0.0356% 0.0000% 5.9449% 	1.681379	2/	2.2798% 0.0356% 0.0000% 9.9956%
1/	WACC = Weighted Average Cost of Capital Cost Rates per the Provisions of the Rockport Unit Power Agreement								
2/	Gross Revenue Conversion Factor (GRCF) Calculation:							,	
1 2	OPERATING REVENUE LESS: INDIANA ADJUSTED GROSS INCOME						100.00		
3 4	(LINE 1 X .085) INCOME BEFORE FED INC TAX						<u>8.500</u> 91.500		
5 6 7 8	LESS: FEDERAL INCOME TÂX (LINE 4 X .35) OPERATING INCOME PERCENTAGE GROSS REVENUE CONVERSION						<u>32.025</u> 59.475		
9	FACTOR (100% / LINE 7)						<u>1.681379</u>		

The WACC (PRE - TAX) value on Line 6 is to be recorded on ES FORM 3.20, Line 5.