AMERICAN ELECTRIC POWER

American Electric Power
1 Riverside Plaza
Columbus, OH 43215-2373
aep.com

September 22, 2005

Commonwealth of Kentucky
Public Service Commission
211 Sower Boulevard
P.O. Box 615
Frankfort, KY 40602-0615

Please find enclosed August 2005 Financial Report pages for Kentucky Power Company consisting of the following:

Page Nos.	Description
1	Income Statement
2	Balance Sheet – Assets & Other Debits
3	Balance Sheet – Liabilities & Other Credits
4	Statement of Retained Earnings
5	Deferred Credits
6-7	Details of Operating Revenues
8	Operating Expenses – Functional Expenses
9-10	Detail Statement of Taxes
11-12	Electric Property & Accum Prov for Depr & Amrtz

Sincerely,

Julie Pierson
Administrator - Regulated Accounting

JP/lck

Enclosure
Cc: Errol Wagner (w/pages)
Kathy Potts

Kentucky Pov. ompany
Comparative Income Statement
August 31, 2005

GLR1100S

DESCRIPTION	ONE MONTH ENDED August 31, 2005	THREE MONTHS ENDED August 31, 2005	YEAR TO DATE August 31, 2005	TWELVE MONTHS ENDED August 31, 2005
OPERATING REVENUES				
SALES TO NON AFFILIATES	45,088,936.47	124,992,056.41	313,055,001.92	447,355,953.07
SALES TO AFFILIATES	4,504,002.36	14,667,699.07	35,141,988.54	48,727,377.21
GROSS OPERATING REVENUES	49,592,938.83	139,659,755.48	348,196,990.46	496,083,330.27
PROVISION FOR RATE REFUND	0.00	0.00	0.00	0.00
TOTAL OPERATING REVENUES, NET	49,592,938.83	139,659,755.48	348,196,990.46	496,083,330.27
OPERATING EXPENSES				
OPERATIONS				
FUEL	14,416,310.22	38,026,974.05	87,738,956.05	123,146,386.81
PURCHASED POWER NON AFFIL	2,674,155.40	3,936,711.44	7,172,281.02	9,568,797.84
PURCHASE POWER AFFILIATED	15,254,087.41	45,997,790.73	116,228,266.36	167,786,292.59
OTHER OPERATION	5,108,013.89	15,611,128.10	39,792,051.21	58,349,056.04
MAINTENANCE	2,100,433.84	6,936,258.35	18,066,278.11	29,084,715.78
TOTAL OPER/MAINT EXPENSES	39,553,000.76	110,508,862.67	268,997,832.74	387,935,249.07
DEPRECIATION AND AMORTIZATION	3,774,794.16	11,287,510.10	29,912,116.67	44,664,207.43
TAXES OTHER THAN INCOME TAXES	831,476.55	2,320,285.56	6,208,093.38	9,159,983.98
STATE, LOCAL & FOREIGN INCOME TAXES	501,724.00	375,032.00	1,067,604.00	(516,098.00)
FEDERAL INCOME TAXES	706,843.27	2,241,628.22	5,915,684.34	5,517,241.67
TOTAL OPERATING EXPENSES	45,367,838.74	126,733,318.55	312,101,331.13	446,760,584.14
NET OPERATING INCOME	4,225,100.10	12,926,436.93	36,095,659.33	49,322,746.13
OTHER INCOME AND DEDUCTIONS				
OTHER INCOME	614,625.25	228,951.36	1,040,597.96	1,356,105.30
OTHER INCOME DEDUCTIONS	(154,146.26)	116,478.13	162,929.10	(108,031.75)
INC TAXES APPL TO OTH INC&DED	(144,276.56)	(89,592.59)	(330,794.06)	(181,598.83)
NET OTHR INCOME AND DEDUCTIONS	316,202.43	255,836.90	872,733.00	1,066,474.72
INCOME BEFORE INTEREST CHARGES	4,541,302.53	13,182,273.83	36,968,392.33	50,389,220.86
INTEREST CHARGES				
INTEREST ON LONG-TERM DEBT	2,197,483.14	6,558,041.80	17,753,803.72	26,675,717.10
INT SHORT TERM DEBT - AFFIL	6,783.50	35,429.72	2,752.19	(45,466.68)
INT SHORT TERM DEBT - NON-AFFL	7,495.32	79,041.05	227,933.17	379,947.18
AMORT OF DEBT DISC, PREM & EXP	92,675.10	277,188.09	772,070.14	1,141,654.26
AMORT LOSS ON REACQUIRED DEBT	5,615.77	16,847.34	41,926.11	64,386.91
AMORT GAIN ON REACQUIRED DEBT	0.00	0.00	0.00	0.00
OTHER INTEREST EXPENSE	71,553.39	221,301.58	594,572.41	850,098.63
TOTAL INTEREST CHARGES	2,381,606.22	7,187,849.58	19,393,057.75	29,066,337.41
AFUDC BORROWED FUNDS - CR	(33,831.63)	(98,272.85)	(224,293.36)	(310,855.65)
NET INTEREST CHARGES	2,347,774.59	7,089,576.73	19,168,764.39	28,755,481.76
NET EXTRAORDINARY ITEMS	0.00	0.00	0.00	0.00
NET INCOME BEFORE PREF DIV	2,193,527.93	6,092,697.10	17,799,627.95	21,633,739.10
PREF STK DIVIDEND REQUIREMENT	0.00	0.00	0.00	0.00
NET INCOME - EARN FOR CMMN STK	2,193,527.93	6,092,697.10	17,799,627.95	21,633,739.10

Kentucky Power Company
Balance Sheet - Assets
August 31, 2005

GLR1500S

DESCRIPTION	MONTH END BALANCES August 31, 2005	DECEMBER BALANCES December 31, 2004
ELECTRIC UTILITY PLANT		
PRODUCTION	467,653,094.73	462,640,781.30
TRANSMISSION	388,391,392.60	385,666,627.94
DISTRIBUTION	450,716,492.15	438,766,381.36
GENERAL	59,710,601.42	57,929,260.63
CONSTRUCTION WORK IN PROGRESS	20,580,849.59	16,544,431.89
TOTAL ELECTRIC UTILITY PLANT	**1,387,052,430.48**	**1,361,547,483.12**
LESS ACCUM PRV-DEPR,DEPL,AMORT	(449,390,246.43)	(426,686,943.86)
NET ELECTRIC UTILITY PLANT	**937,662,184.05**	**934,860,539.26**
OTHER PROPERTY AND INVESTMENT		
L/T ENERGY TRADING CONTRACTS	40,082,509.41	19,067,031.56
NET NONUTILITY PROPERTY	5,433,384.46	5,438,331.05
INVEST IN SUBSIDIARY & ASSOC	0.00	0.00
TOTAL OTHER INVESTMENTS	350,367.42	421,723.58
TOTAL OTHER SPECIAL FUNDS	0.00	0.00
TOTAL OTHER PROP AND INVSTMNTS	**45,866,261.29**	**24,927,086.19**
CURRENT AND ACCRUED ASSETS		
CASH AND CASH EQUIVALENTS	294,829.44	132,300.72
ADVANCES TO AFFILIATES	13,325,305.77	16,126,733.17
ACCOUNTS RECEIVABLE-CUSTOMERS	14,556,294.37	16,388,055.58
ACCOUNTS RECEIVABLE - MISC	9,310,570.39	5,836,437.53
A/P FOR UNCOLLECTIBLE ACCOUNTS	0.00	(33,658.81)
ACCOUNTS RECEIVABLE- ASSOC COS	23,637,441.41	23,045,902.11
FUEL STOCK	9,680,007.76	6,550,571.42
MATERIALS & SUPPLIES	7,601,575.04	9,385,328.76
ACCRUED UTILITY REVENUES	9,186,082.24	7,340,252.26
ENERGY TRADING CONT CURR ASSET	36,730,240.33	19,845,328.64
PREPAYMENTS	1,400,076.21	819,381.37
OTHER CURRENT ASSETS	13,481,289.32	4,003,080.40
TOTAL CURRENT ASSETS	**139,203,712.27**	**109,439,713.14**
REGULATORY ASSETS		
TOTAL REGULATORY ASSETS	**132,578,172.71**	**124,993,760.27**
DEFERRED CHARGES		
TOTAL DEFERRED CHARGES	**60,508,429.12**	**66,892,429.67**
TOTAL ASSETS	**1,315,818,759.43**	**1,261,113,528.53**

Kentucky Power Company
Balance Sheet - Capitalization and Liabilities
August 31, 2005

GLR1700S

DESCRIPTION	MONTH END BALANCES August 31, 2005	DECEMBER BALANCES December 31, 2004
CAPITALIZATION		
COMMON STOCK		
Authorized: 2,000,000 Shares		
Outstanding: 1,009,000 Shares		
COMMON STOCK	50,450,000.00	50,450,000.00
PREMIUM ON CAPITAL STOCK	0.00	0.00
PAID-IN CAPITAL	196,818,749.28	199,975,030.34
RETAINED EARNINGS	88,354,907.90	70,555,279.95
COMMON SHAREHOLDERS' EQUITY	**335,623,657.18**	**320,980,310.29**
CUMULATIVE PREFERRED STOCK		
LT DEBT (LESS AMT DUE IN 1 YR)		
LONG-TERM DEBT LESS AMT DUE 1 YR	447,731,829.88	508,310,302.15
TOTAL CAPITALIZATION	**783,355,487.06**	**829,290,612.44**
OTHER NONCURRENT LIABILITIES		
OBLIGATIONS UNDER CAP LEASE	2,221,842.85	2,801,940.69
ACCUM PROVISIONS-RATE REFUND	0.00	0.00
ACCUMULATED PROVISIONS - MISC	12,734,028.19	17,729,189.84
TOTAL OTH NONCURRENT LIAB'S	**14,955,871.04**	**20,531,130.53**
CURRENT LIABILITIES		
PREFERRED STOCK DUE W/IN 1 YR	0.00	0.00
LONG-TERM DEBT DUE WITHIN 1 YR	40,000,000.00	0.00
SHORT-TERM DEBT	0.00	0.00
ADVANCES FROM AFFILIATES	0.00	0.00
A/P - GENERAL	30,568,335.71	20,080,482.71
A/P- ASSOC. COS.	28,810,542.43	24,899,024.46
CUSTOMER DEPOSITS	19,346,076.38	12,308,487.42
TAXES ACCRUED	11,189,448.28	9,248,178.82
INTEREST ACCRUED	7,540,555.06	6,754,332.86
DIVIDENDS DECLARED	0.00	0.00
OBLIG UNDER CAP LEASES- CURR	1,303,417.17	1,560,983.37
ENERGY TRADING CONT CURR LIAB	37,642,086.83	17,205,428.19
OTHR CURR & ACCRUED LIAB	8,226,881.34	9,036,484.73
TOTAL CURRENT LIABILITIES	**184,627,343.21**	**101,093,402.56**
DEF CREDITS & REGULATORY LIAB		
DEFERRED INCOME TAXES	264,091,968.74	267,046,884.78
DEF INVESTMENT TAX CREDITS	5,942,718.36	6,721,725.00
REGULATORY LIABILITIES	29,743,275.19	22,209,994.15
DEFERRED CREDITS		
LT ENERGY TRADING CONTRACTS	32,627,129.14	13,484,349.55
CUSTOMER ADVANCES FOR CONSTR	55,101.94	59,971.16
DEF GAINS ON SALE/LEASEBACK	0.00	0.00
DEF GAINS-DISP OF UTILITY PLT	0.00	0.00
OTHER DEFERRED CREDITS	419,864.76	675,456.35
TOTAL OTHER DEFERRED CREDITS	33,102,095.84	14,219,779.06
TOTAL DEF CREDITS & REG LIAB'S	**332,880,058.13**	**310,198,382.99**
TOTAL CAPITAL & LIABILITIES	**1,315,818,759.43**	**1,261,113,528.53**

Kentucky Power Company
Statement of Retained Earnings
August 31, 2005

GLR1710S

ACCOUNT NUMBER	DESCRIPTION	MONTH END BALANCES August 31, 2005	DECEMBER BALANCES December 31, 2004
	BALANCE AT BEGINNING OF YEAR	**70,555,279.95**	**64,150,582.93**
	NET INCOME (LOSS)	17,799,627.95	25,904,691.56
	TOTAL	**88,354,907.90**	**90,055,274.49**
	DEDUCTIONS:		
4380001	Div Declrd - Common Stk - Asso	0.00	(19,499,994.54)
	DIVIDEND DECLARED ON COMMON	**0.00**	**(19,499,994.54)**
	DIVIDEND DECLARED ON PREFERRED	**0.00**	**0.00**
	ADJUSTMENT RETAINED EARNINGS	**0.00**	**0.00**
	TOTAL DEDUCTIONS	**0.00**	**(19,499,994.54)**
	BALANCE AT END OF PERIOD (A)	**88,354,907.90**	**70,555,279.95**
	(A) REPRESENTS THE FOLLOWING - BALANCE AT END OF PERIOD		
2150000	Appropriated Retained Earnings	0.00	0.00
2151000	Appr Retnd Erngs - Amrt Rsv, Fed	0.00	0.00
	TOTAL APPR RETND ERNGS	**0.00**	**0.00**
2160001	Unapprp Retained Earnings Unrestr	70,555,279.95	64,150,582.93
2160002	Unapprp Retained Earnings Restr	0.00	0.00
	Net Income Transferred	17,799,627.95	6,404,697.02
	TOTAL UNAPPR RETND ERNGS	**88,354,907.90**	**70,555,279.95**
216.1	Unapprp Undistrbutd Sub Erngs	0.00	0.00
	Equity Ernqs of Subsidiary Co	0.00	0.00
	TOTAL UNAPPR UNDISTR SUB ERNGS	**0.00**	**0.00**
	TOTAL RETAINED EARNINGS	**88,354,907.90**	**70,555,279.95**

GLR1860S

ACCOUNT NUMBER	DESCRIPTION	MONTH END BALANCES August 31, 2005	DECEMBER BALANCES December 31, 2004
	ENERGY TRADING CONTRACTS		
2440002	LT Unreal Losses - Non Affil	30,339,962.63	12,348,284.56
2440004	LT Unreal Losses - Affil	1,882,267.00	777,254.00
2440010	L/T Option Premium Receipts	111,487.51	0.00
2450002	LT Unreal Losses - Hedge	0.00	358,810.99
2450011	L/T Liability-Commodity Hedges	137,522.00	0.00
2450017	Deriv-Hdg-Unreal Ls-FV-Int-L/T	155,890.00	0.00
	LT ENERGY TRADING CONTRACTS	**32,627,129.14**	**13,484,349.55**
	CUSTMR ADVANCES FOR CONSTRUCTN		
2520000	Customer Adv for Construction	55,101.94	59,971.16
	TOTAL CUST ADVANCES FOR CONSTR	**55,101.94**	**59,971.16**
	DEFRD GAIN ON SALE/LEASEBACK		
	TOTAL DEF GAIN ON SALE/LSEBCK	**0.00**	**0.00**
	DEFRD GAIN ON DISP OF UTIL PLT		
	TOTAL DEF GAINS-DISP UTIL PLT	**0.00**	**0.00**
	OTHER DEFERRED CREDITS		
2530000	Other Deferred Credits	0.00	0.00
2530001	*Deferred Revenues*	216,116.18	207,366.88
2530004	Allowances	0.00	598.08
2530021	Unidentified Cash Receipts	0.00	6,669.21
2530050	T.V. Pole Attachments	15,821.29	67,773.84
2530092	Defd Gain - Fiber Optic Leases	187,882.29	189,238.45
2530093	Def Carry Chg - Defd RTO Costs	0.00	203,811.89
2530101	MACSS Unidentified EDI Cash	45.00	0.00
	TOTAL OTHER DEFERRED CREDITS	**419,864.76**	**675,458.35**
	ACCUM DEFERRED INCOME TAXES		
2811001	Acc Dfd FIT - Accel Amort Prop	22,079,400.70	19,268,200.70
2821001	Accum Defd FIT - Utility Prop	110,190,343.33	110,357,019.84
2823001	Acc Dfrd FIT FAS 109 Flow Thru	51,738,340.74	50,919,107.73
2824001	Acc Dfrd FIT - SFAS 109 Excess	(1,732,352.00)	(1,929,320.00)
2830006	ADIT Federal - SFAS 133 Nonaff	21,063.00	1,326,444.72
2830015	ADIT-Fed-Hdg-CF-Int Rate	100,768.98	0.00
2831001	Accum Deferred FIT - Other	13,297,729.58	14,201,796.23
2832001	Accum Dfrd FIT - Oth Inc & Ded	2,278,568.82	2,152,005.45
2833001	Acc Dfd FIT FAS 109 Flow Thru	37,778,105.59	38,652,630.11
2833002	Acc Dfrd SIT FAS 109 Flow Thru	28,340,000.00	32,099,000.00
	TOTAL ACCUM DEF INC TAX-CREDIT	**264,091,968.74**	**267,046,884.78**
	ACCUM DEFRD INVEST TAX CREDITS		
2550001	Accum Deferred ITC - Federal	5,942,718.36	6,721,725.00
	TOTAL ACCUM DEF INVEST TAX CR	**5,942,718.36**	**6,721,725.00**
	REGULATRY LIAB'S	**29,743,275.19**	**22,209,994.15**
	TOTAL DEFRD CREDITS & REG LIAB	**332,880,058.13**	**310,198,382.99**

Kentucky Pow npany
Operating Revenues
August 31, 2005

GLR1110S

ACCOUNT NUMBER	DESCRIPTION	OPERATING REVENUES ONE MONTH ENDED August 31, 2005	THREE MONTHS ENDED August 31, 2005	YEAR TO DATE August 31, 2005	TWELVE MONTHS ENDED August 31, 2005
	SALES OF ELECTRICITY				
	RETAIL SALES				
4400001	Residential Sales-W/Space Htg	7,814,023.98	20,789,316.84	61,122,587.11	88,764,736.08
4400002	Residential Sales-W/O Space Ht	5,519,937.22	14,684,646.60	33,378,052.52	48,027,939.42
	Residential Sales	**13,333,961.20**	**35,473,963.44**	**94,500,639.63**	**136,792,675.50**
4420001	Commercial Sales	6,110,185.67	17,392,507.09	40,915,977.35	60,064,768.31
4420002	Industrial Sales (Excl Mines)	6,768,055.33	19,053,734.86	49,063,421.92	73,168,623.04
4420004	Ind Sales-NonAffil(Incl Mines)	4,197,188.04	12,042,989.94	32,330,762.28	48,431,318.11
4420006	Sales to Pub Auth - Schools	984,646.71	2,504,628.13	6,890,556.37	10,500,112.27
4420007	Sales to Pub Auth - Ex Schools	945,530.84	2,751,194.21	6,562,389.82	9,734,085.08
	COMMERCIAL & INDUSTRIAL SALES	**19,005,606.59**	**53,745,054.23**	**135,763,107.74**	**201,898,906.81**
	SALES - AFFILIATED	**0.00**	**0.00**	**0.00**	**0.00**
4440000	Public Street/Highway Lighting	81,200.64	237,304.89	647,634.43	997,299.74
	Public & Other Sales	**81,200.64**	**237,304.89**	**647,634.43**	**997,299.74**
	TOTAL RETAIL SALES	**32,420,768.43**	**89,456,322.56**	**230,911,381.80**	**339,688,882.05**
	SALES FOR RESALE				
4470002	Sales for Resale - NonAssoc	3,000,313.09	8,309,091.33	22,179,777.60	27,819,503.65
4470004	Sales for Resale-Nonaff-Ancill	2,395.68	7,433.48	19,948.01	93,135.58
4470005	Sales for Resale-Nonaff-Transm	67,120.51	205,382.76	552,943.24	1,523,262.89
4470006	Sales for Resale-Bookout Sales	40,161,654.60	99,693,363.85	266,389,059.69	389,908,161.65
4470007	Sales for Resale-Option Sales	192,229.36	558,575.20	2,452,092.47	4,485,094.50
4470010	Sales for Resale-Bookout Purch	(41,134,356.86)	(99,432,966.01)	(265,186,700.48)	(387,241,044.55)
4470011	Sales for Resale-Option Purch	(334,341.51)	(540,508.05)	(1,156,338.06)	(3,645,268.54)
4470026	Sale for Resl - Real from East	(2,032,466.00)	(3,564,026.00)	(4,443,570.00)	(4,443,570.00)
4470027	Whsal/Muni/Pb Ath Fuel Rev	175,967.57	470,634.15	1,108,076.69	1,582,552.51
4470028	Sale/Resale - NA - Fuel Rev	1,712,071.98	5,270,524.05	19,034,266.01	32,989,797.57
4470033	Whsal/Muni/Pub Auth Base Rev	165,443.24	481,964.42	1,216,448.76	1,774,265.21
4470064	Purch Pwr PhysTrad - Non Assoc	(539,985.75)	(1,526,748.19)	(7,472,316.99)	(11,901,191.47)
4470066	PWR Trding Trans Exp-NonAssoc	19,294.17	(74,294.83)	(171,926.02)	(247,600.02)
4470072	Sales for Resale - Hedge Trans	(706,384.00)	(1,426,755.00)	(1,810,132.00)	(2,720,822.00)
4470081	Financial Spark Gas - Realized	711,647.10	2,024,583.34	995,755.06	(1,538,656.80)
4470082	Financial Electric Realized	659,230.97	(292,451.13)	(32,088.18)	(32,410.12)
4470085	Purchased Power - Dow - Assoc	0.00	0.00	0.00	(84,365.14)
4470089	PJM Energy Sales Margin	2,385,956.44	5,092,372.42	7,217,451.54	7,485,336.89
4470090	PJM Spot Energy Purchases	(1,135,148.98)	(3,823,386.45)	(15,068,717.69)	(22,743,210.46)
4470091	PJM Explicit Congestion Cost	(92,730.33)	(145,791.10)	(149,305.63)	(283,585.86)
4470092	PJM Implicit Congestion-OSS	(169,991.82)	(431,017.21)	(949,181.42)	(1,273,044.86)
4470093	PJM Implicit Congestion-LSE	(1,643,684.64)	(4,738,486.52)	(7,303,870.19)	(8,621,568.55)
4470094	PJM Transm. Loss - OSS	2,568.67	(2,706.26)	(9,971.73)	(24,820.97)
4470095	PJM Ancillary Serv.-Reg	(93,865.84)	80,276.05	444,463.90	594,634.77
4470096	PJM Ancillary Serv.-Spin	16,636.11	19,695.24	19,909.23	21,195.84
4470098	PJM Oper.Reserve Rev-OSS	74,561.70	231,387.56	454,101.72	496,554.36
4470099	PJM Capacity Cr. Net Sales	0.00	0.00	155.02	1,084.11
4470100	PJM FTR Revenue-OSS	382,634.12	957,806.43	1,089,824.56	1,170,456.99
4470101	PJM FTR Revenue-LSE	2,985,665.64	8,091,253.00	10,162,870.36	10,882,345.98
4470103	PJM Energy Sales Cost	4,642,395.96	14,108,157.22	35,406,321.36	46,153,622.27
4470106	PJM Pt2Pt Trans.Purch-NonAff.	(12,848.45)	(16,220.79)	14,064.39	(413,260.63)
4470107	PJM NITS Purch-NonAff.	1,133.35	1,984.84	6,326.12	5,080.36
4470108	PJM Oper.Reserve Rev-LSE	(338,040.71)	(1,078,957.45)	(1,593,122.28)	(1,699,997.98)
4470109	PJM FTR Revenue-Spec	44,042.46	57,825.68	57,825.68	57,825.68
4470110	PJM TO Admin. Exp.-NonAff.	(8,531.24)	(13,783.76)	(40,682.20)	(51,211.46)
4470112	Non-ECR Phys. Sales-OSS	1,170,337.12	2,699,711.84	4,215,770.11	5,348,798.81
4470114	PJM Transm. Loss - LSE	17,677.47	(18,196.44)	(45,629.00)	(117,603.73)
4470115	PJM Meter Corrections-OSS	797.85	(8,220.95)	(20,157.58)	(17,136.27)
4470116	PJM Meter Corrections-LSE	5,433.60	(57,139.11)	(130,249.32)	(117,521.97)
4470117	Realiz. Sharing-447 Optim	581,885.00	751,063.00	2,374,841.00	2,374,841.00
4470118	Realiz. Sharing-PJM OSS	122,859.00	212,668.00	223,638.00	223,638.00

Kentucky Pow npany
Operating Revenues
August 31, 2005

GLR1110S

ACCOUNT NUMBER	DESCRIPTION	OPERATING REVENUES ONE MONTH ENDED August 31, 2005	THREE MONTHS ENDED August 31, 2005	YEAR TO DATE August 31, 2005	TWELVE MONTHS ENDED August 31, 2005
4470119	PJM SECA Transm. Expense	(59,522.76)	(361,033.52)	(1,190,761.52)	(1,190,761.52)
4470124	PJM Incremental Spot-OSS	6,874.14	(32,197.00)	(51,169.87)	(51,169.87)
4470125	PJM Incremental Exp Cong-OSS	106.09	(18,292.24)	(62,319.18)	(62,319.18)
4470126	PJM Incremental Imp Cong-OSS	(153,082.72)	(488,670.61)	(496,998.96)	(496,998.96)
4470131	Non ECR Purchased Power OSS	6,631.11	(1,903,220.71)	(2,758,500.64)	(2,758,500.64)
4470132	Spark Gas - Realized	(108,898.53)	(207,670.99)	394,050.35	394,050.35
	SALES FOR RESALE-NONAFFILIATED	10,751,743.84	29,123,215.52	65,886,070.96	83,607,607.43
4470001	Sales for Resale - Assoc Cos	375,454.25	903,284.67	1,538,833.27	1,861,132.44
4470014	Sls Resale-Ancillary Trans-Aff	0.00	0.00	0.00	2,353.43
4470015	Sls Resale-Transmission-Affil	0.00	0.00	0.00	25,567.10
4470035	Sls for Rsl - Fuel Rev - Assoc	333,229.57	839,732.86	2,074,935.34	3,276,561.12
4470086	Sales for Resale-Affil Pool	0.00	0.00	0.00	11,832,666.65
4470088	Pool Sales to Dow Plt- Affil	15,558.43	19,536.21	23,752.05	90,092.19
4470128	Sales for Res-Aff. Pool Energy	3,754,454.00	12,829,227.00	31,302,019.00	31,302,019.00
	SALES FOR RESALE-AFFILIATED CO	4,478,696.25	14,591,780.74	34,939,539.66	48,390,592.13
	TOTAL SALES FOR RESALE	15,230,440.19	43,714,996.26	100,825,610.62	131,998,199.55
	TOTAL SALES OF ELECTRICITY	47,651,208.62	133,171,316.82	331,736,992.42	471,687,081.60
	TOTAL SLS OF ELECT AFT RFD PROV	47,651,208.62	133,171,318.82	331,736,992.42	471,687,081.60
	OTHER OPERATING REVENUE				
4560007	Oth Elect Rev - DSM Program	43,539.20	150,025.32	(2,762,534.15)	(2,212,220.52)
4560012	Oth Elect Rev - Nonaffiliated	4,364.08	17,198.54	17,198.54	17,198.54
4560013	Oth Elect Rev-Trans-Nonaffil	(23,565.64)	11,848.35	28,816.35	932,289.63
4560014	Oth Elect Revenues - Ancillary	(4,822.53)	0.00	0.00	60,440.62
4560015	Other Electric Revenues - ABD	112,992.53	371,866.98	921,552.79	2,030,766.23
4560016	Financial Trading Rev-Unreal	0.00	0.00	0.00	0.01
4560027	Financial Trading Rev-Real	0.00	0.00	0.00	(133.77)
4560041	Miscellaneous Revenue-NonAffil	0.00	0.00	8,282.87	41,639.81
4560049	Merch Generation Finan -Realzd	67,909.90	(337,386.05)	1,104,114.40	282,779.05
4560050	Oth Elec Rev-Coal Trd Rlzd G-L	(3,107.73)	(10,713.17)	76,028.23	2,467,217.16
4560058	PJM NITS Revenue-NonAff.	242,372.21	759,783.53	1,927,011.96	2,932,654.66
4560060	PJM Pt2Pt Trans.Rev.-NonAff.	115,619.48	318,342.73	945,965.50	1,657,032.31
4560062	PJM TO Admin. Rev..-NonAff.	23,681.99	61,823.81	168,385.32	227,292.13
4560064	Buckeye Admin. Fee Revenue	11,065.89	32,388.52	81,594.82	108,546.30
4560067	OthElecRev Phys Coal Purch Exp	0.00	0.00	0.00	(2,391,294.24)
4560068	SECA Transmission Revenue	975,178.09	2,909,548.71	7,506,272.33	8,330,176.57
4560085	PJM Expansion Cost Recov	1,489.66	4,513.54	4,513.54	4,513.54
	OTHER ELECTRIC REVENUES	1,566,717.13	4,289,240.81	10,027,202.50	14,508,898.03
4540001	Rent From Elect Property - Af	25,306.11	75,918.33	202,448.88	336,785.08
4540002	Rent From Elect Property-NAC	194,393.32	656,493.98	1,750,393.43	2,618,710.19
4540004	Rent From Elect Prop-ABD-Nonaf	3,108.20	18,222.60	44,486.80	83,118.80
	RENT FROM ELEC PROPERTY	222,807.63	750,634.91	1,997,329.11	3,038,614.07
4500000	Forfeited Discounts	137,640.48	327,157.31	1,055,397.48	1,497,712.57
4510001	Misc Service Rev - Nonaffil	14,096.90	30,380.18	79,155.01	216,177.59
4510007	Service Rev-Indirect Cost-NAC	460.20	949.23	949.23	949.23
	MISC REVENUES	152,197.58	358,486.72	1,135,501.72	1,714,839.39
4118000	Gain Disposition of Allowances	7.87	1,090,074.22	3,308,965.87	5,142,906.89
4119000	Loss Disposition of Allowances	0.00	0.00	(9,001.15)	(9,009.70)
	GAIN (LOSS) DISPOS ALLOWANCES	7.87	1,090,074.22	3,299,964.72	5,133,897.19
	TOTAL OTHER OPERATING REVENUE	1,941,730.21	6,488,436.66	16,459,998.05	24,396,248.67
	GROSS OPERATING REVENUES	49,592,938.83	139,659,755.48	348,196,990.46	496,083,330.27
	NET OPERATING REVENUES	49,592,938.83	139,659,755.48	348,196,990.46	496,083,330.27

Kentucky Pow ompany
Operating Expenses - Functional
August 31, 2005

GLR1130S

DESCRIPTION	ONE MONTH ENDED August 31, 2005	THREE MONTHS ENDED August 31, 2005	YEAR TO DATE August 31, 2005	TWELVE MONTHS ENDED August 31, 2005
POWER PRODUCTION EXPENSES				
STEAM POWER GENERATION				
FUEL	14,416,310.22	38,026,974.05	87,738,956.05	123,146,386.81
Operation - Other Than Fuel	1,329,995.29	3,620,648.64	8,519,704.04	12,596,935.80
Steam Power Operation	15,746,305.51	41,647,622.69	96,258,660.09	135,743,322.61
Steam Power Maintenance	493,958.69	2,654,413.53	7,263,770.66	11,873,661.06
TOTAL STEAM POWER GENERATION	16,240,264.20	44,302,036.23	103,522,430.75	147,616,983.67
OTHER POWER GENERATION				
OTHER POWER - OPERATION	0.00	0.00	0.00	0.00
OTHER POWER - MAINTENANCE	55.63	645.79	645.79	645.79
TOTAL OTHER POWER GENERATION	55.63	645.79	645.79	645.79
OTHER POWER SUPPLY EXPENSES				
PURCHASED POWER	17,928,242.81	49,934,502.17	123,400,547.38	177,355,090.43
System Control & load Dispatch	278,628.14	855,755.70	2,462,437.58	3,350,079.99
Other Expenses	318,651.36	1,040,535.69	2,950,422.70	3,877,142.89
TOTAL OTHER POWER SUPPLY EXPS	18,525,522.31	51,830,793.56	128,813,407.66	184,582,313.31
TOTAL POWER PROD EXPS-OPER	34,271,827.82	93,478,416.25	225,072,067.75	320,325,635.92
TOTAL POWER PROD EXPS-MAINT	494,014.32	2,655,059.32	7,264,416.45	11,874,306.85
TOTAL POWER PROD EXPENSES	34,765,842.14	96,133,475.58	232,336,484.20	332,199,942.77
TRANSMISSION EXPENSES				
Transmission - Operation	(176,355.10)	(310,742.78)	(577,180.75)	(1,516,797.89)
Transmission - Maintenance	188,694.84	654,666.89	1,683,769.44	2,264,482.75
TOTAL TRANSMISSION EXPENSES	12,339.74	343,924.11	1,106,588.70	747,684.86
DISTRIBUTION EXPENSES				
DISTRIBUTION - OPERATION	753,661.46	1,965,674.13	4,693,974.92	6,586,646.12
DISTRIBUTION - MAINTENANCE	1,236,845.13	3,215,778.25	7,956,617.54	13,181,009.28
TOTAL DISTRIBUTION EXPENSES	1,990,506.58	5,181,452.38	12,650,592.46	19,777,655.40
TOTAL CUSTOMER ACCT EXPENSES	585,325.10	1,713,827.16	4,941,986.36	7,989,543.99
TOTAL CUST SERV&INFO EXPENSES	132,476.17	319,971.72	991,264.59	1,425,942.62
TOTAL SALES EXPENSES	1.47	161.57	619.69	4,369.26
ADMINISTRATIVE & GENERAL EXPS				
Admins & General - Operations	1,638,630.05	5,724,540.50	13,900,616.86	21,282,002.41
Admin & General - Maintenance	180,879.55	410,753.89	1,161,474.67	1,764,916.90
TOTAL ADMIN & GENERAL EXPS	1,819,509.60	6,135,294.38	15,062,091.53	23,046,919.31
TOTAL FACTORED ACCTS REC EXPS	247,105.46	681,072.27	1,909,049.22	2,744,416.02
TOTAL ACCRETION EXPENSE	0.00	0.00	0.00	0.00
(GAIN) LOSS				
GAINS FROM DISPOSAL OF UT PLT	(105.50)	(316.50)	(844.00)	(1,215.16)
LOSSES FROM DISP. OF UTIL PLT	0.00	0.00	0.00	0.00
TOTAL (GAIN) LOSS	(105.50)	(316.50)	(844.00)	(1,215.16)
TOTAL OPERATION EXPENSES	37,462,566.92	103,572,604.32	250,931,664.64	358,850,533.29
TOTAL MAINTENANCE EXPENSES	2,100,433.84	6,936,258.35	18,066,278.11	29,084,715.78
TOTAL OPERATION & MAINT EXPS	39,563,000.76	110,508,862.67	268,997,832.74	387,935,249.07

Kentucky Pow ompany
Taxes Applicable To Operating Income
August 31, 2005

GLR1170S

ACCOUNT NUMBER	DESCRIPTION	ONE MONTH ENDED August 31, 2005	THREE MONTHS ENDED August 31, 2005	YEAR TO DATE August 31, 2005	TWELVE MONTHS ENDED August 31, 2005
	OTHER TAXES-FEDERAL & STATE				
4081002	FICA	213,137.84	569,815.69	1,620,529.98	2,263,982.21
4081003	Federal Unemployment Tax	135.59	289.09	25,476.27	26,164.63
408100500	Real & Personal Property Taxes	0.00	0.00	0.00	0.00
408100501	Real & Personal Property Taxes	0.00	0.00	0.00	0.00
408100502	Real & Personal Property Taxes	0.00	0.00	(1,990.43)	(1,990.43)
408100503	Real & Personal Property Taxes	0.00	0.00	(74,764.62)	2,211,270.02
408100504	Real & Personal Property Taxes	586,293.00	1,758,879.00	4,690,934.11	4,691,819.07
4081007	State Unemployment Tax	98.53	195.70	20,159.79	20,536.46
408100802	State Franchise Taxes	0.00	0.00	0.00	0.00
408100803	State Franchise Taxes	0.00	0.00	0.00	13,933.00
408100804	State Franchise Taxes	0.00	0.00	0.00	41,680.00
408100805	State Franchise Taxes	8,314.00	30,264.00	69,264.00	69,264.00
408101704	St Lic/Rgstrtion Tax/Fees	0.00	0.00	0.00	100.00
408101705	St Lic/Rgstrtion Tax/Fees	409.04	914.04	964.04	964.04
408101803	St Publ Serv Comm Tax/Fees	0.00	0.00	0.00	0.00
408101804	St Publ Serv Comm Tax/Fees	0.00	42,029.86	252,204.86	420,344.86
408101805	St Publ Serv Comm Tax/Fees	89,182.00	89,182.00	89,182.00	89,182.00
408101904	State Sales and Use Taxes	0.00	0.00	157.40	209.52
408102902	Real/Pers Prop Tax-Cap Leases	0.00	0.00	0.00	0.00
408102903	Pers Prop Tax-Cap Leases	0.00	0.00	0.00	0.00
408102904	Real/Pers Prop Tax-Cap Leases	0.00	459.26	459.26	60,932.60
408102905	Real/Pers Prop Tax-Cap Leases	14,576.00	43,728.00	116,608.00	116,608.00
4081033	Fringe Benefit Loading - FICA	(79,544.74)	(213,013.01)	(595,654.08)	(857,709.32)
4081034	Fringe Benefit Loading - FUT	(1,178.06)	(3,080.69)	(7,824.87)	(12,447.69)
4081035	Fringe Benefit Loading - SUT	(862.65)	(2,125.38)	(4,940.32)	(6,413.27)
408103604	Real Prop Tax-Cap Leases	0.00	0.00	0.00	4,226.29
408103605	Real Prop Tax-Cap Leases	916.00	2,748.00	7,328.00	7,328.00
	TOTAL OTHER TAXES-FED & STATE	**831,476.55**	**2,320,285.56**	**6,208,093.38**	**9,159,983.98**
	STATE, LOCAL & FOREIGN INC TAX				
409100200	Income Taxes, UOI - State	0.00	0.00	42,337.00	42,337.00
409100201	Income Taxes, UOI - State	0.00	0.00	62,635.00	62,635.00
409100202	Income Taxes, UOI - State	0.00	0.00	46,320.00	46,320.00
409100203	Income Taxes, UOI - State	0.00	0.00	0.00	(1,202,807.00)
409100204	Income Taxes, UOI - State	0.00	0.00	0.00	(380,895.00)
409100205	Income Taxes, UOI - State	501,724.00	375,032.00	906,472.00	906,472.00
409100299	Income Taxes, UOI - State	0.00	0.00	9,840.00	9,840.00
	TOTAL ST, LOC & FOR INC TAXES	**501,724.00**	**375,032.00**	**1,067,604.00**	**(516,098.00)**
	FEDERAL INCOME TAXES				
4091001	Income Taxes, UOI - Federal	362,856.76	1,437,955.80	4,660,387.84	(2,963,617.53)
4101001	Prov Def I/T Util Op Inc-Fed	1,989,420.05	5,922,988.48	16,316,171.90	(3,115,434.80)
4111001	Prv Def I/T-Cr Util Op Inc-Fed	(1,548,057.71)	(4,827,188.57)	(14,281,868.76)	12,829,111.64
4114001	ITC Adj, Utility Oper - Fed	(97,375.83)	(292,127.49)	(779,006.64)	(1,232,817.64)
	TOTAL FEDERAL INCOME TAXES	**706,843.27**	**2,241,628.22**	**5,915,684.34**	**5,517,241.67**
	TOTAL TAXES APPLIC TO OPER INC	**2,040,043.82**	**4,936,945.78**	**13,191,381.72**	**14,161,127.65**

Kentucky Power Company
Taxes Applicable to Other Income & Deductions
August 31, 2005

GLR1210S

ACCOUNT NUMBER	DESCRIPTION	ONE MONTH ENDED August 31, 2005	THREE MONTHS ENDED August 31, 2005	YEAR TO DATE August 31, 2005	TWELVE MONTHS ENDED August 31, 2005
	TAXES OTHER THAN INC TAX				
408201404	St Lic/Rgstrtion Tax/Fees	0.00	0.00	0.00	0.00
408201405	St Lic/Rgstrtion Tax/Fees	100.00	100.00	100.00	100.00
	TOTAL TAXES OTHER THAN INC TAX	100.00	100.00	100.00	100.00
	FEDERAL INC TAXES - OI&D				
4092001	Inc Tax, Oth Inc&Ded-Federal	419,719.77	575,689.14	316,040.99	1,196,955.60
4102001	Prov Def I/T Oth I&D - Federal	144,748.10	486,324.30	1,713,774.97	(13,214,103.78)
4112001	Prv Def I/T-Cr Oth I&D-Fed	(420,191.31)	(972,420.85)	(1,699,021.90)	12,198,747.01
4115001	ITC Adj, Non-Util Oper - Fed	0.00	0.00	0.00	0.00
	TOTAL FEDERAL INC TAXES - OI&D	144,276.56	89,592.59	330,794.06	181,698.83
	STATE INC TAXES - OI&D				
	TOTAL STATE INC TAXES - OI&D	0.00	0.00	0.00	0.00
	LOCAL INC TAXES - OI&D				
	TOTAL LOCAL INC TAXES - OI&D	0.00	0.00	0.00	0.00
	FOREIGN INC TAXES - OI&D				
	TOTAL FOREIGN INC TAXES - OI&D	0.00	0.00	0.00	0.00
	TOTAL TAXES APPLICABLE TO OI&D	144,376.56	89,692.59	330,894.06	181,698.83

KENTUCKY POWER COMPANY
DETAIL OF ELECTRIC UTILITY PROPERTY
YEAR TO DATE - August, 2005

GLR7210V 09/13/05 09:50

		BEGINNING BALANCE	ADDITIONS	ORIGINAL COST RETIREMENTS	ADJUSTMENTS	TRANSFERS	ENDING BALANCE
UTILITY PLANT							
101/106	GENERATION	464,497,613.26	7,641,983.20	(1,207,805.34)	0.00	(186,729.00)	470,745,062.12
	TOTAL PRODUCTION	464,497,613.26	7,641,983.20	(1,207,805.34)	0.00	(186,729.00)	470,745,062.12
101/106	TRANSMISSION	384,291,767.19	3,570,108.95	(534,546.09)	0.00	287,945.00	387,615,275.05
101/106	DISTRIBUTION	478,148,970.30	16,689,986.14	(3,894,104.85)	0.00	(101,216.00)	490,843,635.59
	TOTAL (ACCOUNTS 101 & 106)	1,326,938,350.75	27,902,078.29	(5,636,456.28)	0.00	0.00	1,349,203,972.76
1011001	CAPITAL LEASES	11,201,881.49	0.00	0.00	(797,092.35)	0.00	10,404,789.13
102	ELECTRIC PLT PURCHASED OR SOLD	0.00	0.00	0.00	0.00	0.00	0.00
1140001	ELECTRIC PLANT ACQUISITION	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL ELECTRIC PLANT IN SERVICE	1,338,140,232.23	27,902,078.29	(5,636,456.28)	(797,092.35)	0.00	1,359,608,761.89
1050001	PLANT HELD FOR FUTURE USE	6,862,819.00	0.00	0.00	0.00	0.00	6,862,819.00
107000X	CONSTRUCTION WORK IN PROGRESS:						
107000X	BEG. BAL	16,544,431.89					
107000X	ADDITIONS		31,938,496.00				
107000X	TRANSFERS		(27,902,078.29)				
107000X	END. BAL		4,036,417.71				20,580,849.59
	TOTAL ELECTRIC UTILITY PLANT	1,361,547,483.12	31,938,496.00	(5,636,456.28)	(797,092.35)	0.00	1,387,052,430.48
NONUTILITY PLANT							
1210001	NONUTILITY PROPERTY-OWNED	996,378.00	0.00	0.00	0.00	0.00	996,378.00
1210002	NONUTILITY PROPERTY-LEASED	0.00	0.00	0.00	0.00	0.00	0.00
1240025-29	OTHER INVESTMENTS	4,594,574.41	0.00	(500.11)	0.00	0.00	4,594,074.30
	TOTAL NONUTILITY PLANT	5,590,952.41	0.00	(500.11)	0.00	0.00	5,590,452.30

Preparer - Psnvision Report GLR7210V
Reviewer - Rob Scheer, Property Accounting - Tulsa
Sources of Information:
PeopleSoft and PowerPlant Reports

KENTUCKY POWER COMPANY
ACCUMULATED PROVISION FOR DEPRECIATION, AMORTIZATION, & DEPLETION
YEAR TO DATE - August, 2005

GLR7410V 09/13/05 09:49

		BEGINNING BALANCE	PROVISION TO DATE	ORIGINAL COST	NET REM/ SALV COST	TRANSFER/ ADJUSTMENTS	ENDING BALANCE
UTILITY PLANT							
	NUCLEAR						
1080001/11	OTHER					0.00	
1080009/10	DECOMMISSIONING COSTS					0.00	
	TOTAL NUCLEAR					0.00	
1080001/11	PRODUCTION	167,944,173.79	11,352,105.99	(1,046,067.74)	(436,612.75)	(119,234.45)	177,694,364.84
1080001/11	TRANSMISSION	112,713,687.35	4,357,922.78	(502,696.04)	(170,086.67)	169,489.27	116,568,316.69
1080001/11	DISTRIBUTION	131,818,737.52	10,844,485.69	(3,718,800.01)	(625,234.16)	(50,254.82)	138,268,934.22
	RETIREMENT WORK IN PROGRESS	(987,013.27)	0.00	0.00	(1,056,350.93)	1,231,933.58	(811,430.62)
	TOTAL (108X accounts)	411,489,585.40	26,554,514.46	(5,267,563.79)	(2,288,284.51)	1,231,933.58	431,720,185.14
	NUCLEAR					0.00	
1110001	PRODUCTION	2,357,841.52	1,171,388.74	(161,737.60)	0.00	0.00	3,367,492.66
1110001	TRANSMISSION	351,520.85	175,818.88	(31,850.05)	0.00	0.00	495,489.68
1110001	DISTRIBUTION	5,649,038.66	1,453,816.01	(175,304.84)	0.00	0.00	6,927,549.83
	TOTAL (111X accounts)	8,358,401.03	2,801,023.63	(368,892.49)	0.00	0.00	10,790,532.17
1011006	CAPITAL LEASES	6,838,957.43	0.00	0.00	0.00	40,571.69	6,879,529.12
1150001	ACQUISITION ADJUSTMENT AMORT	0.00	0.00	0.00	0.00	0.00	0.00
	TOTAL ACCUM DEPR & AMORT.	426,686,943.86	29,355,538.09	(5,636,456.28)	(2,288,284.51)	1,272,505.27	449,390,246.43
NONUTILITY PLANT							
1220001	Depr&Amrt of Nonutl Prop-Ownd	154,928.27	4,446.48	0.00	0.00	0.00	159,374.75
1220003	Depr&Amrt of Nonutl Prop-WIP	(2,306.91)	0.00	0.00	0.00	0.00	(2,306.91)
1240027	Other Property - RWIP	0.00	0.00	0.00	(500.11)	500.11	0.00
1240028	Other Property - RETIRE	0.00	0.00	(500.11)	500.11	0.00	0.00
	TOTAL NONUTILITY PLANT	152,621.36	4,446.48	(500.11)	0.00	500.11	157,067.84

Preparer - Psnvision Report GLR7415V
Reviewer - Rob Scheer, Property Accounting - Tulsa
Sources of Information:
PeopleSoft and PowerPlant Reports

Kentucky Power Company

REQUEST

List all present or proposed research efforts dealing with the pricing of electricity and the current status of such efforts.

RESPONSE

In June 2004, a team of AEP employees began an internal review of current and potential new service and rate offerings. The team's goal was to identify, analyze and recommend innovative service offerings that would enhance customer satisfaction while not being detrimental to the Company's ongoing earnings. The team screened a number of innovative service offerings, some of which were selected for further analysis. Due to other pressing regulatory activity, the team's efforts have been refocused, and the review is currently on hold.

WITNESS: David M Roush

Kentucky Power Company

REQUEST

Provide a schedule reflecting the salaries and other compensation of each executive officer for the test year and 2 preceding calendar years. Include the percentage annual increase and the effective date of each increase, the job title, duty and responsibility of each officer, the number of employees who report to each executive officer, and to whom each executive officer reports. Also, for employees elected to executive officer status during the test year, provide the salaries, for the test year, for those persons whom they replaced.

RESPONSE

Attached is a schedule reflecting the salaries of each executive officer of KPCo for the test year and the two preceding calendar years. Included in the schedule are all of KPCo's officers, that are employees of AEPSC, with the title of Executive Vice President and above along with the President of KPCo. In addition attached is a separate schedule outlining other compensation for this same group.

Included in the test year is approximately 3.3 % of the salaries and other compensation for the executive officers of KPCo that are employees of AEP.

WITNESS: Timothy C Mosher

emplid	name	title/duty	reports to	Total AEP employees reporting to	12/31/2003 salary	12/31/2003 bonus	12/31/2003 increase date	12/31/2003 increase pct	12/31/200 salary	12/31/2004 bonus	12/31/2004 increase date	12/31/2004 increase pct	6/30/2005 salary	6/30/2005 bonus	6/30/2005 increase date	6/30/2005 increase pct	comments
9103341	English,Carl L	President AEP Utilities	Morris,Michael G	9056	N/A	N/A	N/A	N/A	500000	N/A	N/A	N/A	$500,000	$125,000	*	N/A	hired 2004
1312506	Hagan,Thomas M	EVP - AEP Utilities West	English,Carl L	2463	420000	0	1/1/2003	5	440000	237850	1/1/2004	4.762	$440,000	$200,805	*	N/A	
4212665	Koeppel,Holly K	EVP - AEP Utilities East	English,Carl L	3262	425000	0		0	440000	175000	1/1/2004	3.529	$440,000	$267,217	*	N/A	
9102422	Morris,Michael G	Chairman, President & CEO	Morris,Michael G	19351	N/A	N/A	N/A	N/A	1115000	N/A	N/A	N/A	$1,150,000	$1,250,000	1/1/2005	3.139	hired 2004
4214361	Mosher,Timothy C	President & COO - KY	Koeppel,Holly K	218	170300	54123.92	1/1/2003	3.526	182500	53212.49	1/1/2004	3.523	$187,975	$70,000	1/1/2005	3	
4215336	Powers,Robert P	Executive Vice President	Morris,Michael G	7137	415000	70719.57	1/1/2003	3.75	430000	100000	1/1/2004	3.614	$450,000	$137,500	1/1/2005	4.651	
4203589	Tomasky,Susan	EVP - CFO	Morris,Michael G	500	475000	0	1/1/2003	5.556	500000	256137	1/1/2004	5.263	$500,000	$350,000	*	N/A	

NOTES title,reports to,employees reporting to are from current information

* Did Not Have their Review This Year

Other Compensation - LTI Awards

Name	2003		2004			2005	
	NQSO	PS	NQSO	PS	RS/RSU	RSU	PS
Mike Morris			149,000	119,000	200,000 100,000	5,000	150,000
Carl English					30,000		34,100
Bob Powers	25,000	9,192 21,200					22,500
Susan Tomasky	25,000	10,520 21,200					37,500
Tom Hagan	25,000	9,302 21,200					21,200
Holly Koeppel	25,000	9,413 21,200					21,200
Tim Mosher	1,500	1,300					5,500

NQSO - Non-Qualified Stock Options

PS - Performance Shares

RS/RSU - Restricted Shares (Morris - 2004), Restricted Stock Units

Kentucky Power Company

REQUEST

Provide an analysis of Kentucky Power's expenses for research and development activities for the test year and the 3 preceding calendar years. For the test year include the following:

a. Basis of fees paid to research organizations and Kentucky Power's portion of the total revenue of each organization. Where the contribution is monthly, provide the current rate and the effective date.

b. Details of the research activities conducted by each organization.

c. Details of services and other benefits provided to the company by each organization during the test year and the preceding calendar year.

d. Total expenditures of each organization including the basic nature of costs incurred by the organization.

e. Details of the expected benefits to the company.

RESPONSE

Attached on pages 2 and 3 is a summary of the Company's research and development activities.

(a) through (e) Attached on pages 4 through 27 is the Company's response to the above requested information for the calendar years 2002 through 2004 and the test year.

WITNESS: R.K. Wohnhas

The majority of the research and development (R&D) efforts are grouped into a handful of categories, Distribution, Transmission, Generation, Environmental and Corporate (the projects in this last category are typically ones with applications across the other categories, e.g., EMF, Safety & Occupational Health, and general management of the R&D process/functions).

Within Distribution, the R&D work is focused primarily on reliability and power quality issues. Some of the projects targeted at reliability issues include: Analyzing Distribution Reliability, Incipient Fault Detector, and the Distribution EMI Inspection Tool. Analyzing Distribution Reliability seeks to develop modeling methods used to provide probabilistic assessments of reliability issues as part of the system planning. The other two projects mentioned are focused on methods of detecting problems before a major failure occurs. The Incipient Fault Detector project analyzes the waveforms generated by incipient faults to recognize, classify and alert distribution operations to problems prior to a failure. Likewise, the Distribution EMI Inspection Tool is focused on developing a tool to monitor/detect emitted EMI levels as a predictor of pending component failure. In addition to the reliability projects, there are also several that are focused on power quality (PQ) issues. Examples of these include Distribution VAR Control, Industrial Design Guide – Power Quality, Premium Power Park, as well as the EPRI suite of Power Quality projects. The Industrial Design Guide – Power Quality and the EPRI Power Quality projects all seek to provide quantifiable input on the power quality impacts of designs, standards and practices. The Distribution VAR Control project seeks to develop and demonstrate an effective low-cost method of remotely monitoring and controlling the operation of switched capacitor banks (the capacitor banks provide VAR support near customer loads during peak load periods). Finally, the Premium Power Park project examined the ability of distributed energy resources (in this case a flywheel) to mitigate PQ issues.

With a similar focus as the Distribution projects, the Transmission R&D projects seek to remedy reliability and operational issues. Some examples of work in this area include CERTS Phasor Application, Enhanced Non-Ceramic Insulator (NCI) Performance, 345 kV Optical Instrument Transformer, Reliability Metrics and Benchmarks for Transmission (Reliability Metrics), and Overhead Transmission Line Reference Manuals. The CERTS Phasor Application and Reliability Metrics projects are examples of work developing the tools and guidelines used to monitor (and predict impending problems) the status of the transmission system. At the component level, the NCI Performance project is developing inspection tools for use on non-ceramic insulators – the goal is to avoid outages due to premature failures through improved selection, application and inspection. Similarly, the 345 kV Optical Instrument Transformer project seeks to evaluate and apply a new generation of technology that among other things allows for monitoring of transformer frequency response signatures – an indicator of incipient transformer faults. Finally, the Overhead Transmission Line Reference Manuals serve as

a reference source for the principles that guide/govern the engineering of Extra High Voltage Overhead Transmission Lines. This manual is used to understand/resolve unique engineering problems that confront owners of overhead transmission lines.

The Environmental projects tend to be focused on issues associated with generating plants, and their associated emissions, however they do also touch on Transmission and Distribution issues (e.g., T&D Soil and Water Issues). One of the major focuses within the Environmental category is related to defining and better understanding the science behind power plant emissions and their interactions with the environment (e.g., EPRI Environmental Science Program, Mercury Studies, etc.). A second major area of research is on developing effective methods of mitigating the effects on the environment of the above mentioned emissions (e.g., EPRI Environmental Controls Program). A third area of focus is on developing modeling tools/studies that can have an application across the AEP system (Ohio River Ecological Research Program).

The Generation R&D work has multiple areas of focus. Some of the work is geared toward improving our predictive maintenance capabilities (e.g., Datapult Based Predictive Maintenance System, EMI Detection of Wet Stator Bars, and Corrosion Monitor Probe), with the intent of reducing unplanned outages. Other R&D projects focus on renewable energy resource options and how they can be integrated into the AEP system (e.g., Distributed Wind Turbine Research, Picway Co-Firing – co-firing using waste wood). Yet another area of focus within the Generation R&D projects is advanced generating issues/options. This would include projects looking at the sequestration of CO_2, development of an Integrated Gasification Combined Cycle generating plant, etc.

The approach AEP takes in directing its R&D efforts is aimed at developing incremental improvements in its operating systems. The goal is to improve operating performance, reliability and environmental impacts, while providing cost-effective service to our customers.

2002 Work Order	Corporate Total	Ky Power Total	Title	Description
RD00100701	1,449	81	Coal Flow Measuring System	Develop a system that will accurately measure the coal flow through a burner line on a real time basis.
RD00101301	46,694	1,660	Premium Power Park Project	AEP administrative R&D costs to demonstrate a premium power park (PPP) project and investigate interaction between different technologies involving two or more custom power devices, produced by different manufacturers, located in an existing industrial park site, and served from typical distribution circuits and common station.
RD00101401	17,724	621	UG Vault Heat Dissipation and Ventialtion Monitoring	Purchase and install equipment to monitor air flow, temperature, voltage and current on/around equipment in UG transformer vaults.
RD00101601	284	14	Multiple Unit Stack Inleakage Control	Purchase and evaluate performance of duct blocking device.
RD00102201	2,947	103	Pulsed Electric Field for Food Processing	1) This is an established R&D project: RD1022 2) The objective is to conduct commercial scale feasibility studies on the PEF technology, design and build one portable/mobile self-contained demonstration/ evaluation system. 3) AEP has worked out a contract agreement with OSU to help develop the technology.
RD00102701	5,528	159	EMI Detection of wet stator bars	Evaluate on line diagnostic methods to detect wet insulation in electrical generator stator windings.
RD00103101	14,187	497	Test & Evaluation of Distributed Resources	This research project proposes to expand test & evaluation capabilities @ Dolan Elect. Lab. of larger rated (i.e., up to 200 kVA) three-phase DR technologies, to perform more sophisticated tests over standard tests, to procure an 80 kW micro-turbine for testing, and to assess impact of DR units when subjected to distribution system operating conditions.
RD00103301	195,834	6,875	Distributed Wind Turbines Research	Purchase and Install 5 - 10 kW Wind Turbines in order to better understand their interaction with the grid
RD00103401	32,188	1,361	Energy Choices for Greenhouse Gas Constrained World Consortium	Expenses incurred by MIT
RD00103701	1,709	49	Water Environment Research Foundation	Evaluate benefits of AEP membership to WERF
RD00104801	196,298	5,639	Datapult Based Predictive Maintenance System	This project combines two unique technologies developed within AEP (EMI Signature Analysis and Datapult System) with several technologies currently in development to provide low cost, remotely monitored Predictive Maintenance System, which will notify a remote analyst of the possibility of machinery problems within 24 hours of identification
RD00105001	4,925	199	Iron Aquatic Life Criteria Revision	Perform necessary research and laboratory testing to develop scientifically defensible iron criteria for the protection of freshwater aquatic life.
RD00106101	45,025	1,578	CEA Distribution Projects	To perform research and development projects with the Canadian Electricity Association (CEA). These include membership and research project reports and specific R&D projects, such as, development & production of transformer internal default detector; wood pole maintenance optimization through actuarial analysis; development & testing of ultrasonic detection as a predictive distribution maintenance tool for underground cable accessories; state of the art on extruded distribution cables diagnostic techniques; and icing resistant conductor projects.
RD00106401	26,332	968	Screening Tool for Evaluating Effects of Environmental Policies	Produce a software screening tool to enhance the company's analytical capability to evaluate multi-pollutant control proposals and determine optimal compliance strategies based upon the mix of generating assets.
RD00107301	30,656	1,086	UCATM Substation Initiative	EPRI Tailored Collaboration Agreement 3636.
RD00107501	9,830	436	Biomass Interest Group	EPRI Tailored Collaboration Agreement 6098.
RD00107601	31,598	1,119	Development of a New Acoustic Emissions Detection & Location Technique for Power Transformers	Develop a technique to detect gassing inside the transformer oil more reliably and determine the location(s) where gassing is occurring.
RD00107701	33,806	1,583	Biological Recovery of Strip-Mined Land	Determine if sensitive fauna repopulate reclaimed strip-mined lands in numbers and diversity similar to non-strip-mined areas, and if the repopulation is influenced by reclamation technique.

2002 Work Order	Corporate Total	Ky Power Total	Title	Description
RD00107801	24,982	885	Probablistic Transmission System Risk Assessment	Development of probabilistic risk assessment techniques and related software that can be applied to large-scale transmission systems. Such techniques will initially suppliment and could eventually replace traditional deterministic transmission planning approaches.
RD00108201	6,630	232	Field Testing of Microturbines	EPRI Tailored Collaboration Project
RD00108401	135,126	5,950	Clinch River Plant Effluent Study	To determine whether proprietary chemicals added to Clinch River Plant cooling towers and tower blowdown, copper in the blowdown, or non-plant associated factors are causing observed effects on Clinch River organisms.
RD00108801	341	12	DayCor/GasVue Cameras Evaluation	The project's objective is to evaluate the potential of EPRI's DayCor Camera and GasVue Camera as asset management tools. Two cameras, one DayCor one GasVue, will be purchased and used to inspect both overline and station Transmission facilities. The issue is whether the DayCor and GasVue cameras' proven ability to locate low level electrical discharge and SF-6 gas leaks on installed equipment can provide knowledge of conditions that can be used to lower preventative and corrective maintenance costs. Additional cameras will be purchased based on the cost savings determined with the initial units.
RD00109001	260,294	8,251	AEP Technology Plan Launch Process	To launch and initiate the AEP Technology Plan.
RD00110401	54,472	2,003	MIT Climate Program	EPRI Tailored Collaboration (TC) Agreement 005320/53645 for Massachusetts Institute of Technology's (MIT) Climate Program
RD00110501	8,155	289	Electromagnetic Emission Measurements near FACTS Devices	Electric Power Reasearch Institute (EPRI) Tailored Collabotation (TC) Agreement 005311/53921
RD00111401	(700,745)	(31,299)	General Environmental Targets	EPRI base research and development program for Environmental targets.
RD00111701	16,094	681	Boiler Tube Failure Reduction & Cycle Chemistry Improvement	EPRI Base Program P63.009.
RD00111801	53,110	2,451	Cycle Deposition Reduction Guide	EPRI Base Program P64.004.
RD00111901	26,823	1,238	Computer Based Training Fossil Steam Plants	EPRI Base Program P70.005.
RD00112101	60,064	2,294	Fuel Impact on SCR Life	EPRI Base Program P73.003.
RD00112201	60,849	2,808	Post Combustion Systems Guide	EPRI Base Program P73.004.
RD00112301	32,188	1,485	Multi-Pollutant Technology Evaluations	EPRI Base Program P75.001
RD00112401	45,672	1,932	ESP Operation with Alternative Fuels Guide	EPRI Base Program P76.003. ESP = Electrostatic Precipitator
RD00112501	25,761	984	Fine Particulate Collection with Wet FGD	EPRI Base Program P76.005. FGD = Flue Gas Desulfurization
RD00112601	64,376	2,971	Fossil Repair Applications Center	EPRI Base Program P87.006.
RD00113001	29,166	1,022	Premium Power Park	EPRI Base Program P29.006
RD00113101	69,444	2,434	UCA for Distribution	EPRI Base Program P29.007. UCA = Universal Communication Architecture
RD00113201	53,468	1,874	Analyzing Distribution Asset Aging	EPRI Base Program P29.011
RD00113301	102,823	3,604	Analyzing Distribution Reliability	EPRI Base Program P29.013.
RD00113401	53,468	1,874	Area Investment Strategy Tools	EPRI Base Program P29.014.
RD00113501	89,878	3,150	PIL Cable Remaining Life Estimate	EPRI Base Program P30.001. PIL = Paper Insulated Lead Covered
RD00113601	103,416	3,625	Industrial Design Guide - Power Quality	EPRI Base Program P2.003.
RD00113701	71,250	2,497	Power Quality Database	EPRI Base Program P3.007. Distribution power quality output measurement.
RD00113801	27,925	979	Power Quality Regulatory Watch	EPRI Base Program P3.012.
RD00113901	75,265	2,637	Power Quality Software Support	EPRI Base Program P1.007.
RD00114001	56,714	1,987	Power Quality Implications of Overcompensation	EPRI Base Program P3.008.
RD00114101	117,313	4,155	Transmission Line Lightning Performance	EPRI Base Program P35.001.
RD00114201	114,055	4,040	Enhanced NCI Performance	NCI stands for Non-Ceramic Insulator. EPRI Base Program P35.003.
RD00114301	90,744	3,214	Overhead Transmission Line Reference Manual	EPRI Base Program P35.008.
RD00114401	42,131	1,492	Technology Review for Extruded EHV Cable	EHV stands for Extra-High Voltage. EPRI Base Program P36.001.
RD00114501	37,068	1,313	XLPE Impact of Emergency Temperatures	XLPE stands for Cross-Linked Polyethylene. EPRI Base Program P36.007.
RD00114601	42,131	1,492	Substation Life Extension	EPRI Base Program P37.003.
RD00114701	36,865	1,306	SF6 Management	SF6 stands for Sulfur Hexiflouride, this is a gas in transformers. EPRI Base Contract P37.004.
RD00114801	47,397	1,679	Switching Safety & Protection Relays	EPRI Base Program P37.008.

2002 Work Order	Corporate Total	Ky Power Total	Title	Description
RD00114901	35,187	1,451	Power Transformer Loading & Operating Tool	EPRI Base Program P38.003.
RD00115001	37,059	1,313	Reliability Metrics and Benchmarks for Transmission	EPRI Base Program P38.009.
RD00115101	54,914	1,962	Enterprise Information Security	EPRI Base Program T86.
RD00115201	361,035	15,270	Air Toxics Health and Risk Assessment	EPRI Base Program T42.
RD00115301	330,137	12,608	Ozone, PM & Haze Assessment Tools	PM stands for Particulate Matter. EPRI Base Program T91
RD00115401	377,068	15,948	Air Quality Health/Environment Assessment	EPRI Base Program T92.
RD00115501	448,906	18,987	Global Climate Change Policy Analysis	EPRI Base Program T45.
RD00115601	240,485	10,171	Global Climate Change Impact Assessment	EPRI Base Program T46.
RD00115701	144,291	6,103	Greenhouse Gas Reduction Options	EPRI Base Program T47.
RD00115801	208,411	8,815	Groundwater Protection	EPRI Base Program T49.
RD00115901	142,430	6,951	T&D Soil and Water Issues	T&D stands for Transmission & Distribution. EPRI Base Program is T51.
RD00116001	438,243	16,737	Plant Multimedia Toxics	EPRI Base Program T59.
RD00116101	386,202	16,266	Mercury, Metals & Organics in Aquatics	EPRI Base Program T53.
RD00116401	152,307	6,442	Facilities Water Management	EPRI Base Program T56. Water management project related to steam generation. (Excludes nuclear)
RD00116601	440,684	15,609	EMF Health Assessment	EMF stands for Electric and Magnetic Fields. EPRI Base Program is T60.
RD00116701	192,389	6,742	Electromagnetic Compatibility	EPRI Base Program T61.
RD00116801	106,821	3,748	Occupational Health & Safety	EPRI Base Program T62.
RD00117301	143,676	5,884	Carbon Capture and Sequestration	EPRI Base Program T48.
RD00200201	3,190,696	139,385	R&D Project Development	Capture expenses of operating company R&D programs and activities not directly attributed to a specific operating company R&D project, or prior to setting up a work order for a R&D project.
RD00250001	145,998	7,019	Emerging Technology Analysis	To capture non-project expenses related to the Emerging Technology initiative.
RD00300001	89,647	3,344	Advanced Generation Program Management	Capture non-project expenses for the Advanced Generation Initiative.
RD00300101	22,559	952	DOE Application for CCT Funding of IGCC	Prepare assessment and initial work for Department of Energy (DOE) application for Clean Coal Technology (CCT) funding of Integrated Gasification Combined Cycle (IGCC) project. This is for the first phase of this project.
RD00300201	97,623	4,113	Geologic Feasibility of CO2 Disposal Demonstration	This project will lay the groundwork for conducting a long-term test of Carbon Dioxide (CO2) disposal in deep saline formations and potentially in nearby unmineable coal seams to recover coal-bed methane.
RD00350001	14,464	628	Generation Asset Program Management	Capture all non-project expenses for Generation Asset Management.
RD00400001	84,977	3,175	Environmental Controls Program Management	Capture non-project expenses for the Environmental Controls Initiative.
RD00400101	578,813	24,491	Mercury Studies	Perform analysis of mercury measurements at several power plants.
RD00400201	61,118	2,580	DOE Application for CCT Funding of Super Clean	Provide assessment and feasibility for Department of Energy (DOE) Application for Clean Coal Technology (CCT) Funding of "Super Clean" multi-pollutant power plant.
RD00500101	12,757	533	Picway Cofiring	Pursue research & development assessments for renewable project involving co-firing of Picway power plant. This is a project of the Renewables Energy Resources Initiative. This is a demonstration project at Picway may be used at other plants.
RD00559901	626	22	Easton Development Solid State Distribution Transfer Switch Demonstration	Install, test and demonstrate the merits of a solid state distribution transfer switch at the primary voltage level on the AEP system
RD00567901	97,701	5,819	Voltage Security Monitoring and Control (VSMAC)	Conduct research seeking: a. A practical working understanding of voltage collapse; b. A power system condition monitoring system to determine the proximity of voltage collapse, and to provide specific changes to system operators to avert voltage collapse; and c. System control strategies and operating procedures to avoid or mitigate cascading transmission system failure. This research work supplements immediate conventional work in AEP's Southern Transmission Region to: a) improve the voltage support capabilities of power plants; b) improve system operating controls, including remote switching of transmission voltage control equipment, and c) develop an automatic load shedding process as a last resort to minimize the impact of the voltage collapse

2002 Work Order	Corporate Total	Ky Power Total	Title	Description
RD00568001	1,130	40	Conductor Angle Meter	Develop an inclinometer system to continuously monitor a transmission line conductor angle at the tower.
RD00568801	118	4	Demonstration of 3 kV PEM Fuel Cell	This project includes procurement, demonstration, and techinical and economic feasibility assessment of a 3 kV fuel cell system.
RD00600101	104,386	3,992	Advanced Distribution Program Management	Capture non-project expenses for the Advanced Distribution Initiative.
RD00600501	25,530	895	Incipient Fault Detector	Utilizing available measuring equipment, incipient faults will be generated and recorded at Dolan Lab. Analysis will be conducted on the resulting wave forms to determine equipment specification for application at the distribution substation level to detect incipient fault conditions. The project will then prototype equipment and verify on test lines. During the next phase, equipment will be relocated to several distribution substations for further verification. Finally, the specification will be used to produce low-cost deployable devices able to recognize, classify, and alert distribution operations before a major failure occurs on the circuit.
RD00600601	184,565	6,469	System Disturbance Monitoring	This project collects data from AEP West territory as input to Disturbance Signature Analysis project. It also takes information gathered from other monitoring projects and validates the results for better algorithm development.
RD00600701	169,319	5,935	Distribution VAR Control	Develop two new wireless monitoring and control systems and demonstrate four wireless monitoring systems. Retrofit sixty capacitor bank installations with these systems to provide diverse and extreme operating environments on the AEP distribution system. After twelve months of operation and testing, each system will be evaluated for reliability, performance, and functionality.
RD00600801	123	4	Disturbance System Analysis	The project analyzes and categorizes the data collected from AEP - EPRI Distribution Power Quality and Reliability Benchmarking Study, Disturbance Signature Analysis project, Incipient Fault Detector project, and Fast Fault Detector Study.
RD00690901	104,746	6,223	Ohio River Ecological Research Program	Studies of fish, macroinvertebrates and mussels in the vicinity of Cardinal and Tanners Creek Plant
RD00800001	115,483	4,090	Transmission Asset Program Management	Capture non-project costs for the Transmission Asset research & development program.
RD01500301	3,075	134	R&D Web Site/Database	Training costs for Research Administration Committee R&D database improvements. This will include advanced classes in MS Access and MC Visual Interdev. The project cost also include service corporation time and overhead for development of an R&D intra net site and R&D database improvements.
Grand Total	**11,477,423**	**462,423**		

2003 Work Order	Corporate Total	Ky Power Total	Title	Description
RD00101301	$ (68)	$ (3)	Premium Power Park Project	AEP administrative R&D costs to demonstrate a premium power park (PPP) project and investigate interaction between different technologies involving two or more custom power devices, produced by different manufacturers, located in an existing industrial park site, and served from typical distribution circuits and common station.
RD00103301	$ (545)	$ (24)	Distributed Wind Turbines Research	Purchase and Install 5 - 10 kW Wind Turbines in order to better understand their interaction with the grid
RD00109001	$ (2,908)	$ (82)	AEP Technology Plan Launch Process	To launch and initiate the AEP Technology Plan.
RD00200201	$ 68,658	$ 3,040	R&D Project Development	Capture expenses of operating company R&D programs and activities not directly attributed to a specific operating company R&D project, or prior to setting up a work order for a R&D project.
RD00250001	$ (424)	$ (21)	Emerging Technology Analysis	To capture non-project expenses related to the Emerging Technology initiative.
RD00300001	$ (443)	$ (5)	Advanced Generation Program Management	Capture non-project expenses for the Advanced Generation Initiative.
RD00300201	$ (173)	$ (2)	Geologic Feasibility of CO2 Disposal Demonstration	This project will lay the groundwork for conducting a long-term test of Carbon Dioxide (CO2) disposal in deep saline formations and potentially in nearby unmineable coal seams to recover coal-bed methane.
RD00350001	$ (19)	$ (1)	Generation Asset Program Management	Capture all non-project expenses for Generation Asset Management.
RD00400001	$ (382)	$ (4)	Environmental Controls Program Management	Capture non-project expenses for the Environmental Controls Initiative.
RD00400101	$ 3,907	$ 41	Mercury Studies	Perform analysis of mercury measurements at several power plants.
RD00500101	$ (84)	$ (1)	Picway Cofiring	Purse research & development assessments for renewable project involving co-firing of Picway power plant. This is a project of the Renewables Energy Resources Initiative. This is a demonstration project at Picway may be used at other plants.
RD00567901	$ (146)	$ (5)	Voltage Security Monitoring and Control (VSMAC)	Conduct research seeking: a. A practical working understanding of voltage collapse; b. A power system condition monitoring system to determine the proximity of voltage collapse, and to provide specific changes to system operators to avert voltage collapse; and c. System control strategies and operating procedures to avoid or mitigate cascading transmission system failure. This research work supplements immediate conventional work in AEP's Southern Transmission Region to: a) improve the voltage support capabilities of power plants; b) improve system operating controls, including remote switching of transmission voltage control equipment, and c) develop an automatic load shedding process as a last resort to minimize the impact of the voltage collapse.
RD00600101	$ (242)	$ (9)	Advanced Distribution Program Management	Capture non-project expenses for the Advanced Distribution Initiative.
RD00600501	$ (149)	$ (7)	Incipient Fault Detector	Utilizing available measuring equipment, incipient faults will be generated and recorded at Dolan Lab. Analysis will be conducted on the resulting wave forms to determine equipment specification for application at the distribution substation level to detect incipient fault conditions. The project will then prototype equipment and verify on test lines. During the next phase, equipment will be relocated to several distribution substations for further verification. Finally, the specification will be used to produce low-cost deployable devices able to recognize, classify, and alert distribution operations before a major failure occurs on the circuit.
RD00600601	$ (142,753)	$ (6,211)	System Disturbance Monitoring	This project collects data from AEP West territory as input to Disturbance Signature Analysis project. It also takes information gathered from other monitoring projects and validates the results for better algorithm development.

2003 Work Order	Corporate Total	Ky Power Total	Title	Description
RD00600701	$ 16,334	$ 711	Distribution VAR Control	Develop two new wireless monitoring and control systems and demonstrate four wireless monitoring systems. Retrofit sixty capacitor bank installations with these systems to provide diverse and extreme operating environments on the AEP distribution system. After twelve months of operation and testing, each system will be evaluated for reliability, performance, and functionality.
RD00800001	$ (45)	$ (2)	Transmission Asset Program Management	Capture non-project costs for the Transmission Asset research & development program.
RDCP200301	$ 3,268,588	$ 144,356	R&D Program Development	Capture non-project specific research & development program development expenses
RDCP400001	$ 148,571	$ 7,170	DTC Development & Demonstration	AEP's Dolan Technology Center (DTC) fabrication of small numbers of demonstration units
RDCP400101	$ 319,237	$ 14,092	Universal Control Development	Design and build a universal control circuit board and software library for use in grid connected power electronics applications at the distribution, transmission, and generation levels.
RDCP400201	$ 91,547	$ 2,764	Occupational Health and Safety	To do research and provide products for occupational safety and health issues for the electric utility industry.
RDCP400301	$ 223,645	$ 9,840	EPRI EMF Research	Perform and assess research by EPRI on Electromagnetic Field (EMF) health effects, including contact current and selection bias as possible explanations for a reported association between magnetic fields and childhood leukemia
RDCP400401	$ 12,733	$ 560	Infrastructure Security	This EPRI collaborative was developed in response to the September 11th attacks. It focuses on strategic spare parts, red teaming, vulnerability assessment and secure communications for utilities.
RDCP400501	$ 59,707	$ 2,626	Enterprise Information Security	This EPRI base project objective is to improve utility cyber security. It is a follow on EPRI project from their former Y2K program for utilities.
RDCP600001	$ 23,298	$ 1,028	Competitive Technology Intelligence	Capture non-project specific research & development expenses for the Emerging Technology program
RDCP777701	$ 764	$ 34	Corporate R&D Memberships	To capture all corporate and individual memberships for research & development activities.
RDDA400001	$ 226,474	$ 8,815	Advanced Distribution Program Management	Contingency funding for new Distribution related projects which come up and for non-specific project related travel such as conferences
RDDA400101	$ 11,396	$ 496	Disturbance Signature Analysis	This project utilizes data collected from the existing AEP-EPRI Distribution Power Quality and Reliability Bench Marking project and the future Disturbance Monitoring Project as well as data which will be made available from the Fast Fault Detector Project.
RDDA400201	$ (21,636)	$ (934)	System Disturbance Monitoring	This project is an expansion of the existing AEP-EPRI Distribution Power Quality and Reliability Bench Marking project. This phase provides for the collection of data from the AEP West territory.
RDDA400301	$ 360,407	$ 14,098	Distribution VAR Control	This project will utilize the emerging CDPD (Cellular Digital Packet Data) communications protocols in urban areas and / or 800 MHz systems in rural areas to communicate with our existing and new switched capacitor bank controls.
RDDA400401	$ 48,376	$ 1,883	Fast Fault Detector	These devices will monitor underground (UG) cables and determine when a threshold level of partial discharge (PD) activity has been surpassed. Once this has occurred, the device will send an alarm to a computer to alert an engineer that the cable may have deteriorated to a point where refurbishment is necessary.
RDDA400601	$ 134,313	$ 5,239	Li-Ion Battery Evaluation	Test, evaluate and demonstrate the performance and operating characteristics of the Li-ion battery technology as a UPS over a five-year period.

2003 Work Order	Corporate Total	Ky Power Total	Title	Description
RDDA400701	$ 73,891	$ 2,882	Incipient Fault Detector	The incipient fault detection device is AEP's version of EPRI's Distribution Fault Anticipator. It is the platform from which the Fast Fault Detector, the System Disturbance Monitoring and the Signature Analysis projects will deploy in field applications.
RDDA400801	$ 56,997	$ 2,242	Premium Power Park - Phase 3	Investigate and demonstrate interaction between different technologies and medium voltage power quality (PQ) equipment, commercially available by different manufacturers, on a typical distribution system.
RDDA400901	$ 71,408	$ 2,784	CEA Distribution Projects	Programs offered by the Canadian Electric Association in support of distribution equipment maintenance practices and other research issues.
RDDA401001	$ 57,236	$ 2,216	Power Quality Implications of T&D Construction	Transmission and distribution construction standards and practices can impact the quality of power supplied to end users. Standards engineers lack clear guidelines on how to optimize power quality performance of electrical systems. Construction standards can be developed or modified without a clear understanding of their impact on power quality. As a result, system power quality performance can be negatively impacted by changes intended to reduce construction costs. This multi-year project provides engineering guidelines and software tools for standards engineers.
RDDA401101	$ 37,469	$ 1,630	Power Quality Knowledge-Based Services	The program comprises a wide array of resources and tools. At the core of the program is a customer hotline offering round-the-clock power quality technical support. Complementing these products are four electronically distributed newsletters—*Signature, Current Connections, TechWatch* and *PQNews*
RDDA401201	$ 82,766	$ 3,204	Analyzing Distribution Reliability	The objective of this project is to provide analytical methodology and tools for quantifying the cost/risk tradeoff, for quantifying the strategic reliability risks associated with investment and O&M decision, and for planning system reliability consistent with area customer needs.
RDDA401301	$ 47,354	$ 2,060	Power Quality Software Support	This project offers applications support and training to enhance the value of EPRI power quality software.
RDDA401401	$ 21,008	$ 823	Enhanced Distribution Monitoring	The purpose of this project is to test and evaluate low cost, low powered communications systems for distribution and station asset monitoring. In this project, several technologies will be tested as to their flexibility and capability to monitor and transfer information either along a distribution circuit or in a station yard.
RDDA401501	$ 276,366	$ 10,787	Distribution EMI Inspection Tool	Develop tools and processes that will assist the Distribution business unit in performing inspections of facilities, detecting failing equipment, performing predictive maintenance, and improving productivity. Tools will use Electromagnetic Interference (EMI) as a diagnostic tools of rotating equipment.
RDDA401601	$ 22,105	$ 1,054	Underground Duct Rehabilitation	Develop a practical and cost effective method to rehabilitate or replace three through five inch composite fiber conduit pipe.
RDGA400001	$ 99,405	$ 2,715	Advanced Generation Program Management	Contingency funding for new project which come up and for non-specific project related travel such as conferences
RDGA400101	$ 10,905	$ 362	Plant Support - Alstom	Provide plant data to Alstom in support of DOE funded research & development study project. Project is a phase of the Rankine Cycle improvements program.
RDGA400201	$ 132,974	$ 4,405	Geologic Feasibility of CO2 Disposal/Sequestration	2-mile deep hole at Mountaineer to understand geologic feasibility of carbon sequestration in a saline aquifer, run by Battelle, funded by DOE and OCDO
RDGA400301	$ 17,023	$ 608	Coal Utilitzation Research Council	Industry group which has significant impact on the direction of DOE's fossil energy budget.

2003 Work Order	Corporate Total	Ky Power Total	Title	Description
RDGA400401	$ 86,884	$ 3,204	EPRI IGCC Program PS66E	Access to ane participation in the EPRI IGCC studies. Provides immediate access to developments with operating IGCC plants, IGCC economics, and studeis to improve IGCC technology and economics
RDGA400501	$ 31,507	$ 1,151	Coal Industry Advisory Board	To capture costs regarding AEP's participation in the Coal Industry Advisory Board (CIAB), which provides advice to the International Energy Agency on a wide range of issues regarding coal.
RDGA400601	$ 32,609	$ 1,202	MIT Carbon Sequestration Inititiative	Funding of a 10-member consortium to fund studies associated with carbon sequestration. The head, Dr. Herzog is a respected authority, and the studies he sponsors can have positive impact on CO2 policies
RDGA400701	$ 37,224	$ 1,300	FutureGen	AEP's participation in a 10-company consortium to build DOE's plant of the future, which includes IGCC, carbon sequestration, and hydrogen production
RDGA500001	$ 244,062	$ 7,675	Environmental Controls Program Management	Contingency funding for new project which come up and for non-specific project related travel such as conferences
RDGA500101	$ 45,363	$ 1,670	Gen III Coal Flow Monitor	Develop a coal flow measurement system architechture that will allow other communication platforms to be incorporated.
RDGA500201	$ 16,110	$ 541	Battelle Mercury Capture Process Phase 1	Determine whether an existing process for capturing and controlling mercury in an aqueous waste stream can be extended to a simulated gaseous waste stream.
RDGA500301	$ 79,650	$ 2,281	Amos SCR Ammonia Mitigation	Evaluation of the effects of ammonia slip at Amos on the chemistry of the ash pond
RDGA500501	$ 47,326	$ 1,056	Clinch River Plant Effluent Study	Determine whether the Clinch River Plant is contributing to the impacts on clams downstream of the plant.
RDGA500601	$ 4,840,373	$ 110,054	EPRI Environmental Science Program	This is the work order for charging the Environmental Sciences projects that are purchased as part of the EPRI base program. These projects focus on better understanding emissions and their interactions with the environment.
RDGA500701	$ 611,811	$ 20,080	EPRI Environmental Control Program	This is the work order for charging Environmental Controls projects (e.g., Particulate and Opacity Controls) that are purchased as part of the EPRI base program
RDGA500801	$ 76,062	$ 867	TVA SCR Ammonia	Buy-in to ammonia treatment projects at TVA's Paradise Plant
RDGA500901	$ 98,408	$ 697	Ohio River Ecolological Research Program	High value EPRI TC program on effect of industrial discharges on Ohio River water quality - AEP has been involved in this research for 30 years
RDGA501001	$ 100,106	$ 1,123	Quantifying Carbon Market Opportunities	EPRI Environmental Science purchase
RDGA501101	$ 17,542	$ 543	Battelle Evaluation of Morpholine Injection Technology	To evaluate the use of the morpholine-amine as an application for sulfur trioxide (SO3) mitigation with respect to reaction kinectics, potential downstream impacts on air emissions and water chemistry, health and safety issues, and examine any potential showstoppers with respect to this technology.
RDGA501201	$ 866,968	$ 29,388	General Mercury Science & Technology Investigations	Characterization of mercury emissions from system plants, investigations of technologies with the potential to remove mercury from emissions.
RDGA501301	$ 21,071	$ 643	Multiple Unit Stack Inleakage Control	This project looks at alternative methods of controlling air in-leakage from out-of-service units at fossile fueled power plants.
RDGA600001	$ 117,737	$ 5,237	Generation Asset Program Management	Contingency funding for new project which come up and for non-specific project related travel such as conferences
RDGA600101	$ 98,955	$ 2,950	Big Sandy 2 Pulverizer VFD Demonstration	To determine if Variable Frequency Drive (VFD) can give us more pulverizer capacity at Big Sandy 2.
RDGA600201	$ 54,354	$ 1,922	EPRI Program 63 Boiler Life & Availability Improvement	Boiler Tube Failure Reduction & Cycle Chemistry Improvement; On-Site Training in Managing Flow-Accelerated Corrosion; Seam-Welded Piping Interest Group/Seam-Welded Piping Updates; Boiler Life Availability and Improvement
RDGA600301	$ 54,354	$ 1,786	EPRI Program 88 Heat Recovery Steam Generator Dependability	Participation in EPRI program to provide access to knowledge bases and leverage research expenditures

2003 Work Order	Corporate Total	Ky Power Total	Title	Description
RDGA600401	$ 127,855	$ 4,202	EPRI Program 64 Boiler & Turbine Steam & Cycle Chemistry	Cycle Chemistry Guides to Control Corrosion of Turbine Materials in the Phase Transition Zone; Guide to Reduce Deposition Around the Cycle; Guides to Benchmarking Cycle Chemistry & Justifying Cycle Chemistry Improvements
RDGA600501	$ 65,266	$ 2,406	EPRI Program 87.004 Fossil Repair Applications Center	To develop field welding and welding related repair methods and procedures to address relatively short-term member needs.
RDGA600601	$ 23,035	$ 849	Corrosion Monitor Probe	Field test a novel multi-pronged process for managing waterwall corrosion in coal-fired utility boilers.
RDGA600701	$ 28,421	$ 940	Glen Lyn SSH P91 Characterization	Provide a non-destructive evaluation of the oxide thickness inside of the 9% chrome superheater tubes to deterrmine the status of long term overheating effects, and predict remaining useful life.
RDGA700101	$ 353,870	$ 11,989	Picway Co-Firing	Demonstration project to determine the feasibility of co-firing biomass (waste wood). Results to be used to evaluate other AEP plants.
RDMB777701	$ 29,859	$ 1,318	Corporate R&D Memberships	Memberships in R&D organizations (e.g Research and Technology Executive Council) that support the strategic mission of CTD.
RDTA400001	$ 150,172	$ 5,313	Transmission Program Management	Contingency funding for new project which come up and for non-specific project related travel such as conferences
RDTA400101	$ 29,570	$ 1,046	CEA Equipment Maintenance	Low overhead collaborative focus on member driven station maintenance needs and problems. The two projects that AEP is funding are 1) Prediction of Remaining Life of Power Connectors and Disconnect Switches and 2) T&D Transformer Oil Containment, Spill Prevention and Management
RDTA400201	$ 48,615	$ 1,720	UCA/IEC 61850 Testing	At Dolan, support the testing of substation (IED's) intelligent electronic devices (digital relays, meters, etc), which conform to the UCA/IEC Standard #61850. This is a continuation of the ongoing AEP, utility industry , and EPRI research project for standardized "plug and play" communications in substations.
RDTA400301	$ 24,509	$ 867	High Temp. Low Sag Conductor	This project evaluates the performance of selected transmission line conductors that are capable of significantly increasing the capacity of thermally constrained lines without the need for extensive tower redesign.
RDTA400501	$ 225,669	$ 7,988	345kV Optical Instrument Transformer	AEP purchased NxtPhase's first three phase set of 345kV optical voltage and current transformers. They have been installed at Corridor station. The output data is being recorded and compared to conventional oil filled instruments for reliability, safety accuracy and cost. AEP will migrate to this technology if it proves to be superior.
RDTA400601	$ 169,348	$ 5,993	CERTS Phasor Application	CERTS (Consortium for Electric Reliability Technology Solutions) funded by DOE is providing applications tools to AEP to analyze real time data captured by AEP PMUs (phasor monitoring units). This project also funds the development at DTC of the AEP PDC (phasor data concentrator) for the PMUs.
RDTA400701	$ 47,627	$ 1,685	Emergency Rating Temperatures on XLPE Cable	This EPRI project determines the impact of increasing the safety margin in the operation of XLPE transmission cables under emergency operation in order to increase reliability and reduce equipment failures. The project will determine the temperature at which cables can operate for 100 hours and 300 hours.
RDTA400801	$ 66,382	$ 2,349	Pressurization Procedures for Pipe-Type Cable Systems	Define and document procedures to reduce time to return underground oil filled transmission cables to service after an outage. There are tradeoffs between the time to re-pressurize and energize the cables and the chances of repeated equipment electric failures.
RDTA400901	$ 2,611	$ 92	Probablistic Load Flow	Through this EPRI TC project, use the EPRI PLF (probabilistic load flow) program to determine the viability of using it for routine transmission planning and system reinforcement processes.

2003 Work Order	Corporate Total	Ky Power Total	Title	Description
RDTA401001	$ 98,552	$ 3,490	Lightning Performance of Transmission Lines	Develop new engineering tools that can be used to analyze lightning and to limit the impact that lightning has to new and existing overhead transmission circuits. Lightning is the leading cause of transmission line operations
RDTA401101	$ 13,985	$ 498	Acoustic Emission Detection	The purpose of this EPRI project is to develop a more reliable transformer incipient fault detector. Internal acoustic emissions data is being analyzed in conjunction with other transformer real time data. Several AEP transformers are included in the data set.
RDTA401201	$ 27,813	$ 984	PRA Tools for Transmission Planning	Develop improved transmission reliability assessment tools using PRA (probabilistic techniques) to account for uncertainties of transmission outages and other stochastic operations variables.
RDTA401301	$ 145,641	$ 5,153	Automated Station Data Utilization Demonstration	Develop a system that leverages the automated station data and converts millions of data points into useful information via data filtering software.
RDTA401401	$ 104,987	$ 3,715	Enhanced Non-Ceramic Insulator Performance	Improve selection, application, and inspection of enhanced non-ceramic insulators.
RDTA401501	$ 93,287	$ 3,301	Overhead Transmission Line Reference Manuals	EPRI's Red Book " Transmission Line Reference Book 345kV and Above" is considered an industry standard and valued asset to AEP transmission engineering. It was last updated in 1987. This project is to update the valuable reference to incorporate the latest operating experience and technologies.
RDTA401601	$ 54,461	$ 1,927	Switching Safety and Reliability	This EPRI collaborative brings together utilities to identify issues in ensuring safe reliable switching practices on T&D circuits, determine best practices and identify the direction of NERC and FERC requirements for system dispatcher and control center operators.
RDTA401701	$ 18,146	$ 642	AEP - USI Inclinometer	Develop and test an inclinometer based system to measure the sag of a transmission line and determine its dynamic thermal loading limit.
RDTA401801	$ 7,652	$ 271	Li-Ion Battery for Substation Protection & Control	Test, demonstrate at Trent Station, and evaluate the performance of li-ion batteries for substation protection and control over a 1.5 year period. The results will be compared to the conventional lead acid battery to determine the better choice for AEP in the future.
RDTA401901	$ 9,802	$ 347	Transmission Line EMI Detection	The EMI –GPS technique developed at DTC for Distribution has been tested on a 138kV transmission line during a helicopter aerial inspection survey. This project will further develop and analyze the data and value of EMI for Transmission line inspection and problem detection.
Grand Total	**$ 15,400,450**	**$ 511,709**		

2004 Work Order	Corporate Total	Ky Power Total	Title	Description
RDCP200301	$ 2,428,299	$ 104,175	R&D Program Development	Capture non-project specific research & development program development expenses
RDCP200401	$ 421,706	$ 18,102	Corporate issues EPRI Base Program	This is to cover the portion of the EPRI Base Program that is applicable to the operating companies (e.g., Occupational Health & Safety Issues)
RDCP400001	$ 111,411	$ 5,258	DTC Development & Demonstration	AEP's Dolan Technology Center (DTC) fabrication of small numbers of demonstration units
RDCP400101	$ 198	$ 8	Universal Control Development	Design and build a universal control circuit board and software library for use in grid connected power electronics applications at the distribution, transmission, and generation levels.
RDCP400201	$ (423)	$ (14)	Occupational Health and Safety	To do research and provide products for occupational safety and health issues for the electric utility industry.
RDCP400301	$ 5,582	$ 239	EPRI EMF Research	Perform and assess research by EPRI on Electromagnetic Field (EMF) health effects, including contact current and selection bias as possible explanations for a reported association between magnetic fields and childhood leukemia
RDCP400401	$ 597	$ 26	Infrastructure Security	This EPRI collaborative was developed in response to the September 11th attacks. It focuses on strategic spare parts, red teaming, vulnerability assessment and secure communications for utilities.
RDCP600001	$ 38,267	$ 1,642	Competitive Technology Intelligence	Capture non-project specific research & development expenses for the Emerging Technology program
RDDA400001	$ 187,494	$ 6,838	Advanced Distribution Program Management	Contingency funding for new Distribution related projects which come up and for non-specific project related travel such as conferences
RDDA400101	$ 19,723	$ 795	Disturbance Signature Analysis	This project utilizes data collected from the existing AEP-EPRI Distribution Power Quality and Reliability Bench Marking project and the future Disturbance Monitoring Project as well as data which will be made available from the Fast Fault Detector Project.
RDDA400201	$ 130,447	$ 5,363	System Disturbance Monitoring	This project is an expansion of the existing AEP-EPRI Distribution Power Quality and Reliability Bench Marking project. This phase provides for the collection of data from the AEP West territory.
RDDA400301	$ 14,845	$ 565	Distribution VAR Control	This project will utilize the emerging CDPD (Cellular Digital Packet Data) communications protocols in urban areas and / or 800 MHz systems in rural areas to communicate with our existing and new switched capacitor bank controls.
RDDA400401	$ 101,037	$ 3,731	Fast Fault Detector	These devices will monitor underground (UG) cables and determine when a threshold level of partial discharge (PD) activity has been surpassed. Once this has occurred, the device will send an alarm to a computer to alert an engineer that the cable may have deteriorated to a point where refurbishment is necessary.
RDDA400601	$ 25,255	$ 926	Li-Ion Battery Evaluation	Test, evaluate and demonstrate the performance and operating characteristics of the Li-ion battery technology as a UPS over a five-year period.
RDDA400701	$ 21,559	$ 837	Incipient Fault Detector	The incipient fault detection device is AEP's version of EPRI's Distribution Fault Anticipator. It is the platform from which the Fast Fault Detector, the System Disturbance Monitoring and the Signature Analysis projects will deploy in field applications.
RDDA400801	$ 2,200	$ 80	Premium Power Park - Phase 3	Investigate and demonstrate interaction between different technologies and medium voltage power quality (PQ) equipment, commercially available by different manufacturers, on a typical distribution system.
RDDA400901	$ 146,144	$ 5,391	CEA Distribution Projects	Programs offered by the Canadian Electric Association in support of distribution equipment maintenance practices and other research issues.

2004 Work Order	Corporate Total	Ky Power Total	Title	Description
RDDA401101	$ 5,034	$ 207	Power Quality Knowledge-Based Services	The program comprises a wide array of resources and tools. At the core of the program is a customer hotline offering round-the-clock power quality technical support. Complementing these products are four electronically distributed newsletters—*Signature, Current Connections, TechWatch* and *PQNews*
RDDA401201	$ 7,702	$ 274	Analyzing Distribution Reliability	The objective of this project is to provide analytical methodology and tools for quantifying the cost/risk tradeoff, for quantifying the strategic reliability risks associated with investment and O&M decision, and for planning system reliability consistent with area customer needs.
RDDA401401	$ 3,399	$ 120	Enhanced Distribution Monitoring	The purpose of this project is to test and evaluate low cost, low powered communications systems for distribution and station asset monitoring. In this project, several technologies will be tested as to their flexibility and capability to monitor and transfer information either along a distribution circuit or in a station yard.
RDDA401501	$ 99,267	$ 3,684	Distribution EMI Inspection Tool	Develop tools and processes that will assist the Distribution business unit in performing inspections of facilities, detecting failing equipment, performing predictive maintenance, and improving productivity. Tools will use Electromagnetic Interference (EMI) as a diagnostic tools of rotating equipment.
RDDA401701	$ 533,679	$ 18,615	Advanced Distribution EPRI Base Program	This is the work order for charging Distribution projects that are purchased as part of the EPRI base program
RDDA401801	$ 3,738	$ 133	Communications for Reclosurers & Switches	Building on the VAR Control project, build and test communications devices for reciosers and switches
RDDA401901	$ 226,731	$ 8,821	NEETRAC Membership	A cooperative research organization that will be used to complement DTC's capabilities with research in areas such as cable life extension, and other areas DTC is not directly engaged in.
RDDA402001	$ 6,430	$ 224	VAR Control Phase II	Will build upon the first phase by expanding the capabilities of the DTC communications gateway device. The device is to be deployed on capacitor contols to serve two functions, the communications gateway and the capacitor control
RDDA402101	$ 9,262	$ 328	Wireless Data Acquisition in Substations	Explore the use of wireless data acquisition in a substation environment. Specifically, the system will collect data from a variety of sensors located on equipment spread through-out the station, then transmit that data to a central location within the station. The data will then be transmitted to another location
RDDA402201	$ 93,361	$ 3,310	DSTAR Program 8	Provides 6 new R&D developed technology tools to improve Distribution asset management performance.
RDDA402301	$ 328,716	$ 11,654	NEETRAC Project Purchases	This Charter is set up funding for Closed Project purchases utilizing 2004 ADI Program funding. The projects being considered for purchase are: 1. Test Program to Evaluate OH & UG Fault Detectors; 2. Stray Voltage Concerns, Mitigation & Analysis; 3. Methodology to Determine Arrester Energy Handling Capability; 4. Significance of Partial Discharge in Cable Accessories; 5. Distribution Feeder Protection Strategies; 6. Online Partial Discharge Detection on Power System Equipment; 7. Life Cycling of the Distribution System; 8. Performance Evaluation of Distribution System MOV Arresters; 9. Distribution System Equipment – RCM Program Model; 10. Line Hardware Reliability Assessment; 11. Harmonic Metering
RDGA400001	$ 140,320	$ 5,493	Advanced Generation Program Management	Contingency funding for new project which come up and for non-specific project related travel such as conferences
RDGA400101	$ 591	$ 23	Plant Support - Alstom	Provide plant data to Alstom in support of DOE funded research & development study project. Project is a phase of the Rankine Cycle improvements program.
RDGA400201	$ 35,272	$ 1,508	Geologic Feasibility of CO2 Disposal/Sequestration	2-mile deep hole at Mountaineer to understand geologic feasibility of carbon sequestration in a saline aquifer, run by Battelle, funded by DOE and OCDO KPSC Case No. 2004-00341

2004 Work Order	Corporate Total	Ky Power Total	Title	Description
RDGA400301	$ 44,917	$ 1,935	Coal Utilitzation Research Council	Industry group which has significant impact on the direction of DOE's fossil energy budget.
RDGA400501	$ 8,903	$ 418	Coal Industry Advisory Board	To capture costs regarding AEP's participation in the Coal Industry Advisory Board (CIAB), which provides advice to the International Energy Agency on a wide range of issues regarding coal.
RDGA400601	$ 65,449	$ 2,733	MIT Carbon Sequestration Inititiative	Funding of a 10-member consortium to fund studies associated with carbon sequestration. The head, Dr. Herzog is a respected authority, and the studies he sponsors can have positive impact on CO2 policies
RDGA400701	$ 17,090	$ 776	FutureGen	AEP's participation in a 10-company consortium to build DOE's plant of the future, which includes IGCC, carbon sequestration, and hydrogen production
RDGA400801	$ 137,332	$ 4,565	Adv. Generation EPRI Base Program	This is the work order for charging Advanced Generation projects (e.g., IGCC research) that are purchased as part of the EPRI base program
RDGA400901	$ 31,811	$ 1,902	Midwest Regional Carbon Sequestration	Identify CO2 emission sources and sinks in the Midwest
RDGA401001	$ 20,405	$ 874	Novel Membrane Reactor for Direct Hydrogen Production from Coal	Determine the technical and economic feasibility of using the membrane reactor to produce hydrogen from coal.
RDGA500001	$ 395,328	$ 16,026	Environmental Controls Program Management	Contingency funding for new projects which come up and for non-specific project related travel such as conferences
RDGA500101	$ 17,853	$ 801	Gen III Coal Flow Monitor	Develop a coal flow measurement system architechture that will allow other communication platforms to be incorporated.
RDGA500301	$ (34,085)	$ (1,442)	Amos SCR Ammonia Mitigation	Evaluation of the effects of ammonia slip at Amos on the chemistry of the ash pond
RDGA500601	$ 3,862,258	$ 154,931	EPRI Environmental Science Program	This is the work order for charging the Environmental Sciences projects that are purchased as part of the EPRI base program. These projects focus on better understanding emissions and their interactions with the environment.
RDGA500701	$ 943,984	$ 37,853	EPRI Environmental Control Program	This is the work order for charging Environmental Controls projects (e.g., Particulate and Opacity Controls) that are purchased as part of the EPRI base program
RDGA500901	$ 107,721	$ 3,450	Ohio River Ecolological Research Program	High value EPRI TC program on effect of industrial discharges on Ohio River water quality - AEP has been involved in this research for 30 years
RDGA501201	$ 1,117,047	$ 47,377	General Mercury Science & Technology Investigations	Characterization of mercury emissions from system plants, investigations of technologies with the potential to remove mercury from emissions.
RDGA501401	$ 31,860	$ 1,491	SCR Catalyst Sample Test	Test samples of low SO2 to SO3 conversion rate catalysts for characteristics of NOx reduction activity and SO2 to SO3 conversion rate
RDGA501601	$ 104,390	$ 4,020	MIT Climate Change Program	Membership in the MIT Joint Program on the Science and Policy of Climate Change. The program focuses on the integration of natural and social science aspects of the climate issue to produce analyses relevant to ongoing national and international discussions.
RDGA501701	$ 156,336	$ 5,877	EPRI Climate Contingency Roadmap	EPRI TC Project to examine the impacts of alternative climate policy decisions, capabilities and costs of emission reduction options, and incentives for support of advanced climate related technology research
RDGA501801	$ 39,787	$ 1,583	Coal Flow Loop Measurement	Develop a facility where coal flows can be accurately controlled in order to evaluate various coal flow measurement systems in an environment similar to that in a working power plant. The ability to accurately measure pulverized coal flows in pipes will aid in control of plant combustion systems, helping to control the formation of nitrogen oxides.
RDGA502001	$ 21,009	$ 969	Mercury Characterization & Control Interest Group	Memebership in a group of utilities sharing information about mercury characterization in their plants and control options

2004 Work Order	Corporate Total	Ky Power Total	Title	Description
RDGA502101	$ 33,526	$ 1,183	Water Environment Research Foundation	Membership in an organization that provides a balanced water-quality research program addressing current research needs and forecasting future directions in collection and treatment, human health, water re-use and biosolids, and watersheds and ecosystems.
RDGA502201	$ 222,827	$ 8,484	Ash Pond SCR Ammonia Mitigation	Continued monitoring and data analysis of ash ponds with SCR-ammonia inputs to determine maximum ammonia mitigation potential and to optimize pond characteristics to achieve the best ammonia reductions.
RDGA502301	$ 1,146	$ 45	FGD Wastewater Analysis	Evaluation of the potential impact of FGD wastewater discharges on ash pond water chemistry and compliance with NPDES permit requirements.
RDGA502401	$ 10,373	$ 411	Method 324 Round Robin Laboratory Study	Under proposed EPA regulations, most coal-fired power plants will be required to monitor mercury emissions in their flue gases. One method proposed by EPA for such monitoring is "Method 324", an outgrowth of the EPRI-developed QuickSEM™ method. Currently, there are very few testing laboratories that have demonstrated the ability to analyze samples obtained using Method 324. This project will consist of an initial shakedown phase in which the laboratories will become familiar with the Method 324 analysis techniques, and in second phase, a round robin study, intended to determine the precision and accuracy of the analytical method. Because AEP's Dolan Chemical Laboratory has been performing Method 324 analyses for many months, we will participate only in Phase 2 of the study.
RDGA502501	$ 72,614	$ 2,749	Conesville Sorbent Testing Facility	A cooperative project among AEP, ADA Environmental Solutions, Alstom, DOE, and others to investigate the feasibility and effects of sorbent injection for mercury control on a full-scale system. The unit will most likely be installed in early 2005 on Conesville Unit 6.
RDGA502601	$ 25,934	$ 982	Continuous Mercury Monitoring	Assist the EPA and its contractors in developing a comprehensive field demonstration of certifiable continuous mercury monitors (CMMs) at two power plant sites that will address the recently identified impediments to commercial application of CMM technologies. Specific objectives include: 1. Development and documentation of Hg calibration and linearity procedures; 2.Drafting of an instrumental reference method for annual relative accuracy audits (RATA) 3.Documentation of reliability, operability and performance characteristics of the CMM, Ontario Hydro Method and Draft Method 324 (QSEMS), for low-level detection limits, typical of utility mercury emissions
RDGA600001	$ 80,190	$ 3,586	Generation Asset Program Management	Contingency funding for new project which come up and for non-specific project related travel such as conferences
RDGA600601	$ (15,919)	$ (677)	Corrosion Monitor Probe	Field test a novel multi-pronged process for managing waterwall corrosion in coal-fired utility boilers.
RDGA600901	$ 371,705	$ 13,032	GSU Acoustic Emission Monitors	Acquire necessary material to demonstrate wireless communications in the fossil plant environment as a tool to provided low cost diagnostics on critical devices. In particular this project is targeted at demonstrating the necessary components needed to monitor GSU (Generator Step Up transformers).
RDGA601001	$ 542,109	$ 18,029	Geneation EPRI Base Program	This is the work order for charging Generation Asset Management projects (e.g., Boiler Life Availability) that are purchased as part of the EPRI base program
RDGA601101	$ 24,186	$ 1,107	Wireless and EMI Demonstrations at Fossil Plants	Implementation of DTC wireless and EMI detection technologies at fossil plants.
RDGA601201	$ 25,934	$ 914	Validation of Austenitic Stainless Superheater and Reheater Tubing Conditions	Validation of EPRI technology for condition assessment and life prediction of austenitic stainless steel superheater and reheater tubing by comparing predictions from the EPRI models to samples removed from the to-be-scrapped reheater and superheater of Amos 3

2004 Work Order	Corporate Total	Ky Power Total	Title	Description
RDGA601301	$ 10,059	$ 444	Ceramic Boiler Tube Coating	This project will field install and evaluate an anti-oxidation silica coating form Oxistop, LLC in Conesville Unit 2 boiler. The installation will determine if vendor claims of reduced slag adherence, and corrosion protection of tubing is a valid claim.
RDGA601401	$ 505	$ 20	APTEC Advanced Ultrasonic Technology	APTEC will utilize Advanced Ultrasonic Technology to asses the internal deposits in the Mountaineer furnace tubing. Samples will be removed from the furnace to compare to data acquired with the non-invasive technology for validation. This technology will enable measurement of the scale thickness of more furnace tube locations than current sampling techniques, providing a better assessment of furnace condition. It will also provide potential for future tube scale measurement during furnace chemical cleaning providing better cleaning of the furnace and possibly reducing cleaning duration and time. The ultimate value will be increased furnace tube reliability.
RDGA700101	$ 77,615	$ 3,274	Picway Co-Firing	Demonstration project to determine the feasibility of co-firing biomass (waste wood). Results to be used to evaluate other AEP plants.
RDGA700201	$ 48,121	$ 1,600	Renewable Energy Sources EPRI Base Program	This work order will be used for charging the Renewable Energy Resources portion of the EPRI Base Program; specifically Programs PS84E - Biomass Energy, and PS84.001 - Renewable Energy Technology Assessment Guide.
RDGA700301	$ 58,938	$ 2,244	Muskingum River Biomass Co-fire	Feasibility study on co-firing biomass in cyclone boilers
RDGA700401	$ 47,111	$ 2,213	Biomass Resource Assessment	Quantify the type, amount and location of biomass fuel for use in AEP plants in OH and WV.
RDGA700501	$ 3,008	$ 122	Biomass Gasification Research Technical Advisory Panel	Participate in Technical Advisory Panel for the GTI Gasification Research Project. Expenses are limited to time and travel
RDTA400001	$ 280,770	$ 9,949	Transmission Program Management	Contingency funding for new project which come up and for non-specific project related travel such as conferences
RDTA400101	$ 68,222	$ 2,417	CEA Equipment Maintenance	Low overhead collaborative focus on member driven station maintenance needs and problems. The two projects that AEP is funding are 1) Prediction of Remaining Life of Power Connectors and Disconnect Switches and 2) T&D Transformer Oil Containment, Spill Prevention and Management
RDTA400201	$ 67,740	$ 2,400	UCA/IEC 61850 Testing	At Dolan, support the testing of substation (IED's) intelligent electronic devices (digital relays, meters, etc), which conform to the UCA/IEC Standard #61850. This is a continuation of the ongoing AEP, utility industry , and EPRI research project for standardized "plug and play" communications in substations.
RDTA400301	$ 51,623	$ 1,829	High Temp. Low Sag Conductor	This project evaluates the performance of selected transmission line conductors that are capable of significantly increasing the capacity of thermally constrained lines without the need for extensive tower redesign.
RDTA400501	$ 37,517	$ 1,330	345kV Optical Instrument Transformer	AEP purchased NxtPhase's first three phase set of 345kV optical voltage and current transformers. They have been installed at Corridor station. The output data is being recorded and compared to conventional oil filled instruments for reliability, safety accuracy and cost. AEP will migrate to this technology if it proves to be superior.
RDTA400601	$ 91,196	$ 3,232	CERTS Phasor Application	CERTS (Consortium for Electric Reliability Technology Solutions) funded by DOE is providing applications tools to AEP to analyze real time data captured by AEP PMUs (phasor monitoring units). This project also funds the development at DTC of the AEP PDC (phasor data concentrator) for the PMUs.
RDTA400701	$ 3,659	$ 130	Emergency Rating Temperatures on XLPE Cable	This EPRI project determines the impact of increasing the safety margin in the operation of XLPE transmission cables under emergency operation in order to increase reliability and reduce equipment failures. The project will determine the temperature at which cables can operate for 100 hours and 300 hours.

2004 Work Order	Corporate Total	Ky Power Total	Title	Description
RDTA400801	$ 997	$ 35	Pressurization Procedures for Pipe-Type Cable Systems	Define and document procedures to reduce time to return underground oil filled transmission cables to service after an outage. There are tradeoffs between the time to re-pressurize and energize the cables and the chances of repeated equipment electric failures.
RDTA401201	$ 37,543	$ 1,330	PRA Tools for Transmission Planning	Develop improved transmission reliability assessment tools using PRA (probabilistic techniques) to account for uncertainties of transmission outages and other stochastic operations variables.
RDTA401301	$ 106,403	$ 3,771	Automated Station Data Utilization Demonstration	Develop a system that leverages the automated station data and converts millions of data points into useful information via data filtering software.
RDTA401401	$ 760	$ 27	Enhanced Non-Ceramic Insulator Performance	Improve selection, application, and inspection of enhanced non-ceramic insulators.
RDTA401501	$ 2,462	$ 87	Overhead Transmission Line Reference Manuals	EPRI's Red Book " Transmission Line Reference Book 345kV and Above" is considered an industry standard and valued asset to AEP transmission engineering. It was last updated in 1987. This project is to update the valuable reference to incorporate the latest operating experience and technologies.
RDTA401701	$ 66,589	$ 2,360	AEP - USI Inclinometer	Develop and test an inclinometer based system to measure the sag of a transmission line and determine its dynamic thermal loading limit.
RDTA401801	$ 47,554	$ 1,685	Li-Ion Battery for Substation Protection & Control	Test, demonstrate at Trent Station, and evaluate the performance of li-ion batteries for substation protection and control over a 1.5 year period. The results will be compared to the conventional lead acid battery to determine the better choice for AEP in the future.
RDTA401901	$ 16,592	$ 590	Transmission Line EMI Detection	The EMI –GPS technique developed at DTC for Distribution has been tested on a 138kV transmission line during a helicopter aerial inspection survey. This project will further develop and analyze the data and value of EMI for Transmission line inspection and problem detection.
RDTA402001	$ 26,805	$ 950	Blacksburg 69kV Underground Cable	The EMI detection system developed by Dolan and being tested on T&D overhead lines will be installed on the Blacksburg 69kV underground cable circuit. This will help determine the system's value for underground applications
RDTA402201	$ 19,836	$ 703	Converter Station Frequency	A follow-on project to the recent study on the Back to Back HVDC system at AEP's Eagle Pass Station, to investigate high frequency impacts on insulation in systems with power electronics based controllers. The project includes an investigation to quantify the relationship and threshold levels of harmonic content on insulation degradation, building on historical published results of earlier studies of abnormal voltage and frequency effects
RDTA402301	$ 17,414	$ 617	EHV Transformer Condition Monitoring	Will apply cross cutting, low cost technologies developed at Dolan to AEP Transmission EHV transformers. The package will include EMI, acoustics and dissolved gas monitors. The data will be trended, analyzed locally, with anomalies reported to mitigate failures
RDTA402401	$ 23,865	$ 846	Station Equipment Maintenance	Define and implement AEP station equipment life cycle optimization strategies and processes based on evaluating and quantifying the impact of deferred maintenance for various station equipment types that are currently on a time based maintenance schedule.
RDTA402501	$ 438,646	$ 15,544	Transmission EPRI Base Program	This is the work order for charging Transmission projects that are purchased as part of the EPRI base program
RDTA402601	$ 74,446	$ 2,638	PowerWorld Visualization Tools	This will evaluate a visualization tool developed by PowerWorld. The visualization 2D and 3D graphics included voltage and reactive power contour maps, real-time state estimator data, historical data, and security analysis data (contingency analysis and pricing data).

2004 Work Order	Corporate Total	Ky Power Total	Title	Description
RDTA402701	$ 103,106	$ 3,654	Pserc	Pserc (Power System Engineering Research Center) is a highly leveraged NSF university-industry consortium. Research areas include: transmission, distribution, system operations, and deregulated electricity market models. Benefits include focused and directed R&D, technical issue resolution, and support for leading U.S. power programs
RDTA402801	$ 27,656	$ 980	Transformer Acoustics Emissions (ORNL)	A CRADA project has been established with Oak Ridge National Lab to develop and test a distributed acoustic fiber optic sensor system to be installed inside station transformers for early detection of partial discharge to prevent transformer failures. Participants include AEP, TVA, Airak and the State of Ohio
RDTA402901	$ 14,966	$ 530	Dynamic Thermal Circuit Rating	Applies the EPRI PTLoad off line software program in a real time DTCR (dynamic thermal circuit rating) application on two EHV transformers. The objective is to learn how real time loading and estimated loss of life consequences can aid system operators maximize asset utilization and more reliably operate the transmission grid
RDTA403001	$ 5,977	$ 212	Transmission Reliability Performance Metrics	Will develop the fundamental theory including underlying definitions, metrics and data methodology for the comparison of transmission and substation system level & equipment performance. The project will standardize transmission system availability metrics and resulting comparisons through collaborative development of definitions and data methodology.
RDTA403101	$ 31,004	$ 1,099	In-Service NCI Inspection Tool	Develop a technique/tool to detect mechanical and electrical defects in new and in-service NCI (non ceramic insulators). An EPRI survey found that approximately 1 in every 65,000 NCI sold have failed in-service. These failures have resulted in dropped lines, costly outages and safety concerns. Today there is no reliable method to determine the integrity of in-service NCI's.
Grand Total	**$ 15,540,568**	**$ 613,202**		

12-Months Ended June 2005

Work Order	Corporate Total	Ky Power Total	Title	Description
RDCP200301	$ 2,151,062	$ 90,696	R&D Program Development	Capture non-project specific research & development program development expenses
RDCP200401	$ 210,160	$ 8,897	Corporate Issues EPRI Base...	This is to cover the portion of the EPRI Base Program that is applicable to the operating companies (e.g., Occupational Health & Safety Issues)
RDCP400001	$ 82,748	$ 3,830	DTC Development & Demonstration	AEP's Dolan Technology Center (DTC) fabrication of small numbers of demonstration units
RDCP400301	$ 11,384	$ 479	EPRI EMF Research	Perform and assess research by EPRI on Electromagnetic Field (EMF) health effects, including contact current and selection bias as possible explanations for a reported association between magnetic fields and childhood leukemia
RDCP600001	$ 31,230	$ 1,318	*Competitive Technology Intelligence*	Capture non-project specific research & development expenses for the Emerging Technology program
RDDA400001	$ 215,602	$ 7,619	Advanced Distribution Program Management	Contingency funding for new Distribution related projects which come up and for non-specific project related travel such as conferences
RDDA400101	$ 11,563	$ 504	Disturbance Signature Analysis	This project utilizes data collected from the existing AEP-EPRI Distribution Power Quality and Reliability Bench Marking project and the future Disturbance Monitoring Project as well as data which will be made available from the Fast Fault Detector Project.
RDDA400201	$ 27,323	$ 1,122	System Disturbance Monitoring	This project is an expansion of the existing AEP-EPRI Distribution Power Quality and Reliability Bench Marking project. This phase provides for the collection of data from the AEP West territory.
RDDA400301	$ 534	$ 19	Distribution VAR Control	This project will utilize the emerging CDPD (Cellular Digital Packet Data) communications protocols in urban areas and / or 800 MHz systems in rural areas to communicate with our existing and new switched capacitor bank controls.
RDDA400401	$ 86,370	$ 3,067	Fast Fault Detector	These devices will monitor underground (UG) cables and determine when a threshold level of partial discharge (PD) activity has been surpassed. Once this has occurred, the device will send an alarm to a computer to alert an engineer that the cable may have deteriorated to a point where refurbishment is necessary.
RDDA400601	$ 23,621	$ 839	Li-Ion Battery Evaluation	Test, evaluate and demonstrate the performance and operating characteristics of the Li-ion battery technology as a UPS over a five-year period.
RDDA400801	$ 491	$ 17	Premium Power Park - Phase 3	Investigate and demonstrate interaction between different technologies and medium voltage power quality (PQ) equipment, commercially available by different manufacturers, on a typical distribution system.
RDDA400901	$ 86,277	$ 3,058	CEA Distribution Projects	Programs offered by the Canadian Electric Association in support of distribution equipment maintenance practices and other research issues.
RDDA401201	$ 7,702	$ 274	Analyzing Distribution Reliability	The objective of this project is to provide analytical methodology and tools for quantifying the cost/risk tradeoff, for quantifying the strategic reliability risks associated with investment and O&M decision, and for planning system reliability consistent with area customer needs.
RDDA401401	$ 68,201	$ 2,397	Enhanced Distribution Monitoring	The purpose of this project is to test and evaluate low cost, low powered communications systems for distribution and station asset monitoring. In this project, several technologies will be tested as to their flexibility and capability to monitor and transfer information either along a distribution circuit or in a station yard.
RDDA401501	$ 107,888	$ 3,817	Distribution EMI Inspection Tool	Develop tools and processes that will assist the Distribution business unit in performing inspections of facilities, detecting failing equipment, performing predictive maintenance, and improving productivity. *Tools will use Electromagnetic Interference (EMI) as a* diagnostic tools of rotating equipment.
RDDA401601	$ 32,000	$ 1,501	Underground Duct Rehabilitation	Develop a practical and cost effective method to rehabilitate or replace three through five inch composite fiber conduit pipe.
RDDA401701	$ 712,302	$ 24,778	Advanced Distribution EPRI Base Program	This is the work order for charging Distribution projects that are purchased as part of the EPRI base program
RDDA401801	$ 3,738	$ 133	Communications for Reclosurers & Switches	Building on the VAR Control project, build and test communications devices for reclosers and switches
RDDA401901	$ 13,565	$ 479	NEETRAC Membership	A cooperative research organization that will be used to complement DTC's capabilities with research in areas such as cable life extension, and other areas DTC is not directly engaged in.

12-Months Ended June 2005

Work Order	Corporate Total	Ky Power Total	Title	Description
RDDA402001	$ 1,668	$ 58	VAR Control Phase II	Will build upon the first phase by expanding the capabilities of the DTC communications gateway device. The device is to be deployed on capacitor controls to serve two functions, the communications gateway and the capacitor control
RDDA402101	$ 11,348	$ 402	Wireless Data Acquisition in Substations	Explore the use of wireless data acquisition in a substation environment. Specifically, the system will collect data from a variety of sensors located on equipment spread through-out the station, then transmit that data to a central location within the station. The data will then be transmitted to another location
RDDA402201	$ 96,385	$ 3,417	DSTAR Program 8	Provides 6 new R&D developed technology tools to improve Distribution asset management performance.
RDDA402301	$ 328,716	$ 11,654	NEETRAC Project Purchases	This Charter is set up funding for Closed Project purchases utilizing 2004 ADI Program funding. The projects being considered for purchase are: 1. Test Program to Evaluate OH & UG Fault Detectors; 2. Stray Voltage Concerns, Mitigation & Analysis; 3. Methodology to Determine Arrester Energy Handling Capability; 4. Significance of Partial Discharge in Cable Accessories; 5. Distribution Feeder Protection Strategies; 6. Online Partial Discharge Detection on Power System Equipment; 7. Life Cycling of the Distribution System; 8. Performance Evaluation of Distribution System MOV Arresters; 9. Distribution System Equipment – RCM Program Model; 10. Line Hardware Reliability Assessment; 11. Harmonic Metering
RDDA402401	$ 20,204	$ 945	Gridwise Membership	The GridWise Alliance is a consortium of public and private stakeholders who have joined together in a collaborative effort to provide real-world technology solutions to support the U.S. Department of Energy's vision of a transformed national electric system. An electric system that will employ new distributed "plug and play" technologies using advanced telecommunications, information and control approaches to create a society of devices that functions as an integrated transactive system. The goal is to demonstrate a smart, automated network of distributed utilities to achieve a 10% peak load reduction through improved asset utilization and demand/load management, building on the backbone of an open but secure distribution system architecture, under the industry-supported GridWise framework, that is also responsive to providing customer choice in electricity costs vs. values, as well as infrastructure security against all disturbance events.
RDDO200501	$ 227,102	$ 9,543	Dolan Operations	This covers the basic operating costs for maintaining the Dolan Technology Center
RDGA400001	$ 194,509	$ 6,963	Advanced Generation Program Management	Contingency funding for new project which come up and for non-specific project related travel such as conferences
RDGA400201	$ 7,241	$ 273	Geologic Feasibility of CO2 Disposal/Sequestration	2-mile deep hole at Mountaineer to understand geologic feasibility of carbon sequestration in a saline aquifer, run by Battelle, funded by DOE and OCDO
RDGA400301	$ 73,795	$ 2,702	Coal Utilitzation Research Council	Industry group which has significant impact on the direction of DOE's fossil energy budget.
RDGA400501	$ 6,556	$ 309	Coal Industry Advisory Board	To capture costs regarding AEP's participation in the Coal Industry Advisory Board (CIAB), which provides advice to the International Energy Agency on a wide range of issues regarding coal.
RDGA400601	$ 36,815	$ 1,447	MIT Carbon Sequestration Inititiative	Funding of a 10-member consortium to fund studies associated with carbon sequestration. The head, Dr. Herzog is a respected authority, and the studies he sponsors can have positive impact on CO2 policies
RDGA400701	$ 22,095	$ 891	FutureGen	AEP's participation in a 10-company consortium to build DOE's plant of the future, which includes IGCC, carbon sequestration, and hydrogen production
RDGA400801	$ 136,223	$ 4,586	Adv. Generation EPRI Base Program	This is the work order for charging Advanced Generation projects (e.g., IGCC research) that are purchased as part of the EPRI base program
RDGA400901	$ 4,838	$ 247	Midwest Regional Carbon Sequestration	Identify CO2 emission sources and sinks in the Midwest
RDGA401001	$ 10,285	$ 454	Novel Membrane Reactor for Direct Hydrogen Production from Coal	Determine the technical and economic feasibility of using the membrane reactor to produce hydrogen from coal.
RDGA500001	$ 368,535	$ 14,169	Environmental Controls Program Management	Contingency funding for new project which come up and for non-specific project related travel such as conferences
RDGA500301	$ 554	$ 23	Amos SCR Ammonia Mitigation	Evaluation of the effects of ammonia slip at Amos on the chemistry of the ash pond

12-Months Ended June 2005

Work Order	Corporate Total	Ky Power Total	Title	Description
RDGA500601	$ 4,030,951	$ 143,879	EPRI Environmental Science Program	This is the work order for charging the Environmental Sciences projects that are purchased as part of the EPRI base program. These projects focus on better understanding emissions and their interactions with the environment.
RDGA500701	$ 953,585	$ 34,202	EPRI Environmental Control Program	This is the work order for charging Environmental Controls projects (e.g., Particulate and Opacity Controls) that are purchased as part of the EPRI base program
RDGA500901	$ 188,417	$ 5,957	Ohio River Ecolological Research Program	High value EPRI TC program on effect of industrial discharges on Ohio River water quality - AEP has been involved in this research for 30 years
RDGA501201	$ 1,036,680	$ 41,147	General Mercury Science & Technology Investigations	Characterization of mercury emissions from system plants, investigations of technologies with the potential to remove mercury from emissions.
RDGA501401	$ 31,860	$ 1,491	SCR Catalyst Sample Test	Test samples of low SO2 to SO3 conversion rate catalysts for characteristics of NOx reduction activity and SO2 to SO3 conversion rate
RDGA501601	$ 51,867	$ 1,844	MIT Climate Change Program	Membership in the MIT Joint Program on the Science and Policy of Climate Change. The program focuses on the integration of natural and social science aspects of the climate issue to produce analyses relevant to ongoing national and international discussions.
RDGA501701	$ 77,801	$ 2,766	EPRI Climate Contingency Roadmap	EPRI TC Project to examine the impacts of alternative climate policy decisions, capabilities and costs of emission reduction options, and incentives for support of advanced climate related technology research
RDGA501801	$ 40,710	$ 1,612	Coal Flow Loop Measurement	Develop a facility where coal flows can be accurately controlled in order to evaluate various coal flow measurement systems in an environment similar to that in a working power plant. The ability to accurately measure pulverized coal flows in pipes will aid in control of plant combustion systems, helping to control the formation of nitrogen oxides.
RDGA502001	$ 20,676	$ 911	Mercury Characterization & Control Interest Group	Memebership in a group of utilities sharing information about mercury characterization in their plants and control options
RDGA502101	$ 34,147	$ 1,203	Water Environment Research Foundation	Membership in an organization that provides a balanced water-quality research program addressing current research needs and forecasting future directions in collection and treatment, human health, water re-use and biosolids, and watersheds and ecosystems.
RDGA502201	$ 157,964	$ 6,350	Ash Pond SCR Ammonia Mitigation	Continued monitoring and data analysis of ash ponds with SCR-ammonia inputs to determine maximum ammonia mitigation potential and to optimize pond characteristics to achieve the best ammonia reductions.
RDGA502301	$ 1,146	$ 45	FGD Wastewater Analysis	Evaluation of the potential impact of FGD wastewater discharges on ash pond water chemistry and compliance with NPDES permit requirements.
RDGA502401	$ 10,373	$ 411	Method 324 Round Robin Laboratory Study	Under proposed EPA regulations, most coal-fired power plants will be required to monitor mercury emissions in their flue gases. One method proposed by EPA for such monitoring is "Method 324", an outgrowth of the EPRI-developed QuickSEM™ method. Currently, there are very few testing laboratories that have demonstrated the ability to analyze samples obtained using Method 324. This project will consist of an initial shakedown phase in which the laboratories will become familiar with the Method 324 analysis techniques, and in second phase, a round robin study, intended to determine the precision and accuracy of the analytical method. Because AEP's Dolan Chemical Laboratory has been performing Method 324 analyses for many months, we will participate only in Phase 2 of the study.
RDGA502501	$ 155,164	$ 6,187	Conesville Sorbent Testing Facility	A cooperative project among AEP, ADA Environmental Solutions, Alstom, DOE, and others to investigate the feasibility and effects of sorbent injection for mercury control on a full-scale system. The unit will most likely be installed in early 2005 on Conesville Unit 6.

12-Months Ended June 2005

Work Order	Corporate Total	Ky Power Total	Title	Description
RDGA502601	$ 25,934	$ 982	Continuous Mercury Monitoring	Assist the EPA and its contractors in developing a comprehensive field demonstration of certifiable continuous mercury monitors (CMMs) at two power plant sites that will address the recently identified impediments to commercial application of CMM technologies. Specific objectives include: 1. Development and documentation of Hg calibration and linearity procedures, 2.Drafting of an instrumental reference method for annual relative accuracy audits (RATA) 3.Documentation of reliability, operability and performance characteristics of the CMM, Ontario Hydro Method and Draft Method 324 (QSEMS), for low-level detection limits, typical of utility mercury emissions
RDGA600001	$ 131,031	$ 5,735	Generation Asset Program Management	Contingency funding for new projects which come up and for non-specific project related travel such as conferences
RDGA600901	$ 444,264	$ 15,373	GSU Acoustic Emission Monitors	Acquire necessary material to demonstrate wireless communications in the fossil plant environment as a tool to provided low cost diagnostics on critical devices. In particular this project is targeted at demonstrating the necessary components needed to monitor GSU (Generator Step Up transformers).
RDGA601001	$ 546,447	$ 18,389	Geneation EPRI Base Program	This is the work order for charging Generation Asset Management projects (e.g., Boiler Life Availability) that are purchased as part of the EPRI base program
RDGA601101	$ 116,557	$ 4,575	Wireless and EMI Demonstrations at Fossil Plants	Implementation of DTC wireless and EMI detection technologies at fossil plants.
RDGA601201	$ 25,934	$ 914	Validation of Austenitic Stainless Superheater and Reheater Tubing Conditions	Validation of EPRI technology for condition assessment and life prediction of austenitic stainless steel superheater and reheater tubing by comparing predictions from the EPRI models to samples removed from the to-be-scrapped reheater and superheater of Amos 3
RDGA601301	$ 25,059	$ 1,056	Ceramic Boiler Tube Coating	This project will field install and evaluate an anti-oxidation silica coating from Oxistop, LLC in Conesville Unit 2 boiler. The installation will determine if vendor claims of reduced slag adherence, and corrosion protection of tubing is a valid claim.
RDGA601401	$ 10,775	$ 376	APTEC Advanced Ultrasonic Technology	APTEC will utilize Advanced Ultrasonic Technology to asses the internal deposits in the Mountaineer furnace tubing. Samples will be removed from the furnace to compare to data acquired with the non-invasive technology for validation. This technology will enable measurement of the scale thickness of more furnace tube locations than current sampling techniques, providing a better assessment of furnace condition. It will also provide potential for future tube scale measurement during furnace chemical cleaning providing better cleaning of the furnace and possibly reducing cleaning duration and time. The ultimate value will be increased furnace tube reliability.
RDGA700101	$ 64,330	$ 2,562	Picway Co-Firing	Demonstration project to determine the feasibility of co-firing biomass (waste wood). Results to be used to evaluate other AEP plants.
RDGA700201	$ 58,710	$ 1,959	Renewable Energy Sources EPRI Base Program	This work order will be used for charging the Renewable Energy Resources portion of the EPRI Base Program; specifically Programs PS84E - Biomass Energy, and PS84.001 - Renewable Energy Technology Assessment Guide.
RDGA700301	$ 90,014	$ 3,294	Muskingum River Biomass Co-fire	Feasibility study on co-firing biomass in cyclone boilers
RDGA700401	$ 47,111	$ 2,213	Biomass Resource Assessment	Quantify the type, amount and location of biomass fuel for use in AEP plants in OH and WV.
RDGA700501	$ 492	$ 17	Biomass Gasification Research Technical Advisory Panel	Participate in Technical Advisory Panel for the GTI Gasification Research Project. Expenses are limited to time and travel
RDTA400001	$ 239,841	$ 8,477	Transmission Program Management	Contingency funding for new projects which come up and for non-specific project related travel such as conferences
RDTA400101	$ 69,219	$ 2,446	CEA Equipment Maintenance	Low overhead collaborative focus on member driven station maintenance needs and problems. The two projects that AEP is funding are 1) Prediction of Remaining Life of Power Connectors and Disconnect Switches and 2) T&D Transformer Oil Containment, Spill Prevention and Management
RDTA400201	$ 79,119	$ 2,793	UCA/IEC 61850 Testing	At Dolan, support the testing of substation (IED's) intelligent electronic devices (digital relays, meters, etc), which conform to the UCA/IEC Standard #61850. This is a continuation of the ongoing AEP, utility industry , and EPRI research project for standardized "plug and play" communications in substations.

12-Months Ended June 2005

Work Order	Corporate Total	Ky Power Total	Title	Description
RDTA400301	$ 27,754	$ 983	High Temp. Low Sag Conductor	This project evaluates the performance of selected transmission line conductors that are capable of significantly increasing the capacity of thermally constrained lines without the need for extensive tower redesign.
RDTA400501	$ 63,693	$ 2,251	345kV Optical Instrument Transformer	AEP purchased NxtPhase's first three phase set of 345kV optical voltage and current transformers. They have been installed at Corridor station. The output data is being recorded and compared to conventional oil filled instruments for reliability, safety accuracy and cost. AEP will migrate to this technology if it proves to be superior.
RDTA400601	$ 105,839	$ 3,737	CERTS Phasor Application	CERTS (Consortium for Electric Reliability Technology Solutions) funded by DOE is providing applications tools to AEP to analyze real time data captured by AEP PMUs (phasor monitoring units). This project also funds the development at DTC of the AEP PDC (phasor data concentrator) for the PMUs.
RDTA400801	$ 597	$ 21	Pressurization Procedures for Pipe-Type Cable Systems	Define and document procedures to reduce time to return underground oil filled transmission cables to service after an outage. There are tradeoffs between the time to re-pressurize and energize the cables and the chances of repeated equipment electric failures.
RDTA401201	$ 12,318	$ 437	PRA Tools for Transmission Planning	Develop improved transmission reliability assessment tools using PRA (probabilistic techniques) to account for uncertainties of transmission outages and other stochastic operations variables.
RDTA401501	$ 458	$ 16	Overhead Transmission Line Reference Manuals	EPRI's Red Book " Transmission Line Reference Book 345kV and Above" is considered an industry standard and valued asset to AEP transmission engineering. It was last updated in 1987. This project is to update the valuable reference to incorporate the latest operating experience and technologies.
RDTA401701	$ 47,272	$ 1,684	AEP - USI Inclinometer	Develop and test an inclinometer based system to measure the sag of a transmission line and determine its dynamic thermal loading limit.
RDTA401801	$ 37,129	$ 1,314	Li-Ion Battery for Substation Protection & Control	Test, demonstrate at Trent Station, and evaluate the performance of li-ion batteries for substation protection and control over a 1.5 year period. The results will be compared to the conventional lead acid battery to determine the better choice for AEP in the future.
RDTA401901	$ 33,311	$ 1,170	Transmission Line EMI Detection	The EMI –GPS technique developed at DTC for Distribution has been tested on a 138kV transmission line during a helicopter aerial inspection survey. This project will further develop and analyze the data and value of EMI for Transmission line inspection and problem detection.
RDTA402001	$ 55,350	$ 1,952	Blacksburg 69kV Underground Cable	The EMI detection system developed by Dolan and being tested on T&D overhead lines will be installed on the Blacksburg 69kV underground cable circuit. This will help determine the system's value for underground applications
RDTA402201	$ 22,183	$ 785	Converter Station Frequency	A follow-on project to the recent study on the Back to Back HVDC system at AEP's Eagle Pass Station, to investigate high frequency impacts on insulation in systems with power electronics based controllers. The project includes an investigation to quantify the relationship and threshold levels of harmonic content on insulation degradation, building on historical published results of earlier studies of abnormal voltage and frequency effects
RDTA402301	$ 30,243	$ 1,070	EHV Transformer Condition Monitoring	Will apply cross cutting, low cost technologies developed at Dolan to AEP Transmission EHV transformers. The package will include EMI, acoustics and dissolved gas monitors. The data will be trended, analyzed locally, with anomalies reported to mitigate failures
RDTA402401	$ 23,810	$ 844	Station Equipment Maintenance	Define and implement AEP station equipment life cycle optimization strategies and processes based on evaluating and quantifying the impact of deferred maintenance for various station equipment types that are currently on a time based maintenance schedule.
RDTA402501	$ 502,478	$ 17,739	Transmission EPRI Base Program	This is the work order for charging Transmission projects that are purchased as part of the EPRI base program
RDTA402601	$ 86,452	$ 3,059	PowerWorld Visualization Tools	This will evaluate a visualization tool developed by PowerWorld. The visualization 2D and 3D graphics included voltage and reactive power contour maps, real-time state estimator data, historical data, and security analysis data (contingency analysis and pricing data).

12-Months Ended June 2005

Work Order	Corporate Total	Ky Power Total	Title	Description
RDTA402701	$ 72,115	$ 2,551	Pserc	Pserc (Power System Engineering Research Center) is a highly leveraged NSF university-industry consortium. Research areas include: transmission, distribution, system operations, and deregulated electricity market models. Benefits include focused and directed R&D, technical issue resolution, and support for leading U.S. power programs
RDTA402801	$ 1,478	$ 52	Transformer Acoustics Emissions (ORNL)	A CRADA project has been established with Oak Ridge National Lab to develop and test a distributed acoustic fiber optic sensor system to be installed inside station transformers for early detection of partial discharge to prevent transformer failures. Participants include AEP, TVA, Airak and the State of Ohio
RDTA402901	$ 20,080	$ 710	Dynamic Thermal Circuit Rating	Applies the EPRI PTLoad off line software program in a real time DTCR (dynamic thermal circuit rating) application on two EHV transformers. The objective is to learn how real time loading and estimated loss of life consequences can aid system operators maximize asset utilization and more reliably operate the transmission grid
RDTA403001	$ 15,588	$ 550	Transmission Reliability Performance Metrics	Will develop the fundamental theory including underlying definitions, metrics and data methodology for the comparison of transmission and substation system level & equipment performance. The project will standardize transmission system availability metrics and resulting comparisons through collaborative development of definitions and data methodology.
RDTA403101	$ 31,115	$ 1,103	In-Service NCI Inspection Tool	Develop a technique/tool to detect mechanical and electrical defects in new and in-service NCI (non ceramic insulators). An EPRI survey found that approximately 1 in every 65,000 NCI sold have failed in-service. These failures have resulted in dropped lines, costly outages and safety concerns. Today there is no reliable method to determine the integrity of in-service NCI's.
RDTA403201	$ 8,434	$ 295	CEA Transmission Line Interest Group	Low overhead collaborative focus on member driven transmission line maintenance needs and problems. AEP funded a 2004 project in condition assessment techniques for wood cross arms. Several promising projects will be funded in 2005, including an asset management approach to tower painting. CEA is Canadian Electricity Assoc.
RDTA403401	$ 26,475	$ 929	SuperPower HTS Matrix Fault Current Limiter	SuperPower is developing a HTS based fault current limiter (MFCL) for a 138kV application. AEP has the need for several MFCL where existing circuit breakers could be subjected to fault current levels exceeding their ratings. The MFCL is an alternative to replacing these breakers. Sporn 138kV station has been selected as the likely AEP demonstration site.
RDTA403501	$ 6,955	$ 245	Reducing Transmission Wood Pole Fires	Steel cross arms will no longer be used on AEP 69 kV wood H-frame structures. While this will significantly improve the lightning performance of the structures, it will increase the long-term exposure to pole fires due to leakage current across the wood cross arms. This project will determine which commercially available Non Ceramic Insulator best withstands leakage currents under contaminated conditions and will recommend solutions to reduce/eliminate transmission wood pole fires in areas of high contamination.
RDTA403601	$ 9,205	$ 322	ABB CAT Reactor Synchronous Switching	Prove the capability of the ABB "CAT" control system to precisely close AEP 765 kV reactor breakers at a point in time to minimize transient inrush and extend the life of the aging 100 MVAR single-phase oil filled reactors. Presently most of AEP's 765 kV shunt reactors are switched with 765 kV circuit breakers. Reactor bank energization results in high levels of current with dc component. These currents may result in mechanical stress of the reactor windings or may cause saturation of transformers in the vicinity and high levels of harmonic currents. For reactor bank de-energization, the circuit breakers are either protected by opening resistors or surge arresters mounted across the interrupters. The opening resistors or the surge arresters protect the breaker from high transient voltages in case of chopping reactive current and re-ignition/re-strike which can result in breaker failure. In spite of surge arrester application, for example, very high frequency re-ignition transient voltages can occur which would stress the shunt reactor windings and or deteriorate the breaker contacts. In order to reduce the adverse effects from energization or de-energization it is recommende

12-Months Ended June 2005

Work Order	Corporate Total	Ky Power Total	Title	Description
RDTA403701	$ 31,344	$ 1,099	Galloping Conductor Mitigation Trial	Install galloping mitigation attachments to a selected 345kV span in Indiana to evaluate effectiveness, longevity and maintainability. Two models (EHV and non-EHV) of the PLP (Preformed Line Products) Air Flow Spoilers will first be electrically tested at Dolan Technology Center for corona, audible noise and radio interference performance. Based on the test results, several units of one of the designs will be installed on the bottom conductor of one of the double circuit Desoto Sorenson 345 kV circuits. Ground clearance of the conductor will be measured and a stationary video camera will record its motion as compared to that of the conductors with no spoilers installed. Results of the project will be used to make BU Air Flow Spoiler purchase and deployment decisions for lines prone to galloping.
RDTA404001	$ 14,209	$ 1,008	High Temp Superconducting Cable	This project will develop a high temperature superconducting, three phase, triax cable and demonstrate its suitability for a high power substation underground retrofit application. AEP is hosting the demonstration at Columbus' Bixby Substation as part of a $9M DOE Superconducting Partnership Initiative project. If successful, it will further DOE's objectives to accelerate the introduction of HTS cables into the utility grid. The cable will operate in real life conditions as the primary source to the Bixby 13.2kV bus and distribution feeders supplying electricity to industrial and residential users. Both closed loop pulse tube and open loop cryogenic cooling will be demonstrated. The project will answer user's questions regarding long length application, the triax cable design, cryogenics cooling systems, system reliability and O&M costs. The cable and support systems will be removed and the station restored after the 1-2 year demonstration is completed.
Grand Total	**$ 15,482,693**	**$ 578,020**		

Kentucky Power Company

REQUEST

Provide the average number of customers for each customer class (i.e., residential, commercial, and industrial) for the 3 calendar years preceding the test year, the test year, and for each month of the test year.

RESPONSE

The requested information for each customer class is as follows, in addition we are providing the requested information for Public Street and Highway Lighting.

Month/Year	Residential	Commercial	Industrial	Public Street & Highway Light
2001	144,079	25,966	1,517	447
2002	144,400	26,704	1,501	445
2003	144,487	27,390	1,463	448
2004	144,434	28,289	1,466	442
Jul. 2004	144,037	28,321	1,463	442
Aug.	144,066	28,361	1,461	444
Sep.	144,081	28,421	1,460	444
Oct.	144,159	28,472	1,455	444
Nov.	144,360	28,449	1,457	444
Dec.	144,623	28,491	1,456	442
Jan. 2005	144,900	28,554	1,462	445
Feb	144,415	28,502	1,457	441
Mar.	145,259	28,716	1,465	445
Apr.	144,955	28,743	1,448	451
May	144,302	28,818	1,441	443
Jun.	144,342	28,922	1,458	444
TY Average	144,458	28,564	1,457	444

WITNESS: David M Roush