

	MwH Peak Demand Demand	MwH Peak Demand Demand Annualized*	FERC 582 Energy	Est System Load Factor
2002	552,761,642	569,642,179	343,816,582	62.20%
2003	644,301,697	740,389,562	427,998,509	66.43%
2004	811,950,762	833,165,948		

*METC joined 5/1/02

*FE/NIPSCO joined 10/1/03

*Ameren joined 5/1/04

Annual Operating Expense

	Dec-02	Annualized	2002 Form 1	"Day 1" (Basis)
Salaries/benefits	\$ 2,216,413	\$ 26,596,956	\$ 24,530,838	\$ 26,596,956 Annualized
Outside services	\$ 977,323	\$ 11,727,876	\$ 8,910,654	\$ 8,910,654 Actual
Occupancy	\$ 296,001	\$ 3,552,012	\$ 3,214,346	\$ 3,552,012 Annualized
Insurance	\$ 276,336	\$ 3,316,032	\$ 2,982,254	\$ 2,982,254 Actual
Supplies/other	\$ 1,054,251	\$ 12,651,012	\$ 9,487,711	\$ 9,487,711 Actual
Taxes	\$ 64,586	\$ 775,032	\$ 1,248,418	\$ 1,248,418 Actual
	\$ 4,884,910	\$ 58,618,920	\$ 50,374,221	\$ 52,778,005
Depreciation	\$ 1,323,916	\$ 15,886,992	\$ 14,300,334	\$ 15,886,992 Annualized
Amortization	\$ 818,252	\$ 9,819,024	\$ 9,819,026	\$ 9,819,026 Actual
Interest Expense	\$ 592,389	\$ 7,108,668	\$ 9,399,340	\$ 9,399,340 Actual
	\$ 2,734,557	\$ 32,814,684	\$ 33,518,700	\$ 35,105,358
TOTAL	\$ 7,619,467	\$ 91,433,604	\$ 83,892,921	\$ 87,883,363

Less:

Market Ops	\$ 79,777	\$ 945,582
Transmission Planning	\$ 260,580	\$ 3,126,960
MAPPOR Contract Expense		\$ 6,054,995

Total MISO Day 1 Expenses

\$ 77,755,826

Load - MWh of peak demand

569,642,179

Cost/MWh of peak demand

\$ 0.1365

Load - MWh of energy

343,816,582

Cost/MWh of energy

\$ 0.2262

Headcount
December 31, 2002

Admin/Exec	2
Finance/Shared Services	27
Operations	108
Planning	20
IT	54
Legal/Reg	13
Market Ops	3
	<u>227</u>

Less:

Market Ops	3
Transmission Planning	20
MAPP FTE's	37
	<u> </u>

Day 1 Headcount	<u><u>167</u></u>
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Operational Estimate

Fixed Assets January 2002

Operational Date for Day 1 was February 1, 2002

	<u>Balance as of</u> <u>January 31, 2002</u>
Land	\$ 1,952,457
Buildings and Improvements	22,050,603
Furniture and Fixtures	2,281,957
Computer Hardware	12,220,990
Computer Software	43,546,144
Telecommunications Equipment	<u>5,794,169</u>
Total Assets	87,846,320
Deferred Regulatory Asset	<u>58,914,154</u>
Total Start-up Costs	<u>\$ 146,760,474</u>

FINAL 12/31/02 MISO TRIAL BALANCE						
D:\Documents and Settings\catmt13\My Documents\MyFiles\Outreach Prog\ISO Startup Costs\Exhibit 4(v2).xls\WESTCONNECT RAW DATA						
Account	Description	12/31/2001	Activity	12/31/2002	Form I Page	Form I Line
10700	Construction in Process-Transm	57,251,795.54	(37,731,631.92)	19,520,163.62	110	3
10850	Accumulated provision for dep	-	(11,838,294.75)	(11,838,294.75)	110	5
10860	Accumulated provision for dep	-	(134,994.08)	(134,994.08)	110	5
10870	Accumulated provision for dep	(1,652,842.26)	(818,018.43)	(2,470,860.69)	110	5
10880	Accumulated provision for dep	-	(1,509,026.42)	(1,509,026.42)	110	5
12410	One Group Investment	33,670,072.42	(13,102,777.24)	20,567,295.18	110	27
12420	SERP Investment	-	224,038.87	224,038.87	110	21
12421	Plan 457 Investment	-	57,279.14	57,279.14	110	21
13110	Petty Cash	529.11	148.08	677.19	110	24
13120	Bank One Checking	2,223,250.55	(3,936,511.24)	(1,713,260.69)	110	24
13125	Cash Deposits for Engineering	-	3,008,887.02	3,008,887.02	110	24
13150	Flex Account	(1,242.98)	(3,370.82)	(4,613.80)	110	24
13170	Restricted Cash (Credit Depos	17,017,476.66	(7,575,456.44)	9,442,020.22	110	25
13400	Deposits	705.54	310,322.75	39,028.29	110	25
14200	Customer accounts receivable	3,310,388.48	1,236,614.62	1,575,003.10	110	29
14310	Employee receivable	457,787.30	(451,540.79)	6,246.51	110	30
14320	Sales tax receivable	5,362.07	948,169.23	953,531.30	110	30
14330	Other accounts receivable	-	443,505.64	443,505.64	110	30
16510	Prepaid Insurance	2,454,063.53	(1,404,526.93)	1,049,536.60	110	46
16520	Other Prepayments	663,862.43	505,770.91	1,169,633.34	110	46
17300	Accrued utility revenue	-	5,722,524.00	5,722,524.00	110	50
18100	Unamortized debt expense - 20	585,937.50	(56,250.00)	529,687.50	111	56
18230	Deferred regulatory asset - C	58,914,154.28	(57,579,257.50)	1,334,896.78	111	59
18235	Deferred regulatory asset - P	-	58,296,781.90	58,296,781.90	111	59
18236	Deferred regulatory asset - A	-	(9,819,025.68)	(9,819,025.68)	111	59
22100	Bonds - 2012	(100,000,000.00)	-	(100,000,000.00)	112	17
22400	Other long-term debt	(261,495.26)	261,495.26	-	112	20
22410	IDFA Note - long term	(944,443.74)	80,074.54	(864,369.20)	112	20
22600	Unamortized discount on long-	412,319.00	(39,588.00)	372,731.00	112	22
22700	Obligations under capital lea	(15,292,331.14)	(6,666,507.51)	(21,958,838.65)	112	25
22800	Deferred revenue	(61,161,829.33)	493,723.80	(60,668,105.53)	113	54
10A	Settlement	(60,000,000.00)	197,641.47	(59,802,358.53)	113	54
Other		(1,161,829.33)	296,082.33	(865,747.00)	113	53
23110	IDFA Note - short term	(32,959.93)	(35,745.87)	(68,705.80)	112	33
23120	NCSC - short term	(500,895.84)	239,400.58	(261,495.26)	112	33
23200	Accounts Payable	(20,631,030.93)	(4,452,678.02)	(6,516,508.95)	112	34
23510	Customer deposits - generatio	-	(1,893,495.84)	(1,893,495.84)	112	37
23520	Customer deposits - facility	-	(1,115,391.18)	(1,115,391.18)	112	37
23610	Property tax accrual	-	(286,608.00)	(286,608.00)	112	38
LATER						

LATER MOVED TO 224 FOR FILING

Exhibit 4

Midwest ISO Accounts

23650 Accrued State Sales Tax	(897.57)	(19,885.90)	(20,783.47)	112	38
23655 Accrued Local Sales Tax	(69.05)	(1,632.85)	(1,701.90)	112	38
23700 Interest accrued	(746,649.66)	(103,022.19)	(849,671.85)	112	39
24220 Accrued Payroll	(3,684.04)	3,684.04	-	112	44
24225 Accrued Bonus	(1,817,756.60)	(1,039,016.52)	(2,656,773.12)	112	44
24230 Accrued Vacation and Holiday	(530,455.03)	(13,348.61)	(543,803.64)	112	44
24250 Other Current and Accrued Lia	(3,206,860.24)	15,621,035.38	(1,644,024.86)	112	44
24260 Withholdings - taxes	(0.02)	-	(0.02)	112	44
24265 Flex account withholdings	(16,676.12)	(13,464.90)	(30,141.02)	112	44
24270 Accrued liabilities-benefits	(93,123.00)	19,278.37	(73,844.63)	112	44
24275 SERP Liability	(143,664.04)	(80,374.85)	(224,038.89)	112	28
24276 Plan 457 Liability	-	(57,279.14)	(57,279.14)	112	28
24280 401k withholdings	302.55	(511.65)	(209.10)	112	44
24290 401k match	0.04	(0.05)	(0.01)	112	44
24295 Garnishments	(288.00)	288.00	-	112	44
24300 Obligations under capital lea	(3,371,037.12)	(2,505,704.36)	(2,843,541.48)	112	45
25305 Customer deposits - long term	(23,811.00)	-	(23,811.00)	112	37
25310 Customer deposits - credit as	(17,000,000.00)	7,678,484.64	(9,321,515.36)	112	37
25320 Deferred rent	(4,678.22)	(56,162.64)	(60,840.86)	113	53
25330 Deferred compensation - direc	-	(79,401.00)	(79,401.00)	113	53
25340 Reserve for disputed amounts	-	(1,942,570.07)	(1,942,570.07)	113	54
35203 Leasehold Improvements-Transm	-	523,235.32	523,235.32	110	2
35301 Computer Hardware-Transmissio	2,745,218.87	10,267,700.84	13,012,919.71	110	2
35303 Computer Software-Transmissio	1,499,438.48	59,673,476.81	61,172,915.29	110	2
35307 Telecommunications Equipment-	-	8,165,925.41	8,165,925.41	110	2
35311 Computer Hardware-Transmissio	-	4,859,786.79	4,859,786.79	110	2

Exhibit 4

90810 Member Training	155,685.72	114	155,685.72	114	4	90810
91000 Miscellaneous Customer Serv	5,109.17	114	5,109.17	114	4	91000
92010 Salaries and Wages	16,705,871.56	114	16,705,871.56	114	4	92010
92020 Annual Bonus	3,172,161.79	114	3,172,161.79	114	4	92020
92022 Other Bonuses	55,099.75	114	55,099.75	114	4	92022
92025 Signing Bonus	129,950.00	114	129,950.00	114	4	92025
92030 Relocation Expense - Taxable	890,169.33	114	890,169.33	114	4	92030
92040 Relocation Expense - Non Taxa	167,418.70	114	167,418.70	114	4	92040
92060 Severance	(10,627.23)	114	(10,627.23)	114	4	92060
92110 Office Supplies	249,558.73	114	249,558.73	114	4	92110
92111 Postage	(2,363.17)	114	(2,363.17)	114	4	92111
92112	-	114	-	114	4	92112
92113	-	114	-	114	4	92113
93030 Bank Charges	248,723.87	114	248,723.87	114	4	92115
92120 Telephone	280,206.19	114	280,206.19	114	4	92120
92121 Long Distance	46,215.39	114	46,215.39	114	4	92121
92130 Subscriptions/Literature	76,832.84	114	76,832.84	114	4	92130
92140 Meals & Entertainment-Travel	117,262.34	114	117,262.34	114	4	92140
92142 Meals & Entertainment-Business	165,651.46	114	165,651.46	114	4	92142
92144 Meals & Entertainment-Recruit	163.94	114	163.94	114	4	92144
92146 Mileage-IDOC Limit	4.75	114	4.75	114	4	92146
92149 Mileage	557.90	114	557.90	114	4	92149
92150 Travel-Air, Lodging, Auto	1,179,745.85	114	1,179,745.85	114	4	92150
92154 Lodging	1,473.14	114	1,473.14	114	4	92154
92156 Taxi, Car Rental, Parking, To	751.89	114	751.89	114	4	92156
92157 Travel-IDOC Per Diem Meals-Fu	156.35	114	156.35	114	4	92157
92168 Small Tools & Equipment	13,661.53	114	13,661.53	114	4	92168
92170 Memberships/Dues	40,094.99	114	40,094.99	114	4	92170
92179 NERC	41,476.42	114	41,476.42	114	4	92179
92180 Printing	16,399.90	114	16,399.90	114	4	92180
92187 Voice Circuits (AT&T)	12,210.14	114	12,210.14	114	4	92187
92190 Computer Maintenance	1,064,750.27	114	1,064,750.27	114	4	92190
92191 Telecommunications - ICCS	4,402,692.10	114	4,402,692.10	114	4	92191
92192 MCN	624,363.55	114	624,363.55	114	4	92192
92193 VPN	33,469.45	114	33,469.45	114	4	92193
92195 Telecom Maintenance	1,895.93	114	1,895.93	114	4	92195
92196 Internet	47,094.96	114	47,094.96	114	4	92196
92197 Cable/Satellite	9,202.97	114	9,202.97	114	4	92197
92198 Telecommunications - On Call	903.10	114	903.10	114	4	92198
92310 Outside Services	2,698,416.55	114	2,698,416.55	114	4	92310
92320 Legal Fees	2,024,829.46	114	2,024,829.46	114	4	92320
92340 Executive Search	68,692.00	114	68,692.00	114	4	92340
92345 Hiring/Retention Costs	148,832.11	114	148,832.11	114	4	92345

Exhibit 4

Midwest ISO Accounts

92360 Management Consultants	-	2,659,006.41	114	4	2,659,006.41	92360
92365 Management Consultants Exp -	-	13,760.85	114	4	13,760.85	92365
92375 Temporary Help	-	737,228.59	114	4	737,228.59	92375
92380 Security	-	208,705.23	114	4	208,705.23	92380
92385 Payroll Service	-	20,793.70	114	4	20,793.70	92385
92395 Contractor	-	330,388.95	114	4	330,388.95	92395
92405 Property Insurance	-	141,425.25	114	4	141,425.25	92405
92410 General Liability/Reps and Wa	-	1,878,888.29	114	4	1,878,888.29	92410
92440 Automotive	-	553.36	114	4	553.36	92440
92450 Directors & Officers Liabilit	-	165,810.00	114	4	165,810.00	92450
92460 Workman's Compensation	-	41,504.90	114	4	41,504.90	92460
92470 Excess Liability	-	740,807.85	114	4	740,807.85	92470
92480 IN Surplus Lines Tax	-	9,733.72	114	4	9,733.72	92480
92490 Insurance - Crime Coverage	-	3,048.28	114	4	3,048.28	92490
92500 Injuries and Damages	-	482.52	114	4	482.52	92500
92610 Employee Benefits	-	1,403,254.95	114	4	1,403,254.95	92610
92615 Employee Benefits - SERP	-	166,488.25	114	4	166,488.25	92615
92620 401k	-	1,607,919.92	114	4	1,607,919.92	92620
92630 Officer Flex Spending	-	35,357.99	114	4	35,357.99	92630
92640 Education Assistance/Outside	-	190,212.61	114	4	190,212.61	92640
92650 Materials/Books	-	1,247.48	114	4	1,247.48	92650
93016 Conventions and seminars	-	16,312.75	114	4	16,312.75	92670
91300 Marketing, PR Expense	-	84,251.58	114	4	84,251.58	93015
93015 General Advertising Expenses	-	470.25	114	4	470.25	93015
91300 Marketing, PR Expense	-	15,359.00	114	4	15,359.00	93021
93035 Directors Fees	-	450,062.50	114	4	450,062.50	93022
92145 Meals & Entertainment-Directo	-	1,579.88	114	4	1,579.88	93023
92159 Travel-Directors	-	81,903.73	114	4	81,903.73	93024
93025 Miscellaneous General Expense	-	3,420.30	114	4	3,420.30	93025
92170 Memberships/Dues	-	16,712.00	114	4	16,712.00	93026
93110 Operating Lease-Building	-	1,863,772.33	114	4	1,863,772.33	93110
93130 Operating Lease-Furniture	-	2,626.18	114	4	2,626.18	93130
93140 Operating Lease-Computers	-	46,516.84	114	4	46,516.84	93140
93150 Operating Lease-Copier	-	136,793.86	114	4	136,793.86	93150
93510 Services for building	-	118,499.61	114	5	118,499.61	93510
93520 Utilities	-	444,018.73	114	5	444,018.73	93520
93530 General Maintenance	-	602,118.82	114	5	602,118.82	93530

Southwest Power Pool (SPP)

Southwest Power Pool, Inc.**Fixed Assets and Depreciation as of 12/31/2003**

Date Acquired	ID Number	C/F/S	Location	Description	Life (Yrs)	12/31/2003 Ending Cost	Function	Project
31-Dec-01		S	Computer Room	Market Settlement Software	5	15,932,379	Market	Market Systems
28-Dec-00		S	Computer Room	Software - Market Settlement	3	3,040,800	Market	Market Systems
01-Oct-97	10052	S	Computer Room	EMS Software	3	1,983,505	Reliability	EMS Implementation
29-Jun-01		S	Scheduling agent	Hardware/Software	3	1,715,754	TSP Support	Enhance Energy Scheduling
13-Dec-01		S	Scheduling agent	MOS Project	3	1,251,550	Market	Market Systems
22-Aug-01		S	Computer Room	ESCA - EMP Project	3	596,130	Reliability	EMS Enhancements
17-Dec-01		C	Scheduling agent	Hardware	3	586,400	TSP Support	Enhance Energy Scheduling
01-Jan-01		F	Security Center	New Chillers	5	480,876	Split	Computer Room Expansion
01-Jan-01		F	Security Center	renovate security center	5	338,842	Split	Control Room Infrastructure
31-Dec-03		MS	Security Center	Market Settlement Software	5	298,000	Market	Market Systems
17-Dec-01		S	Computer Room	ESCA - EMP Project	3	221,641	Reliability	EMS Enhancements
21-Nov-00		S	Computer Room	OATI	3	200,000	TSP Support	Enhance Energy Scheduling
04-Mar-98		S	C. Monroe	ESCA Software	3	177,599	Reliability	EMS Implementation
24-Aug-98		S	C. Monroe	TrakR Software	3	166,250	Reliability	EMS Implementation
01-Oct-96	10526	C	Computer Room	OASIS	3	164,041	Transmission Sei	OASIS
01-Mar-98	10446	C	Security Center	Video Display Hardware	3	162,371	Reliability	EMS Implementation
22-Aug-01		S	Computer Room	ESCA - Compaq Project	3	154,208	Reliability	EMS Enhancements
17-Dec-01		C	Scheduling agent	Hardware	3	146,600	TSP Support	Enhance Energy Scheduling
23-May-01	11086	S	Computer Room	Microsoft Licenses	3	134,322	Management	Business Systems
31-Dec-02	11385	C	Backup Site- AREC	Redundant Network Router	3	122,314	Reliability	Business Continuity
18-Sep-03	11892	C	Telecomm Room	Core Switch	3	117,130	Split	EMS Enhancements
24-Apr-01	11079	F	7th Floor	Modular Furniture for Offices	5	108,425	Management	Administration
25-Feb-02	11808	S	EMS Project	Cutover Project	3	105,400	Reliability	EMS Enhancements
18-Apr-02	n/a	F	Computer Room	2 chillers, handlers and data mates	5	103,315	Split	Computer Room Expansion
01-Jan-92	10231	S	J. Chamberlin	PTI Software	3	100,000	Reliability	Transmission Planning
15-Aug-02	n/a	S	Computer Room	5 Sequel Server Licenses 2000 Editio	3	92,022	Split	EMS Enhancements
25-Jun-98		S	C. Monroe	TrakR Software	3	85,241	Reliability	EMS Implementation
5-Mar-02		F	New Cubicles on 9	Deposit on Cubicles	3	83,630	Management	Administration
27-May-98		S	C. Monroe	Tagging software	5	82,686	Reliability	EMS Implementation
01-Sep-99		S	Computer Room	Oasis Automation	3	78,063	Transmission Sei	OASIS
10-Apr-99		S	B. Gibson	JTAG Software	3	77,150	Reliability	EMS Enhancements
10-Aug-01	21202	F	9th Floor	Modular Furniture	5	68,798	Management	Administration
01-Jan-97	10095	C	Computer Room	Lan Server (SPPALPHA)	3	63,962	Management	Administration
01-May-99		S	Computer Room	Oasis Automation	3	61,843	Transmission Sei	OASIS
24-Oct-01		S	Software	Firewall Software	3	60,358	Split	Enterprise Security
30-Dec-02	1376-113t	C	Computer Room	Firewall Servers (4) 11376-11380	3	57,287	Split	Enterprise Security
01-Dec-00		S	Computer Room	GENESYS Subsystem	3	55,743	Reliability	EMS Enhancements
01-Oct-96	10528	C	Computer Room	OASIS Firewall	3	55,031	Transmission Sei	Enterprise Security
26-Apr-99		S	Computer Room	Oasis Automation	3	51,451	Transmission Sei	OASIS
01-Mar-01	11020	C	Scheduling Agent	UPS	3	50,372	Split	EMS Enhancements
28-Mar-02	11259	C	Operations	OASIS replacement server/peripheral	3	47,703	Transmission Sei	OASIS

Asset_BV>4,000

Exhibit 4

Southwest Power Pool, Inc.

Fixed Assets and Depreciation as of 12/31/2003

Date Acquired	ID Number	CIF/IS	Location	Description	Life (Yrs)	12/31/2003 Ending Cost	Function	Project
04-Jun-98		S	C. Monroe	TrakR Software	3	45,920	Reliability	EMS Enhancements
20-Nov-03	11932	C	ESCA Office	PowerEdge 6650 2.5 G Server	3	44,809	Reliability	EMS Enhancements
20-Nov-03	11933	C	ESCA Office	PowerEdge 6650 2.5 G Server	3	44,808	Reliability	EMS Enhancements
20-Nov-03	11951	C	ESCA Office	PowerEdge 6650 2.5 G Server	3	44,808	Reliability	EMS Enhancements
31-May-02	n/a	F	8th Floor Furniture	Balance on cubes for 8th floor	5	43,333	Management	Administration
19-Jun-03	11869	C	6th Floor - Training	Audio System	5	41,265	Management	Administration
18-Sep-01	11204	C	Door Control System	HID Door Reader System	3	41,097	Management	Administration
24-Mar-97		C	Security Center	A/C Units in Comp. Room	3	41,051	Split	Computer Room Expansion
01-Jan-97	10192	C	Computer Room	Telephone System	3	40,841	Split	Control Room Infrastructure
31-Jul-97	10388	F	Security Center	Consoles for Sec. Center	5	40,836	Split	Control Room Infrastructure
09-Jul-01	11128	C	Computer Room	Digital Voice Recorder	3	40,155	Split	Control Room Infrastructure
8-May-03	11762	C	Back-Up Site-AREC	Nokia Firewall for Backup Site	3	39,714	Reliability	Business Continuity
18-Apr-02	n/a	F	8th Floor Furniture	deposit on 8th floor cubicles	5	39,270	Management	Administration
01-Jun-00		S	Computer Room	Sequel Server Software	3	37,995	Split	EMS Enhancements
30-Oct-97	10325	C	Computer Room	UPS	3	36,500	Split	EMS Implementation
19-Aug-02	11316	C	Telecom Room	Back Up Site Route at AREC & Maint	3	35,417	Reliability	Business Continuity
30-Mar-98		S	C. Monroe	ESCA Software	3	35,000	Reliability	EMS Implementation
2/14/2003	11397	C	IT	Dell PowerVault 220S Server	3	34,039	Management	Administration
06-Aug-98		S	C. Monroe	Free Flow Software	3	33,550	Reliability	EMS Enhancements
20-Nov-03	11931	C	ESCA Office	Dell EMC DAE2 Disk array Encl.	3	32,524	Market	Market Systems
20-Nov-03	11930	C	ESCA Office	Dell EMC DAE2 Disk array Encl.	3	32,524	Market	Market Systems
23-Apr-01	11051	C	Telecom Room	SPPNET Replacement Router	3	32,301	Split	EMS Enhancements
01-May-00		S	9th Floor	Forecasting Program-Engineering	3	31,000	Reliability	Transmission Planning
23-Apr-01	11052	C	Telecom Room	INET Routers	3	30,138	Reliability	EMS Enhancements
23-Apr-01	11053	C	BackUp Site - AREC	INET router	3	30,138	Reliability	EMS Enhancements
14-Oct-98		S	C. Monroe	Tagging Software	3	29,889	Reliability	EMS Enhancements
27-Feb-96	10358	C	A. Rodriguez	HP Network Analyzer-Advisor	3	29,765	Split	Computer Room Expansion
22-Oct-03	11917	C	RTTOSS system	Compaq-runs setup/integra.	3	29,000	TSP Support	Enhance Energy Scheduling
29-Nov-99	10786	F	Computer Room	Drive Array	3	28,790	Split	EMS Enhancements
01-Sep-01	11177	C	9th Floor	Office Panels	5	27,488	Management	Administration
11-Apr-01		C	COSMOS Project	Compaq Testing System CPU	3	27,374	Market	Market Systems
29-Jun-99		F	Security Center	raised floor/carpeting for comp room	5	26,987	Split	Control Room Infrastructure
25-Sep-02	n/a	S	Computer Room	Oasis Automation	3	26,831	Transmission Sei	OASIS
01-Apr-00	10876	F	Security Center	2 consoles - Market Ops	5	26,200	Market	Control Room Infrastructure
20-Nov-03	11945	C	Ohio Office	Stancil Voice Logger	3	26,107	Transmission Sei	AEP Project
20-Nov-03	11944	C	ESCA Office	Dell EMC SAN Array	3	25,366	Market	Market Systems
20-Nov-03	11944	C	ESCA Office	Dell EMC SAN Array	3	25,366	Market	Market Systems
01-Oct-98	10190	C	Computer Room	Corporate Server	3	24,985	Management	Administration
01-Feb-97	10033	C	Computer Room	A/C Units in Comp. Room	3	24,917	Split	Computer Room Expansion
24-Apr-01	11075	F	7th Floor	Fire Detection System	5	24,495	Split	Computer Room Expansion
01-Dec-00	10974	F	Scheduling Agent	Consoles	5	23,965	TSP Support	Control Room Infrastructure

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Southwest Power Pool, Inc. Fixed Assets and Depreciation as of 12/31/2003

Date Acquired	ID Number	C/F/S	Location	Description	Life (Yrs)	12/31/2003 Ending Cost	Function	Project
3-Jun-02	11282-86	C	Computer Room	5 PowerEdge 1650 Srvrs (11282-286)	3	22,775	Split	EMS Enhancements
1/16/2003	11382	C	Computer Room	New Tape Backup System & Tapes	3	22,350	Split	EMS Enhancements
20-Nov-03	11948	S	ESCA Office	Software/Accessories	3	22,327	Market	Market Systems
07-Apr-99	10369	C	Computer Room	Operating Reserve Servers	3	22,248	Reliability	Operating Reserve Sharing
07-Apr-99	10370	C	Computer Room	Operating Reserve Servers	3	22,248	Reliability	Operating Reserve Sharing
20-Jul-01	11141	C	EMS Upgrade Computer	ES40	3	22,093	Reliability	EMS Enhancements
24-Jul-01		S	Software	MUST Licenses	3	21,400	Reliability	Transmission Planning
24-Oct-01		S	Software	OASIS Enhancements	3	21,063	Transmission Sei	OASIS
01-Jun-99		S	Computer Room	Nostradamus Software	3	21,000	Reliability	EMS Enhancements
26-Apr-02	n/a	F	Computer Room	Balance on chillers, handlers, etc.	5	20,938	Split	Computer Room Expansion
22-May-02	1272-112;	C	Computer Room	2-Cisco Pix Firewalls(11272& 11273)	3	20,881	Split	Enterprise Security
22-Oct-03	11918	C	Computer Room	Tape Backup System	3	20,858	Split	EMS Enhancements
01-Mar-99		S	Computer Room	OASIS Software	3	20,610	Transmission Sei	OASIS
9-Apr-02	n/a	S	Operations	150 user license ACE server software	3	20,596	Reliability	EMS Enhancements
01-Feb-96	10620	C	R. Wheeler	SUN Workstation	3	20,453	Reliability	Operating Reserve Sharing
01-Feb-96	10621	C	Computer Room	SUN Workstation	3	20,453	Reliability	Operating Reserve Sharing
31-Dec-02	11383	C	Computer Room	Dial Up Router (repl. MCI RLN)	3	20,210	Split	EMS Enhancements
01-Jul-97	10374	C	Computer Room	Control Center Phone System	3	20,206	Split	Control Room Infrastructure
10-Apr-02	11261-65	F	Telecom Equip.	SPP video conference phone equip.	5	19,228	Management	Administration
10-Apr-99	10355	F	B. Gibson	JTAG Workstation	3	18,888	TSP Support	Enhance Energy Scheduling
14-Feb-02		C	Sch. Agent	Comfort Systems	5	18,701	TSP Support	Control Room Infrastructure
22-Apr-02	11266-68	C	Computer Room	3 servers (11266;11267;11268)	3	17,885	Split	Computer Room Expansion
27-Dec-02	n/a	F	12th Floor Office	Door Access Control System	5	17,726	Split	Enterprise Security
01-Jul-01	11140	F	Scheduling Agent	Raised Flooring	5	17,718	Split	Computer Room Expansion
1-Oct-03	11895	C	Computer Room	PowerEdge 2650 Server - Acctg.	3	16,925	Management	Business Systems
1-Oct-03	11896	C	Computer Room	PowerEdge 2650 Server - FTP	3	16,925	Management	Business Systems
01-Dec-00	10973	C	Scheduling Agent	Raised Floor	5	16,916	Split	Computer Room Expansion
18-Dec-02	n/a	F	12th Floor Office	Bal. On 12th floor furnishings (8 sets)	5	16,738	Management	Administration
20-Mar-01	11039	F	6th Floor	Cubical Offices	5	16,527	Management	Administration
01-Jun-91	10092	C	Security Center	harris rf/ssb radio	3	16,154	Split	Control Room Infrastructure
15-Nov-02	n/a	F	12th Floor Office	Dep. On 8 sets of furniture	5	15,148	Management	Administration
01-Sep-99		S	Computer Room	MUST Licenses - Engineer	3	15,000	Transmission Sei	OASIS
31-Dec-02		S	Computer Room	Cold Fusion Software & Licenses	3	14,643	Split	Computer Room Expansion
1/9/2003		S	Computer Room	Cold Fusion Server & licenses	3	14,643	Split	Computer Room Expansion
07-Aug-01	11172	C	Computer Room	Data Base Server	3	14,429	Split	Computer Room Expansion
07-Aug-01	11173	C	Computer Room	Data Base Server	3	14,429	Split	Computer Room Expansion
01-Feb-97	10076	F	Computer Room	Fire Suppression System	5	14,418	Split	Computer Room Expansion
22-May-02	n/a	S	R. Turner	LAN Mgmt. Sys. - CiscoWorks	3	14,273	Split	Computer Room Expansion
09-Nov-01		F	9th Floor	Conference Room Chairs	5	14,166	Management	Administration
31-Dec-99	10783	C	Computer Room	JTAG Redundant Server	3	14,056	TSP Support	Enhance Energy Scheduling
01-Jan-93	10525	C	Xerox Room	Router	3	14,000	Management	Administration

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Southwest Power Pool, Inc.

Fixed Assets and Depreciation as of 12/31/2003

Date Acquired	ID Number	C/I/F/S	Location	Description	Life (Yrs)	Ending Cost 12/31/2003	Function	Project
01-Jul-00		S	Computer Room	Cold Fusion Software	3	13,663	Split	Computer Room Expansion
09-Mar-01	11041	C	AREC Redundancy Proj.	Server & Peripherals	3	13,625	Reliability	Business Continuity
5-Jun-02	1274-1127	C	Computer Room	5 Cisco Switches(11274-11278)	3	13,594	Split	Computer Room Expansion
01-Feb-97	10546	C	S. Venable - home	Workstation	3	13,594	Management	Administration
01-Feb-97	10616	C	K. Bates	Workstation	3	13,594	Transmission Ser	OASIS
01-Feb-97	10618	C	A. Rodriguez	Workstation	3	13,594	Split	IT Architecture
22-Oct-03	11915	C	Computer Room	Seq. Database Cluster Server	3	13,515	Split	Computer Room Expansion
22-Oct-03	11916	C	Computer Room	Seq. Database Cluster Server	3	13,515	Split	Computer Room Expansion
17-Aug-01	11203	C	COSMOS Project	Oracle Server (20 seat)	3	13,499	Market	Market Systems
5-Mar-02		F	Security	Camera Equip.	5	13,096	Split	Enterprise Security
30-Mar-98		S	C. Monroe	ESCA Software	3	13,066	Split	Computer Room Expansion
24-Jun-03	11861	C	HR-Server	PowerEdge 2650 Server	3	12,974	Management	Administration
24-Jun-03	11863	C	Computer Room	Dell PowerEdge 2650 Server-Hope	3	12,820	Split	Computer Room Expansion
24-Jun-03	11864	C	Computer Room	Dell PowerEdge 1650 Server-Hope	3	12,820	Split	Computer Room Expansion
24-Apr-03		S	Computer Room	Software for Load Balancers	3	12,634	Market	Market Systems
06-Nov-01		F	BackUp Site - AREC	Raised Flooring	5	12,054	Reliability	Business Continuity
9-Oct-03	11907	C	OATI-Plymouth, MN	Redundant Router for OATI system	3	11,968	TSP Support	Enhance Energy Scheduling
09-Nov-01		F	7th Floor	Office Panels	5	11,758	Management	Administration
1-Jan-02		S	Software	Veritas Net Backup Sys.	3	11,520	Split	Computer Room Expansion
31-Dec-02		C	Computer Room	Tape Backup Sys. & Tapes	3	11,175	Split	Computer Room Expansion
01-Apr-97	10617	C	T. Mallinger	Workstation	3	11,142	Split	Control Room Infrastructure
01-Feb-97	10544	C	K. McArthur	Workstation	3	11,142	Management	Administration
01-Apr-97	10215	C	BackUp Site - AREC	Workstation	3	11,131	Reliability	Business Continuity
01-Jun-98	10111	C	Computer Room	4.3 GB UW Drive	3	11,000	Split	Computer Room Expansion
18-Sep-02	11320&21	C	Computer Room	Two SPP Routers	3	10,993	Split	Computer Room Expansion
06-Nov-01		S	Software	Mailserver	3	10,974	Management	Enterprise Security
01-Jun-01	11087	S	Computer Room	Firewall - Gateway	3	10,888	Split	Enterprise Security
14-Nov-02	n/a	F	6th Floor	Balance on 28 Tables & Carts	5	10,704	Management	Administration
01-Aug-01		S	Software	Verisign OnSite Certs & Seats (322)	3	10,660	Split	Enterprise Security
24-Jun-03	11865	C	Computer Room	Dell Power Vault 220S Server-Hope	3	10,609	Split	Computer Room Expansion
1/22/2003		S	Computer Room	Software for New BackUp System	3	10,603	Split	Computer Room Expansion
22-Dec-03	11961	C	Computer Room	Dell PowerEdge 1750 Server	3	10,305	Market	Market Systems
22-Dec-03	11962	C	Computer Room	Dell PowerEdge 1750 Server	3	10,304	Market	Market Systems
3-Jun-02	n/a	S	Software	3 Roguewave Soft. Licenses	3	10,260	Split	Enterprise Security
11-Apr-01		F	Computer Room	Raised Floor	5	10,000	Split	Computer Room Expansion
14-Mar-01		S	Computer Room	VSAT Software	3	10,000	Reliability	Transmission Planning
09-Oct-01	11206	C	Computer Room	Dell PowerVault 20XS	3	9,962	Split	Computer Room Expansion
18-Sep-02	n/a	S	Computer Room	DreamWeaver & Cold Fusion SW & L	3	9,809	Split	Computer Room Expansion
01-Apr-00	10875	C	Ohio Office	Voice Gate Voice Mail System	3	9,739	Transmission Ser	AEP Project
18-Sep-02	n/a	C	Computer Room	Two SPP Spare Router	3	9,718	Split	Computer Room Expansion
18-Sep-02	n/a	F	6th Floor	Deposit on 28 tables & 2 carts	5	9,675	Management	Administration

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Southwest Power Pool, Inc.

Fixed Assets and Depreciation as of 12/31/2003

ID	Date Acquired	Number	C/F/S	Location	Description	Life (Yrs)	12/31/2003 Ending Cost	Function	Project
	14-Nov-02	n/a	F	6th Floor	Balance on Chairs (60)	5	9,621	Management	Administration
	25-Jul-02	n/a	S	Software	25 Visio Pro 2002 copies	3	9,357	Management	Administration
	30-Dec-02		C	A/C & TelCom Room on 7	RCM 8 Monitor for Sec. Ctr. & TelCon	3	9,298	Split	Control Room Infrastructure
	20-Jun-02	11281	C	Computer Room	1 PowerEdge 2250 Svr (Intrusion De	3	9,276	Split	Enterprise Security
	9-Oct-03	11897	C	Computer Room	SPPLIST Server Replacement	3	9,255	Management	Administration
	20-Mar-01		C	Computer Room	Voice System Upgrade	3	9,228	Management	Administration
	22-Dec-97	10418	C	S. Skipper	Color Scanner	3	8,923	Management	Administration
	15-May-03	11820	C	Computer Room	Dell Power Edge 2650 Server	3	8,919	Split	Control Room Infrastructure
	31-Oct-97	10435	C	R. Turner	Workstation	3	8,792	Split	IT Architecture
	16-Sep-02	n/a	F	6th Floor	Deposit on 60 chairs for training ctr.	5	8,693	Management	Administration
	01-Jan-97	10229	C	B. Phillips	Laptop	3	8,640	Management	Administration
	01-Dec-00		S	Computer Room	EMS Upgrade Support Software	3	8,421	Reliability	EMS Enhancements
	1-Apr-03	11748	F	Security Center	True Time Device	5	8,295	Split	Control Room Infrastructure
	01-Jul-97	10196	C	Computer Room	Laptop - Workstation HP	3	8,257	Split	Computer Room Expansion
	01-May-00	10913	F	Ohio Office	Ricoh 350 Copier	5	8,249	Transmission Sei	AEP Project
	25-Jun-01		S	Software	HR Software - Employees Self Serv	3	8,248	Management	Administration
	15-Aug-01		F	Security Center	Raised floor in computer room	5	8,148	Split	Computer Room Expansion
	31-Jul-97	10385	C	Security Center	Workstation	3	8,100	Split	Control Room Infrastructure
	11-Jul-01	11130	C	Telecom Room	Vendor Net Router	3	7,955	Split	Computer Room Expansion
	25-Jan-01	10981	C	J. Chamberlin	Workstation	3	7,952	Transmission Sei	OASIS
	25-Jan-01	10983	C	K. Tynes	Workstation	3	7,952	Transmission Sei	OASIS
	25-Jan-01	10985	C	C. Jamieson	Workstation	3	7,952	Transmission Sei	OASIS
	25-Jan-01	10987	C	J. Boshears	Workstation	3	7,952	Transmission Sei	OASIS
	16-Mar-99	10289	F	9th Floor	Office Panels	5	7,919	Management	Administration
	3-Apr-03		F	9th Floor	Bal. On Cubes & Chairs	5	7,912	Management	Administration
	14-Aug-01		S	Software	Norton AntiVirus Software	3	7,710	Management	Enterprise Security
	17-Apr-03		C	IT Infrastructure	CSI Essential Software for Nokia	3	7,692	Split	Computer Room Expansion
	01-Jul-97	10375	C	Security Center	Closed Circuit TV System	3	7,674	Split	Enterprise Security
	26-Nov-97	10419	C	9th Floor	Color printer	3	7,608	Management	Administration
	01-Apr-99	10277	C	Telecom Room	Laptop	3	7,546	Split	Computer Room Expansion
	27-Mar-02		S	Software	VM Workstation 3.0	3	7,541	Transmission Sei	OASIS
	01-Apr-00	10842	C	R. Ciesiel	Workstation	3	7,456	Regional Reliabil	Administration
	27-Nov-02	11361	C	8th Floor Reception	ScanXTender Scanner	3	7,395	Management	Administration
	15-Apr-97		F	Security Center	Carpet in Security Room	5	7,387	Split	Control Room Infrastructure
	01-Sep-00	10923	C	Computer Room	ICCP Machine-Redundant	3	7,366	Reliability	EMS Enhancements
	01-Sep-00	10924	C	Computer Room	ICCP Machine-Redundant	3	7,366	Reliability	EMS Enhancements
	01-Sep-00	10925	C	Computer Room	ICCP Machine-Development	3	7,366	Reliability	EMS Enhancements
	23-Feb-01	11005	C	Computer Room	Hi-Speed Backup Sytem (Veritas SW	3	7,356	Split	Computer Room Expansion
	02-Dec-99		S	Corporate Services - 4th Floor	Imaging Software	3	7,349	Management	Administration
	20-Jul-01	11129	C	Computer Room	Cisco Router & Smartnet	3	7,286	Split	Computer Room Expansion
	11-Jul-02	11292-94	C	8th Floor Printers	2-Laser Jet 8150; 1-Laser Jet 1200N	3	7,285	Management	Administration

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Fixed Assets and Depreciation as of 12/31/2003

Southwest Power Pool, Inc.

Date Acquired	ID Number	C/I/S	Location	Description	Life (Yrs)	12/31/2003 Ending Cost	Function	Project
29-Aug-01	11198	C	Computer Room	73 Gigabyte Hard Drives	3	7,229	Split	Computer Room Expansion
01-Feb-97	10077	F	Computer Room	Raised Floor	5	7,225	Split	Computer Room Expansion
29-Dec-97	10420	C	Security Center	Frequency Recorder	3	7,200	Split	Control Room Infrastructure
17-Feb-99		S	K. Perry	DEC Server Licenses	3	7,179	Split	Computer Room Expansion
2/14/2003		F	9th Floor	Additional Cubes Setup	5	7,143	Management	Administration
01-Jun-00	10895	C	Computer Room	Workstation	3	7,129	Split	Computer Room Expansion
01-Jun-00	10898	C	A. Blacklaw	Workstation	3	7,129	Transmission Sei	OASIS
01-Jun-00	10917	C	J. Smith	Workstation	3	7,129	Transmission Sei	OASIS
01-Apr-00	10893	C	C. Ordaz	Workstation	3	7,129	Transmission Sei	OASIS
01-Jan-00	10818	C	R. Rhodes	Laptop	3	7,071	Split	Control Room Infrastructure
01-Mar-00	10840	C	R. Ciesiel	Laptop	3	7,008	Regional Reliabil	Administration
01-Feb-96	10342	C	6th Floor	Laser 5SI-REC	3	6,850	Management	Administration
01-Dec-99	10807	C	T. Mallinger	Laptop computer	3	6,815	Split	Control Room Infrastructure
01-Nov-00	10971	C	Engineering	Plotter-36" DesignJet 750C Plus	3	6,728	Transmission Sei	OASIS
19-Jun-01		S	Software	WordPerfect Office; Corel; Acrobat	3	6,676	Management	Administration
01-Dec-00		S	Computer Room	MMS EASE & Exceed & DCE	3	6,613	Split	Computer Room Expansion
01-Jan-97	10800	C	Computer Room	Network	3	6,598	Split	Computer Room Expansion
01-Feb-00	10541	C	4th Floor	Server	3	6,536	Management	Administration
15-Feb-96	10542	C	C. Monroe	Laptop	3	6,521	Management	Administration
15-Feb-96		C	M. Sidor	Laptop	3	6,521	Management	Administration
1-Dec-03	10430	S	Telecomm Room	Software to upgrade Sec. Ctr. Phone	3	6,474	Split	Control Room Infrastructure
31-Oct-97	10781	F	Computer Room	LANscape 3000 Rack System	5	6,473	Split	Computer Room Expansion
01-Jan-00	10782	C	Computer Room	Web Server	3	6,458	Split	Computer Room Expansion
01-Jan-00	11902	C	Computer Room	Web Server	3	6,458	Split	Computer Room Expansion
9-Oct-03	11901	C	Computer Room	EMS Redundant Server	3	6,448	Reliability	Computer Room Expansion
9-Oct-03	11909	C	Computer Room	EMS Redundant Server	3	6,447	Reliability	Computer Room Expansion
01-Jun-00		C	D. Martin	Workstation	3	6,441	Split	Computer Room Expansion
22-May-02	n/a	S	Computer Room	36GB Ultra SCSI 10 K RPM Disk Driv	3	6,434	Split	Computer Room Expansion
20-Jul-01	11134	C	Firewall	BorderGuard 3000	3	6,387	Split	Enterprise Security
20-Jul-01	11135	C	Firewall	BorderGuard 3000	3	6,387	Split	Enterprise Security
24-Apr-03		S	IT & EMS group	15 copies of Visual Sourcesafe	3	6,360	Split	Computer Room Expansion
01-Apr-00	10843	C	M. Crosby	Laptop	3	6,303	Split	IT Architecture
14-Nov-02	n/a	F	8th Floor	Extra Cubicles	5	6,301	Management	Administration
20-Nov-03	11956	C	Computer Room	PowerEdge 650 2.4GH Server	3	6,298	Market	Market Systems
20-Nov-03	11957	C	Computer Room	PowerEdge 650 2.4GH Server	3	6,298	Market	Market Systems
20-Nov-03	11955	C	Computer Room	PowerEdge 650 2.4GH Server	3	6,298	Market	Market Systems
02-Jul-01		S	Software	VeriSign OnSite Global Server Admin	3	6,255	Split	Enterprise Security
2/6/2003	11393	C	A. Kloster	Dell Latitude C840 workstation	3	6,160	Split	Enterprise Security
18-Dec-97	10424	C	8 - IT Lab	Infocus LP420 Video Projector	3	6,141	Management	Administration
01-Jan-97	10078	C	Library	Laser Printer - 5SI - ENG	3	6,119	Management	Administration
01-Jan-97	10622	C	9th Floor	Laser Printer - 5SI - OPS	3	6,119	Management	Administration

Fixed Assets and Depreciation as of 12/31/2003

Southwest Power Pool, Inc.

ID	Date Acquired	Number	CIF/S	Location	Description	Life (Yrs)	12/31/2003 Ending Cost	Function	Project
11894	29-Sep-03	11894	C	Security Center	HP LaserJet 5100 DTN Printer	3	6,109	Split	Control Room Infrastructure
n/a	23-Oct-02	n/a	S	Software	Authorware & VLO Corp Studio Mix	3	6,082	Split	Computer Room Expansion
11254	1-Apr-02	11254	C	Computer Room	Server	3	6,064	Split	Computer Room Expansion
11255	1-Apr-02	11255	C	Computer Room	Server	3	6,064	Split	Computer Room Expansion
10351	25-Mar-99	10351	C	Computer Room	Docking Station	3	6,052	Split	Computer Room Expansion
n/a	3-Jun-02	n/a	C	Computer Room	Cisco Routers (Spare)	3	5,988	Split	Computer Room Expansion
10172	13-Nov-01	10172	F	4th Floor	Security System for 465	5	5,984	Split	Enterprise Security
11949	01-Jul-98	11949	C	Computer Room	Workstation	3	5,974	Split	Enterprise Security
10964	13-Nov-03	10964	C	ESCA Office	PIX Firewall - 515E	3	5,937	Transmission Sei	OASIS
11958	01-Sep-00	11958	C	J. Wilson	Workstation	3	5,911	Split	IT Architecture
10327	18-Dec-03	10327	C	J. Keaton	Latitude D800 Laptop & Docking	3	5,897	Split	Computer Room Expansion
10545	01-Dec-98	10545	C	Computer Room	Workstation	3	5,896	Reliability	Business Continuity
10979	01-Feb-97	10979	C	Backup Site - AREC	Laptop	3	5,869	Management	Administration
11388	01-Dec-00	11388	C	J. Marschewski	Laptop	3	5,846	Split	Control Room Infrastructure
10533	2/6/2003	10533	C	Security Center	HP LaserJet 5100 DTN Printer	3	5,791	Management	Administration
10922	01-Aug-99	10922	S	8-IT Lab	Portable Projector	3	5,789	Split	IT Architecture
11931	01-Jul-00	11931	C	B. Gibson	Workstation	3	5,780	Market	Market Systems
11930	6-Nov-03	11930	C	ESCA Office	Dell PowerEdge 4210 Cabinet	3	5,779	Market	Market Systems
n/a	18-Dec-02	n/a	F	ESCA Office	Dell PowerEdge 4210 Cabinet	3	5,712	Management	Administration
10278	16-Feb-95	10278	C	12th Floor Office	Bal. On 12th floor conf. Table & chair	5	5,695	Management	Administration
10248	01-Sep-00	10248	S	8th Floor	Laserjet 4SI - ENG	3	5,661	Management	Enterprise Security
10228	27-Feb-95	10228	C	Computer Room	McAfee License Scans	3	5,655	Split	Control Room Infrastructure
11194	01-Jan-97	11194	C	Security Center	Dell 575XL w/ 17" monitor	3	5,633	Regional Reliabil	Administration
11889	20-Aug-01	11889	C	R. Ciesiel	Laptop	3	5,589	Transmission Sei	OASIS
10794	10-Sep-03	10794	C	J. Woods	Dell Precision 330 Workstation	3	5,539	Split	IT Architecture
11119	02-Dec-99	11119	F	T. Thompson	Dell C400 Latitude Laptop	5	5,522	Management	Administration
11089	26-Jun-01	11089	C	Corporate Services - 4th Floor	Scanner	3	5,522	Split	IT Architecture
11103	01-Jun-01	11103	C	S. Pilgrim	Dell P4 Precision Workstation	3	5,522	Transmission Sei	OASIS
n/a	01-Jun-01	n/a	C	J. Holland	Dell P4 Precision Wkstn	3	5,509	Management	Administration
11089	01-Jun-01	11089	C	B. Walkup	Dell P4 Precision Workstation	3	5,504	Management	Enterprise Security
11103	31-Mar-03	11103	F	9th Floor	Bal. On Cubes & Chairs	5	5,468	Reliability	Business Continuity
11080	02-Jul-01	11080	S	Software	PGP Personal Security Software	3	5,428	Split	IT Architecture
11080	5-Mar-02	11080	F	Office Chairs	Deposit on chairs	3	5,418	Split	IT Architecture
10602	23-Apr-01	10602	F	7th Floor	Generator Switch	5	5,395	Split	IT Architecture
11178	22-Nov-99	11178	C	A. Rodriguez	Laptop computer	5	5,395	Split	IT Architecture
10201	01-Sep-01	10201	C	H. Ho	Dell Precision 330 MiniTower	3	5,379	Transmission Sei	OASIS
10268	01-Dec-98	10268	C	7-Telecom Room	DELL Laptop - Network Analyzer	3	5,328	Market	Market Systems
10434	01-Aug-99	10434	C	C. Monroe	DELL Laptop	3	5,328	Market	Market Systems
11935	20-Nov-03	11935	C	C. Mamandur	Laptop	3	5,328	Market	Market Systems
11934	20-Nov-03	11934	C	ESCA Office	Fiber Switch	3	5,328	Market	Market Systems
11934	20-Nov-03	11934	C	ESCA Office	Fiber Switch	3	5,328	Market	Market Systems

Asset_BV>4,000

Exhibit 4

Southwest Power Pool, Inc.

Fixed Assets and Depreciation as of 12/31/2003

Date Acquired	ID Number	C/F/S	Location	Description	Life (Yrs)	Ending Cost	Function	Project
15-May-03	11799	C	B. Sugg	Dell Latitude C840 laptop	3	5,306	Split	IT Architecture
15-May-03	11802	C	J. Holland	Dell Latitude C840 laptop	3	5,306	Transmission Ser	OASIS
20-Jul-01	11131	S	Computer Room	PowerEdge 1550-Web Server	3	5,278	Split	IT Architecture
20-Jul-01	11132	S	Computer Room	PowerEdge 1550-Web Server	3	5,278	Split	IT Architecture
20-Jul-01	11133	S	Computer Room	PowerEdge 1550-Web Server	3	5,278	Split	IT Architecture
27-Feb-95	10247	C	R. Wheeler - Home	Workstation	3	5,255	Split	IT Architecture
27-Feb-95	10252	C	B. Rew - Home	Workstation	3	5,255	Transmission Ser	OASIS
01-Sep-98	10174	C	J. Keaton	Laptop	3	5,239	Split	IT Architecture
20-Nov-03	11939	C	ESCA Office	Fiber Switch	3	5,195	Market	Market Systems
20-Nov-03	11940	C	ESCA Office	Fiber Switch	3	5,194	Market	Market Systems
15-Nov-02	n/a	F	12th Floor Office	dep. On Conf. Table w/chairs	5	5,181	Management	Administration
13-Nov-01		S	Software	TOAD (7 copies)	3	5,174	Market	Market Systems
12-Sep-02	n/a	F	8th Floor	Furn. For reception, MTS, interview r	5	5,153	Management	Administration
31-Dec-99	10784	C	Computer Room	Web Redundant Server	3	5,148	Split	IT Architecture
31-Dec-99	10785	C	Computer Room	Web Redundant Server	3	5,148	Split	IT Architecture
28-Mar-01	11044	C	6th Floor	Projector for Training Room	3	5,142	Management	Administration
16-Feb-01	11001	C	S. Austin	Workstation	3	5,116	Split	IT Architecture
01-Feb-97	10202	C	B. Rew	Laptop	3	5,096	Transmission Ser	OASIS
31-Aug-01	11199	C	Computer Room	Mail Sweeper Server	3	5,087	Management	Enterprise Security
2/27/2003	11398	C	R. Ciesiel	Dell Latitude C640 Laptop	3	5,056	Regional Reliab	Administration
10-Apr-03	11753	C	RJ Robertson	Dell Latitude C640 Laptop	3	5,029	Management	Administration
10-Apr-03	11756	C	E. Davis	Dell Latitude C640 Laptop	3	5,029	Market	Market Systems
21-Feb-02	11240	C	Computer Room	Fluke Network Analyzer	3	5,014	Split	IT Architecture
09-Jul-01	11106	C	BackUp Site - AREC	Remote Backup Site Equipment	3	5,000	Reliability	Business Continuity
01-Jul-01	11144	C	AREC Redundancy Proj.	Cisco Router	3	4,985	Reliability	Business Continuity
01-Jul-01	11145	C	Telecom Room	Cisco Router	3	4,985	Split	Control Room Infrastructure
01-Jun-99	10389	C	A. Sabb	Work Station	3	4,967	Split	IT Architecture
2/20/2003		F	9th Floor	Galli & RJ Furn; 10 Chairs; Cubes	5	4,963	Management	Administration
9-May-02	11271	C	Telecom Room	Security Badge Printer System	3	4,905	Management	Enterprise Security
03-Mar-00	10822	C	6-Training Ctr.	Redundant Compaq Machine	3	4,884	Management	Administration
03-Mar-00	10824	C	6-Training Ctr.	Redundant Compaq Machine	3	4,884	Management	Administration
03-Mar-00	10826	C	6-Training Ctr.	Redundant Compaq Machine	3	4,884	Management	Administration
03-Mar-00	10828	C	6-Training Ctr.	Redundant Compaq Machine	3	4,884	Management	Administration
9-Oct-03	11898	C	T. Avery	Dell Latitude C840 laptop	3	4,860	Split	IT Architecture
9-Oct-03	11903	C	J. Kelly	Dell Latitude C840 laptop	3	4,860	Split	IT Architecture
21-Aug-03	11886	C	J. Wilson	Dell Latitude C840 laptop	3	4,860	Transmission Ser	OASIS
19-Aug-02	n/a	S	Computer Room	Exch. Serv. Licenses (2yr)E-Mail Syst	3	4,847	Split	IT Architecture
29-Aug-01	11169	C	Computer Room	PowerEdge 2550, Pentium III	3	4,814	Split	IT Architecture
29-Aug-01	11170	C	Computer Room	PowerEdge 2550, Pentium III	3	4,814	Split	IT Architecture
29-Aug-01	11171	C	Computer Room	PowerEdge 2550, Pentium III	3	4,814	Split	IT Architecture
01-Jul-00	10912	C	12th Floor	Color Printer	3	4,806	Management	Administration

Asset_BV>4,000

Exhibit 4

Southwest Power Pool, Inc.

Fixed Assets and Depreciation as of 12/31/2003

Date Acquired	ID Number	C/F/S	Location	Description	Life (Yrs)	12/31/2003 Ending Cost	Function	Project
24-Jun-03	11857	C	K. Tynes	Dell Latitude C840 laptop	3	4,802	Transmission Sei	OASIS
07-Mar-01	11019	C	Scheduling Agent	CISCO Switch-OAT1 (off site)	3	4,776	TSP Support	Enhance Energy Scheduling
01-Dec-00	10972	C	8-IT Lab	Laptop	3	4,738	Split	IT Architecture
01-Mar-97	10282	C	K. Moran	Laptop -Dell Latitude 166	3	4,664	Split	IT Architecture
24-Mar-97	10282	F	Computer Room	Carpet	5	4,627	Split	Computer Room Expansion
01-May-01	11077	C	Training Center	Projector	3	4,622	Management	Administration
28-Aug-03	11890	C	Computer Room	PowerEdge 2650 Server	3	4,617	Market	Market Systems
28-Aug-03	11891	C	Computer Room	PowerEdge 2650 Server	3	4,616	Market	Market Systems
15-Dec-00		S	Engineering	U. S. AutoCad	3	4,550	Reliability	Transmission Planning
16-May-01		S	Remote Site	Firewall Software	3	4,514	Split	Enterprise Security
01-Jun-98	10164	C	7-Telecom Room	Telephone System Upgrade	3	4,512	Management	Administration
31-Aug-01	11195	C	Computer Room	Firewall Servers	3	4,452	Split	Enterprise Security
31-Aug-01	11196	C	Computer Room	Firewall Servers	3	4,452	Split	Enterprise Security
31-Aug-01	11197	C	Computer Room	Firewall Servers	3	4,452	Split	Enterprise Security
25-Jan-01	10975	C	R. Dillon	Workstation	3	4,358	Market	Market Systems
25-Jan-01	10977	C	A. Ralls	Workstation	3	4,358	Split	IT Architecture
01-Sep-00	10966	C	N. Brown	Laptop	3	4,334	Management	Administration
01-Aug-99	10561	C	Computer Room	ARS Test Machine	3	4,307	Regional Reliabil	Administration
01-Apr-98	10152	C	Computer Room	Tape Drive	3	4,305	Split	IT Architecture
01-Feb-91	10079	C	Training Center	proxima versacolor	3	4,305	Management	Administration
22-Oct-03	11909	C	J. Rooker	Dell 2.4GB MiniTower	3	4,297	Transmission Sei	OASIS
22-Oct-03	11912	C	B. Lux	Dell 2.4GB MiniTower	3	4,297	Transmission Sei	OASIS
23-May-01		F	Computer Room	Hardware boards	5	4,280	Split	IT Architecture
2/6/2003	11395	C	J. Mills	Dell Precision 350 Workstation	3	4,208	Transmission Sei	OASIS
03-Sep-97	10378	C	Security Center	Raised Flooring for Sec. Ctr. Lease #:	3	4,160	Split	Control Room Infrastructure
01-Aug-01	11146	C	Computer Room	Cabinet - 4100 M Series	3	4,145	Split	Computer Room Expansion
14-Jan-94	10142	C	J. Keaton	Dell 450/base	3	4,100	Split	IT Architecture
08-Dec-99	10603	C	9th Floor	HP Printer	3	4,096	Management	Administration
23-Jul-03	11870	F	Outside Generator	Steps & Platform to Gen. Door	5	4,090	Reliability	Business Continuity
27-Feb-95	10251	C	R. Turner	Dell 575XL w/ 17" monitor	3	4,080	Split	IT Architecture
16-Jan-01		F	Computer Room	Raised Floor	5	4,066	Split	Computer Room Expansion
30-Jan-02	11241	C	Kevin Goolsby	PC	3	4,017	Transmission Sei	OASIS
6-Nov-03	11950	C	Training Room	Dell 3200 MP Projector	3	4,016	Market	Market Systems
				Assets < 4,000		1,261,768		
						33,275,131		

Asset_BV>4,000

Exhibit 4

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Sum of 12/31/2003 Ending Cost	Function	Management	Market	Reliability	Split	Transmission Service Provision	TSP Support	Regional Reliability	Grand Total
Administration		\$1,035,567.98						\$29,463.24	\$1,065,031.22
AEP Project						\$44,095.00			\$44,095.00
Business Continuity				\$259,690.27					\$259,690.27
Business Systems		\$168,171.56			\$1,246,447.20				\$168,171.56
Computer Room Expansion					\$631,476.35				\$1,246,447.20
Control Room Infrastructure			\$26,200.00		\$444,803.38		\$42,666.00		\$700,342.35
EMS Enhancements				\$1,621,434.78	\$36,500.00				\$2,066,238.16
EMS Implementation				\$2,692,652.00					\$2,729,152.00
Enhance Energy Scheduling							\$2,727,441.62		\$2,727,441.62
Enterprise Security		\$39,841.00			\$273,106.12	\$55,031.00			\$367,978.12
IT Architecture					\$196,139.06				\$196,139.06
Market Systems			\$20,814,257.75			\$637,794.32			\$20,814,257.75
OASIS				\$85,402.00					\$85,402.00
Operating Reserve Sharing				\$166,950.00					\$166,950.00
Transmission Planning									
Grand Total		\$1,243,580.54	\$20,840,457.75	\$4,826,129.05	\$2,828,472.11	\$736,920.32	\$2,770,107.62	\$29,463.24	\$33,275,130.63

Sum of 2004 Budget		Function						
Project2	Management	Market	Reliability	Split	Transmission Service Provision	TSP Support	Regional Reliability	Grand Total
Administration	\$1,297,438.00						\$9,000.00	\$1,306,438.00
Business Continuity			\$804,125.00					\$804,125.00
Computer Room Expansion				\$308,040.00				\$308,040.00
EMS Enhancements			\$218,000.00					\$218,000.00
Enhance Energy Scheduling						\$7,500.00		\$7,500.00
Enterprise Security	\$49,085.00			\$71,976.00				\$121,061.00
Market Systems		\$12,859,320.00						\$12,859,320.00
OASIS					\$211,775.00			\$211,775.00
Transmission Planning			\$53,000.00					\$53,000.00
Grand Total	\$1,346,523.00	\$12,859,320.00	\$1,075,125.00	\$380,016.00	\$211,775.00	\$7,500.00	\$9,000.00	\$15,889,259.00

Period	Prior Rent per Month	Scheduled Rate Increase	Current Rent Rate	Total Rent for the Period	Annual Cost per Sq. Ft.
Jan-Sept. 2003	47,625	-		428,629	\$ 15.13
Oct 2003-Oct. 2004	47,625	3%	49,054	588,651	\$ 15.58
Oct 2004-Oct. 2005	49,054	3%	50,526	606,311	\$ 16.05
Oct. 2005 - Oct. 2006	50,526	3%	52,042	624,500	\$ 16.53
Oct. 2006-Oct. 2007	52,042	3%	53,603	643,235	\$ 17.03
Oct. 2007-Oct. 2008	53,603	3%	55,211	662,532	\$ 17.54
Oct. 2008 - Oct. 2009	55,211	3%	56,867	682,408	\$ 18.07
Oct. 2009 - Oct 2010	56,867	3%	58,573	702,880	\$ 18.61
Oct 2010 - Oct. 2011	58,573	3%	60,331	723,967	\$ 19.17
Total Rent for the REMAINING Life of the Lease				5,663,113	
Average MONTHLY Rent for the REMAINING Life of the Lease				53,934	
Square Footage Occupied				37,773	
Average ANNUAL Cost per Square Foot				\$ 17.13	

Sum of Op Budget	Corporate Function						
Departmental Function	Management	Markets	Regional Reliability	Reliability	Transmission Service Provider	TSP Support	Grand Total
ADMINISTRATIVE	2,131,004						2,131,004
BUSINESS APPLICATIONS	29,904				149,519		179,423
BUSINESS ARCHITECTURE & STRATEGY	164,471						164,471
BUSINESS INFRASTRUCTURE	938,693						938,693
BUSINESS PROJECT MANAGEMENT	29,904						29,904
CHANGE MANAGEMENT	224,278						224,278
COMPLIANCE			359,519				359,519
CORPORATE AFFAIRS	59,380						59,380
CUSTOMER RELATIONS	104,663						104,663
ENGINEERING MANAGEMENT				598,076	608,248		1,206,324
FINANCE & ACCOUNTING	261,658			74,759			336,417
FINANCIAL ANALYSIS & PROCESS IMPROVEMENT	680,313						680,313
GOVERNMENT RELATIONS	149,519						149,519
HUMAN RESOURCES	74,760						74,760
INTERCONNECTION ENGINEERING	323,039				299,039		323,039
IT MANAGEMENT	350,567						350,567
LEGAL	284,278						284,278
MARKET ANALYSIS		898,077					898,077
MARKET MANAGEMENT		336,417					336,417
MARKET OPERATIONS		7,504,604					7,504,604
MARKET SUPPORT		1,995,278					1,995,278
MEMBER RELATIONS	44,856						44,856
NETWORK MODELS				1,033,798	74,759		1,108,557
OFFICE & FACILITIES	378,797						378,797
OPERATIONS ENGINEERING			37,380	441,082	299,039		777,501
OPERATIONS MANAGEMENT	52,332						52,332
REGIONAL SUPPORT & SCHEDULING							
RELIABILITY AUTHORITY				2,003,630			2,041,010
RELIABILITY ENGINEERING							
SCHEDULING							
SETTLEMENTS		550,557			447,755	1,792,956	2,990,339
TARIFF ADMINISTRATION	299,039				1,793,429		998,312
TECH SUPPORT			50,080		74,759	171,168	2,142,548
TRAINING	74,759	74,759		283,283			529,210
TRANSMISSION ENGINEERING					598,077		149,518
TRANSMISSION PLANNING				1,179,532			598,077
TRANSMISSION POLICY	743,037				998,557		1,179,532
TREASURY	14,952						1,741,594
Grand Total	7,414,203	11,359,692	1,007,677	5,614,160	5,343,181	1,964,124	32,703,037

SPP Raw Operating Budget Data

Personnel	Corporate Function	Departmental Function	Op Budget	FTEs
Accounting	Management	ADMINISTRATIVE	149,519	1
Accounting	Management	FINANCE & ACCOUNTING	598,072	4
Accounting	Management	FINANCIAL ANALYSIS & PROCESS IMPROVEMENT	149,519	1
Accounting	Markets	SETTLEMENTS	550,557	3
Accounting	Transmission Service Provider	BUSINESS APPLICATIONS	149,519	1
Accounting	Transmission Service Provider	SETTLEMENTS	299,039	2
Accounting	Management	TARIFF ADMINISTRATION	299,039	2
Accounting	Management	IT MANAGEMENT	149,519	1
Accounting	Markets	MARKET SUPPORT	373,798	2.5
Accounting	Reliability	EMS APPLICATIONS	448,557	3
Accounting	Reliability	NETWORK MODELS	734,759	0.5
Accounting	Transmission Service Provider	EMS APPLICATIONS	608,248	0.5
Accounting	Transmission Service Provider	NETWORK MODELS	74,759	0.5
Accounting	Transmission Service Provider	SETTLEMENTS	74,759	0.5
Accounting	Transmission Service Provider	TARIFF ADMINISTRATION	373,798	2.5
Accounting	TSP Support	SCHEDULING	299,039	2
Bruce Rew	Management	ENGINEERING MANAGEMENT	74,759	0.5
Bruce Rew	Management	TRANSMISSION POLICY	518,759	0.5
Carl Monroe	Management	ADMINISTRATIVE	37,380	0.25
Carl Monroe	Management	IT MANAGEMENT	37,380	0.25
Carl Monroe	Management	OPERATIONS MANAGEMENT	37,380	0.25
Carl Monroe	Markets	MARKET OPERATIONS	37,380	0.25
Cheryl Robertson	Management	ADMINISTRATIVE	149,519	1
Customer Service	Management	ADMINISTRATIVE	14,952	0.1
Customer Service	Markets	MARKET SUPPORT	254,183	1.7
Customer Service	Reliability	RELIABILITY AUTHORITY	14,952	0.1
Customer Service	Transmission Service Provider	TARIFF ADMINISTRATION	299,039	2
Customer Service	TSP Support	SCHEDULING	14,952	0.1
HR	Management	ADMINISTRATIVE	528,137	3
HR	Management	HUMAN RESOURCES	323,039	2
Infrastructure	Management	BUSINESS INFRASTRUCTURE	619,702	4
Infrastructure	Management	IT MANAGEMENT	98,384	0.5
Infrastructure	Markets	MARKET SUPPORT	208,524	1.25
Infrastructure	Reliability	TECH SUPPORT	208,524	1.25
Infrastructure	Transmission Service Provider	SETTLEMENTS	59,005	0.25
Infrastructure	Transmission Service Provider	TARIFF ADMINISTRATION	59,005	0.25
Infrastructure	TSP Support	TECH SUPPORT	98,409	0.5
Jeff Price	Transmission Service Provider	TRANSMISSION POLICY	699,519	1
Karen Thomas	Management	ADMINISTRATIVE	112,139	0.75
Katie Duncan	Markets	MARKET SUPPORT	37,380	0.25
Katie Duncan	Management	TRAINING	74,759	0.5
Keith Dover	Management	ADMINISTRATIVE	74,759	0.5
Kevin Perry	Management	CHANGE MANAGEMENT	74,759	0.5
Kevin Perry	Management	BUSINESS APPLICATIONS	29,904	0.2
Kevin Perry	Management	BUSINESS ARCHITECTURE & STRATEGY	44,856	0.3
Kevin Perry	Management	BUSINESS INFRASTRUCTURE	14,952	0.1
Kevin Perry	Management	BUSINESS PROJECT MANAGEMENT	29,904	0.2
Kevin Perry	Management	IT MANAGEMENT	29,904	0.2
Lanny Nickell	Management	OPERATIONS MANAGEMENT	14,952	0.1
Lanny Nickell	Regional Reliability	REGIONAL SUPPORT & SCHEDULING	44,856	0.3
Lanny Nickell	Reliability	OPERATIONS ENGINEERING	29,904	0.2
Lanny Nickell	Reliability	RELIABILITY AUTHORITY	839,904	0.2
Lanny Nickell	Transmission Service Provider	TARIFF ADMINISTRATION	14,952	0.1
Lanny Nickell	TSP Support	SCHEDULING	14,952	0.1
Laurie Guinn	Management	LEGAL	149,519	1

Salary, Travel,
Meetings,
Comm

NERC

Admin

L&M

Services

19,291,638 137,797 482,647 1,148,389 7,573,680
 551,190 14,076 32,811 8,203
 137,797 3,519 8,203
 413,392 10,557 128,608
 137,797 3,519 8,203
 275,595 7,038 16,406
 275,595 3,519 8,203
 344,494 8,797 20,507
 413,392 10,557 24,608
 68,899 1,759 4,101
 68,899 1,759 4,101
 68,899 1,759 4,101
 68,899 1,759 4,101
 344,494 8,797 20,507
 275,595 7,038 16,406
 68,899 1,759 4,101
 68,899 1,759 4,101
 34,449 880 2,051
 34,449 880 2,051
 34,449 880 2,051
 34,449 880 2,051
 137,797 3,519 8,203
 13,780 352 820
 234,256 5,982 13,945
 13,780 352 820
 275,595 7,038 16,406
 413,392 10,557 24,608
 275,595 3,519 8,203
 551,190 14,076 32,811
 68,899 1,759 4,101
 172,247 4,399 10,253
 172,247 4,399 10,253
 34,449 880 2,051
 68,899 1,759 4,101
 103,348 2,639 6,152
 34,449 880 2,051
 68,899 1,759 4,101
 68,899 1,759 4,101
 68,899 1,759 4,101
 27,559 704 1,641
 41,339 1,056 2,461
 13,780 352 820
 27,559 704 1,641
 27,559 704 1,641
 13,780 352 820
 27,559 704 1,641
 27,559 704 1,641
 13,780 352 820
 137,797 3,519 8,203

800,000

800,000

Admin	L&M	Services
1,270,347	3,767,368	7,573,680

[illegible]

Salary, Travel, Meetings, Comm	NERC	Admin	L&M	Services
19,291,938	800,000	1,270,347	3,767,368	7,573,680
34,449		492,647	1,148,389	
		880	2,051	

Personnel	Corporate Function	Departmental Function	Op Budget	FTEs
Training	TSP Support	SCHEDULING	37,380	0.25

0.18%

Sum of FTEs		Corporate Function					Grand Total	
Departmental Function		Management	Markets	Regional Reliability	Reliability	Transmission Service Provider	TSP Support	
ADMINISTRATIVE		7.85						7.85
BUSINESS APPLICATIONS		0.2						1.2
BUSINESS ARCHITECTURE & STRATEGY		1.1				1		1.1
BUSINESS INFRASTRUCTURE		6.1						6.1
BUSINESS PROJECT MANAGEMENT		0.2						0.2
CHANGE MANAGEMENT		1.5						1.5
COMPLIANCE				1				1
CORPORATE AFFAIRS		0.25						0.25
CUSTOMER RELATIONS		0.7						0.7
EMS APPLICATIONS					4			4
ENGINEERING MANAGEMENT		1.75			0.5			2.25
FINANCE & ACCOUNTING		4.55						4.55
FINANCIAL ANALYSIS & PROCESS IMPROVEMENT		1						1
GOVERNMENT RELATIONS		0.5						0.5
HUMAN RESOURCES		2				2		2
INTERCONNECTION ENGINEERING								2
IT MANAGEMENT		2.2						2.2
LEGAL		1.5						1.5
MARKET ANALYSIS			4					4
MARKET MANAGER			2.25					2.25
MARKET OPERATIONS			7.75					7.75
MARKET SUPPORT			13.2					13.2
MEMBER RELATIONS		0.3						0.3
NETWORK MODELS					2.5	0.5		3
OFFICE & FACILITIES		2.5						2.5
OPERATIONS ENGINEERING				0.25	2.95	2		5.2
OPERATIONS MANAGEMENT		0.35						0.35
REGIONAL SUPPORT & SCHEDULING				0.5				0.5
RELIABILITY AUTHORITY				0.25	8.05			8.3
RELIABILITY ENGINEERING				2				2
SCHEDULING				1			9.45	10.45
SETTLEMENTS			3					3
TARIFF ADMINISTRATION		2		0.25		2.85		5.85
TECH SUPPORT						11.85		11.85
TRAINING		0.5	0.5		1.75	0.5	1	3.25
TRANSMISSION ENGINEERING								1
TRANSMISSION PLANNING					6.5	4		10.5
TRANSMISSION POLICY		2				3		5
TREASURY		0.1						0.1
Grand Total		39.15	30.7	5.25	26.25	28.2	10.45	140

SPP FTEs per Department

Exhibit 4

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WestConnect

	2003 Total	2004 Total	2005 Total	2006 Total	2007 Total	2008 Total	2009 Total	2010 Total	2011 Total	Total
Interim Committee Expenses										
Board Search Expenses	\$0	\$0	\$0	\$0	\$450,000	\$0	\$0	\$0	\$0	\$450,000
CEO/Executive Search Expenses	\$18,000	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$18,000
Office Space approx. 1000 sq. ft.	\$0	\$36,000	\$36,000	\$36,000	\$21,000	\$0	\$0	\$0	\$0	\$129,000
Administrative	\$12,000	\$24,000	\$24,000	\$24,000	\$9,000	\$0	\$0	\$0	\$0	\$93,000
Total Interim Committee Expenses	\$30,000	\$60,000	\$60,000	\$60,000	\$174,000	\$0	\$0	\$0	\$0	\$324,000
WestConnect Board Expenses										
Retention Fees	\$0	\$0	\$0	\$0	\$175,000	\$175,000	\$175,000	\$175,000	\$0	\$700,000
Meeting Fees	\$0	\$0	\$0	\$0	\$24,000	\$32,000	\$32,000	\$32,000	\$8,000	\$128,000
Meeting and Travel Expenses	\$0	\$0	\$0	\$0	\$39,000	\$52,000	\$52,000	\$52,000	\$13,000	\$208,000
D & O Insurance	\$0	\$0	\$0	\$0	\$225,000	\$300,000	\$300,000	\$300,000	\$75,000	\$1,200,000
Total Board Expenses	\$0	\$0	\$0	\$0	\$539,000	\$559,000	\$559,000	\$559,000	\$96,000	\$2,237,000
Tariff Filing										
Consulting	\$100,000	\$280,000	\$100,000	\$100,000	\$90,000	\$0	\$0	\$0	\$0	\$870,000
Systems	\$0	\$0	\$60,000	\$60,000	\$100,000	\$0	\$0	\$0	\$0	\$220,000
RFP Process & Contract	\$0	\$0	\$0	\$0	\$240,000	\$0	\$0	\$0	\$0	\$240,000
SSG-WI Expenses	\$180,000	\$120,000	\$40,000	\$40,000	\$270,000	\$0	\$0	\$0	\$0	\$650,000
Website	\$4,800	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$4,000	\$36,800
Total Tariff Filing	\$284,800	\$404,000	\$204,000	\$204,000	\$704,000	\$4,000	\$4,000	\$4,000	\$4,000	\$1,776,800
WestConnect Building										
Lease (7 temp. facilities)	\$0	\$0	\$0	\$0	\$180,000	\$1,500,000	\$1,500,000	\$1,500,000	\$1,500,000	\$6,780,000
Prepare Facilities (Renovate/ I/C & U)	\$0	\$0	\$0	\$0	\$0	\$13,500,000	\$456,000	\$456,000	\$114,000	\$14,526,000
On going Operating Expense	\$0	\$0	\$0	\$0	\$0	\$456,000	\$0	\$0	\$0	\$456,000
Furniture	\$0	\$0	\$0	\$0	\$60,000	\$0	\$0	\$0	\$0	\$60,000
Total Facility Expenses	\$0	\$0	\$0	\$0	\$240,000	\$15,006,000	\$17,006,000	\$17,006,000	\$1,614,000	\$33,332,000
WestConnect Operations										
Operations Software/Hardware	\$0	\$0	\$0	\$0	\$0	\$16,000,000	\$12,000,000	\$16,000,000	\$0	\$44,000,000
Communications between WIC and P	\$0	\$0	\$0	\$0	\$0	\$1,650,000	\$2,200,000	\$550,000	\$150,000	\$4,550,000
Total Operations	\$0	\$0	\$0	\$0	\$0	\$17,650,000	\$14,200,000	\$16,550,000	\$150,000	\$63,100,000
Staff Expenses										
Project Manager Expenses	\$336,000	\$336,000	\$336,000	\$336,000	\$84,000	\$0	\$0	\$0	\$0	\$1,428,000
Staffing	\$0	\$0	\$0	\$1,204,000	\$3,408,000	\$3,929,000	\$17,545,000	\$7,194,000	\$7,194,000	\$33,280,000
Procurement Project Manager (1)	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Relocation	\$0	\$0	\$0	\$0	\$340,000	\$0	\$700,000	\$1,200,000	\$0	\$2,240,000
Total Staff Expenses	\$336,000	\$336,000	\$336,000	\$1,204,000	\$3,788,000	\$3,929,000	\$18,744,000	\$8,394,000	\$7,194,000	\$33,972,000
Miscellaneous Expenses										
Legal	\$0	\$0	\$0	\$0	\$3,600,000	\$3,600,000	\$3,600,000	\$3,600,000	\$900,000	\$15,300,000
Corporation Financial Reserve	\$0	\$0	\$0	\$0	\$8,000,000	\$0	\$0	\$0	\$0	\$8,000,000
Project Contingency	\$0	\$0	\$0	\$0	\$10,000,000	\$0	\$0	\$0	\$0	\$10,000,000
Dues, licensing, insurance	\$0	\$0	\$0	\$0	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$0	\$16,000,000
Total Misc. Expenses	\$0	\$0	\$0	\$0	\$15,600,000	\$7,600,000	\$7,600,000	\$7,600,000	\$900,000	\$46,900,000
Total Expenses	\$660,800	\$808,000	\$600,000	\$600,000	\$29,815,000	\$44,577,000	\$38,935,000	\$45,414,000	\$9,958,000	\$167,462,800

Exhibit 4

WestConnect Projections

Exhibit 5

**Debt Interest Rates
15 Year Average**

	Prime Rate	Five Year Treasury Notes	Seven Year Treasury Notes	Moody's Long-term Aaa Bond Rate
1989	10.87	8.50	8.52	9.26
1990	10.01	8.37	8.52	9.32
1991	8.46	7.37	7.68	8.77
1992	6.25	6.19	6.63	8.14
1993	6.00	5.14	5.54	7.22
1994	7.15	6.69	6.91	7.97
1995	8.83	6.38	6.50	7.59
1996	8.27	6.18	6.34	7.37
1997	8.44	6.22	6.33	7.27
1998	8.35	5.15	5.28	6.53
1999	8.00	5.55	5.79	7.05
2000	9.23	6.16	6.20	7.62
2001	6.91	4.56	4.88	7.08
2002	4.67	3.82	4.30	6.49
2003	4.12	2.97	3.52	5.66
15 Year Avg	<u>7.70</u>	<u>5.95</u>	<u>6.20</u>	<u>7.56</u>
Basis spread	0.00	1.75 (1)	1.75 (1)	0.00
Total	<u><u>7.70</u></u>	<u><u>7.70</u></u>	<u><u>7.95</u></u>	<u><u>7.56</u></u>

(1) In Docket No. ES02-53-000, Midwest Independent Transmission System Operator, Inc., application to issue securities the pricing of the interest rate was based on the market rate of comparable term U.S. Treasury on the date of pricing, plus a spread that of 150 to 200 basis points. Consequently, for the above calculation we picked the mid-range of 175 basis points.

Source: Federal Reserve Board

**Debt Interest Rates
10 Year Average**

	Prime Rate	Five Year Treasury Notes	Seven Year Treasury Notes	Moody's Long-term Aaa Bond Rate
1994	7.15	6.69	6.91	7.97
1995	8.83	6.38	6.50	7.59
1996	8.27	6.18	6.34	7.37
1997	8.44	6.22	6.33	7.27
1998	8.35	5.15	5.28	6.53
1999	8.00	5.55	5.79	7.05
2000	9.23	6.16	6.20	7.62
2001	6.91	4.56	4.88	7.08
2002	4.67	3.82	4.30	6.49
2003	4.12	2.97	3.52	5.66
10 Year Avg	<u>7.40</u>	<u>5.37</u>	<u>5.61</u>	<u>7.06</u>
Basis spread	0.00	1.75 (1)	1.75 (1)	0.00
Total	<u><u>7.40</u></u>	<u><u>7.12</u></u>	<u><u>7.36</u></u>	<u><u>7.06</u></u>

(1) In Docket No. ES02-53-000, Midwest Independent Transmission System Operator, Inc., application to issue securities the pricing of the interest rate was based on the market rate of comparable term U.S. Treasury on the date of pricing, plus a spread that of 150 to 200 basis points. Consequently, for the above calculation we picked the mid-range of 175 basis points.

Source: Federal Reserve Board

**Debt Interest Rates
5 Year Average**

	Prime Rate	Five Year Treasury Notes	Seven Year Treasury Notes	Moody's Long-term Aaa Bond Rate
1999	8.00	5.55	5.79	7.05
2000	9.23	6.16	6.20	7.62
2001	6.91	4.56	4.88	7.08
2002	4.67	3.82	4.30	6.49
2003	4.12	2.97	3.52	5.66
5 Year Avg	<u>6.59</u>	<u>4.61</u>	<u>4.94</u>	<u>6.78</u>
Basis spread	0.00	1.75 (1)	1.75 (1)	0.00
Total	<u><u>6.59</u></u>	<u><u>6.36</u></u>	<u><u>6.69</u></u>	<u><u>6.78</u></u>

(1) In Docket No. ES02-53-000, Midwest Independent Transmission System Operator, Inc., application to issue securities the pricing of the interest rate was based on the market rate of comparable term U.S. Treasury on the date of pricing, plus a spread that of 150 to 200 basis points. Consequently, for the above calculation we picked the mid-range of 175 basis points.

Source: Federal Reserve Board

**RTO Debt Outstanding
As of December 31, 2003**

PJM

	Outstanding 12/31/2003	Ratio	Rate	Weighted Average Rate
Short-term Debt	0	0.000	0	0
Long-Term Debt:				
Senior Notes	\$66,521,000	0.466	7.163	3.34
Project Development Facility - Variable Rate	76,129,000	0.534	3.200 (1)	1.71
	<u>\$142,650,000</u>	<u>1.000</u>		<u>5.05</u>

Midwest Independent Transmission System Operator, Inc.

	Outstanding 12/31/2003	Ratio	Rate	Weighted Average Rate
Short-term Debt	<u>\$5,000,000</u>	0.024	1.670	0.04
Long-Term Debt:				
8.75 % Series Senior Notes	\$99,667,000	0.485	8.750	4.24
4.69 % Series Senior Notes	100,000,000	0.486	4.690	2.28
National Cooperative Services Corp. Variable Rate	887,498	0.004	3.000 (1)	0.01
	<u>\$200,554,498</u>			6.52
Total Debt	<u>\$205,554,498</u>	<u>1.000</u>		<u>6.56</u>

(1) Variable rate debt - used rate on December 31, 2003 in the above calculations.

Exhibit 6

4 Other Quantified RTO Impacts - Benchmarking

This section describes the quantitative benchmarking analyses. TCA gathered information from industry sources in several areas:

- Startup and operating costs for RTOs,³⁸
- Startup and operating costs of exchanges,
- Costs of performing a schedule coordinator role, and
- Monetary valuation of impacts of unplanned outages (loss of load).

Each of these areas is addressed below.

4.1 Startup and Operating Costs for RTOs

The October 2000 "RTO West Potential Benefits and Costs" report estimated the RTO West expected startup costs at \$82 million and the annual operating costs at \$50 million. This estimate was based on the October 2000 study group's best estimate of the levels of staffing and startup costs anticipated.

TCA collected data related to costs to develop and maintain ISOs/RTOs in North America.³⁹ This effort was intended to provide insights into the *actual* operating costs of similar organizations in the United States and Canada. The cost data were collected from a variety of sources, primarily publications from the respective organizations.

Table 23 summarizes the data collected for each of the ISOs and RTOs in North America.⁴⁰ The table shows startup and annual operating costs where available. In all

³⁸ "RTO" is used in this Section and in Section 5 to represent the broad set of RTO organizations, including ISOs.

³⁹ Within this section the terms ISO and RTO are used interchangeably to represent, except where noted, functionality on the scale expected within the RTO West.

⁴⁰ Notes/Sources:

- A. All values in \$US.
- B. Direct comparisons across regions must be undertaken with care. Some shared regional functions and cost responsibilities are handled outside of ISO cost structure.
- C. Some start-up costs not reflected or associated with previous tight pool structure and cost recovery.
- D. Cost values actual or projected for 2000 or 2001, except where noted.
- E. New England annual depreciation and interest costs are accounted for outside of the NE-ISO tariff structure.
- F. Ontario, PJM, New England, and NY values from Ontario Independent Market Operator (IMO) Business Plan 2001-2003, November 2000.
- G. NY ISO transition costs were obtained from the NY ISO Annual Report, 2000.
- H. ERCOT values taken from Public Utility Commission of Texas Docket 23320 filings.
- I. Alberta values from Transmission Administrator (TA) and Power Pool of Alberta (PP) Annual Review / Report documents for 2000, and Cox Report (see note L), and as provided by EAL professionals.

cases, however, all-in per-megawatt-hour carrying costs (startup and operating costs) have been provided or derived for each ISO/RTO and are shown.

-
- J. Ontario start-up costs based on 1999 - 2001 capital expenditures from the IMO Business Plan 2001-2003, page 32 (\$CA 254 Million).
 - K. ERCOT start-up costs based on 2000 - 2001 capital expenditures as reported in the "Year 2001 ERCOT Fund Summary" in Docket 23320 filing.
 - L. California numbers are from 2001 and are from "Participant Charges at Electricity Exchanges, Pools and ISOs: Towards a Benchmarking Study," prepared for the Power Pool of Alberta by Paul Cox, December 29, 2000, and revised May 9, 2001.
 - M. PJM is represented in several configurations in the table, and all configurations are included in the weighted averages. Since the costs of these configurations span the range of other ISO costs, this factor is not expected to materially bias the average.

Table 23: Startup and Operating Costs of ISOs/RTOs

	Annual O&M Costs (\$ million)	Annual Amortized Depreciation and Interest Costs (\$ million)	Total Annual Revenue Requirement with Debt & Interest (\$ million)	Annual Energy (TWh)	Unit O&M Costs (\$/MWh)	Unit Revenue Requirement (\$/MWh)	Peak Demand 2000 (MW)	Transmission Miles	# FTE employees	Staffing FTE/TWh	Start-up Costs (\$ million)
PJM (2000)	70.2	31.6	101.8	256	0.27	0.40	49,417	8,000	384	1.50	140
PJM without PJM West (2002)			128.9	256		0.50		8,000			
PJM with PJM West (2002)			137.3	314		0.44		13,100			
New York	53.7	6.9	60.6	149	0.36	0.41	30,311	10,800	222	1.49	82
New England	55.7		55.7	122	0.46	0.46	23,300	7,000	323	2.65	55
Calif ISO			228.0	270		0.84	45,990	25,526	544	2.01	
ERCOT	44.6	77.4	122.1	281	0.16	0.44	57,606	37,000	250	0.89	137
Alberta TA and SC	6.3		21.4	54		0.40	7,785	10,540	76	1.41	
Ontario	57.6	28.4	86.0	150	0.39	0.58	23,428	18,000	417	2.79	172
Weighted Average \$/MWh RTO Carrying Cost						0.51					
Weighted Average \$/MWh RTO Carrying Cost, Without CA ISO						0.45					

Several items should be noted when applying these numbers to the relative net merits of RTO West.

- Numbers should be viewed as “ball park,” given, for example, the averaging of dollar values from different years.
- Application of these values to an RTO West valuation requires judgment about the comparable level of effort required for RTO West.
- Various attributes are not distinguished in the preceding table:
 - ISO costs may include upgrades that would have occurred with or without the RTO:
 - Regional upgrades
 - SCADA upgrades
 - Y2k upgrades
 - RTO West costs are direct costs, not adjusted for parallel savings by the TOs or CAOs.
 - RTO West costs do not include the costs of stakeholder participation in the development process.

However, the table shows that the carrying costs of an RTO generally group fairly tightly. With the exception of California, which is broadly believed to have encountered unusually high startup costs, the other RTOs are relatively tightly grouped in a range of \$0.40/MWh to \$0.58/MWh.⁴¹ The weighted average cost of the existing RTOs in North America is approximately \$0.45 to \$0.51, with the lower value representing the case in which California and Alberta are excluded from the mix.

Given the annual energy throughput expected for RTO West⁴² in 2004, per-unit costs such as these quoted above equate to approximately \$127 million to \$143 million per year, depending on whether California's costs are included in the mix or not.

As RTOs mature and more such organizations become operational, parties can hope that experience will drive startup and operating costs down. The data from ERCOT and Ontario do not necessary demonstrate that RTOs have yet benefited from this learning curve. Conversely, however, the startup of Ontario and ERCOT do suggest that costs are being contained rather than significantly increasing, as the California ISO's experience, taken alone, would have suggested. These data are therefore seen as solid benchmark for average ISO/RTO costs. To the extent that RTO West could “beat the averages” and start up and/or operate for less cost, the overall RTO West net benefits would increase.

⁴¹ Even the \$.58/MWh RTO, Ontario, is somewhat of an “outlier”, with the next most costly RTO at \$.46, and represents a relatively small service area.

⁴² From the Energy Impact Analysis TCA estimated approximately 280 TWh annual energy.

General Comment: With the exception of the SEARUC study, which looks at several benchmarks that could be drivers of actual costs, the studies summarized below do not break start-up RTO costs into their component costs. However, the four studies do provide useful upper and lower bounds of costs projected and experienced by other RTOs and therefore an indication of the range within which WestConnect's costs are likely to be discussed.

Northeast RTO Costs and Benefits Assessment, ISO New England and New York ISO, May 14, 2002.

Summary of Implementation Costs by Action Table ES-5, p.9

NERTO Actions	Cost (Millions \$)	Explanation
Costs of RTO formation and Organizational Integration	35 - 60	
Standardize Markets/Eliminate Seams	NA	Costs already committed independently of NERTO (SMD 1.0 in NE and SMD 2.0 in NYISO)
Eliminate Export Fees (Own: Not a startup cost)	NA	Estimated Transmission owner revenue losses of \$36 million in NY and \$14 million must be recovered elsewhere
Single Dispatch	85-100	Cost of single dispatch solution

The Benefits and Costs of Regional Transmission Organizations and Standard Market Design in the Southeast, Prepared for the Southeastern Association of Regulatory Utility Commissioners, Prepared by Charles River Associates (and GE Power Systems Energy Consulting), November 6, 2002.

Section II. B. Pgs. 22- 24.

Costs are based on estimates supplied by the RTOs.

- “Day 1” RTO start-up costs are implementation costs short of SMD implementation.
- “Day 2” Costs are those of implementing SMD

The cost breakdown for GridSouth and GridFlorida were based on more detailed costs provided by GridFlorida. The study assumes similar costs for GridSouth (which did not provide detailed costs) as for GridFlorida. Takes mid-point of range of potential costs provided by SeTrans (range for Day 1 costs of \$145 -170 million and Day 2 costs of \$55-60 million.

The studies assume no offsetting savings in transmission costs at the utilities as certain utilities estimated small savings from elimination of functions and others small incremental costs associated with additional interaction with the RTO.

The analysis also considered whether there would be different costs should one Combined RTO be established for the entire region. “Conservatively” it was assumed that start-up costs would be the same as if three separate RTOs were created, though O&M expenses would be lower for the combined RTO.

Table 1
RTO Start-up and Operating Costs (in \$mm of dollars, except as otherwise noted)

	GridSouth	GridFlorida	SeTrans	Total of 3 RTOs	1 Combined RTO
Without SMD					
1 Time Start-Up Costs	186	186	158	530	530
Annual O&M	46	46	58	150	95
2005 Revenue Required	89	89	95	274	217
\$/MWh of Load	0.43	0.45	0.22	0.32	0.26
With SMD					
1 Time Start-Up Costs	244	244	215	703	703
Annual O&M	60	60	75	195	123
2005 Revenue Required	118	118	127	362	289
\$/MWh of Load	0.55	0.58	0.28	0.42	0.33

RTO West Benefit/Cost Study: Final Report Presented to RTO West Filing Utilities, by Tabors Caramis & Associates.
March 11, 2002,

Section 4.1. p. 36.

The October 2000 "RTO West Potential Benefits and Costs" report estimated the RTO West expected startup costs at \$82 million and the annual operating costs at \$50 million. They also collected data on actual expenses of other RTOs in the US and Canada and that data is the table below:¹

¹ All Values in \$,

Direct comparisons across regions must be undertaken with care. Some shared regional functions and cost responsibilities are handled outside of ISO cost structure.

Some of startup costs are not reflected or associated with previous tight pool structure and cost recovery

Cost values actual or projected for 2000 and 2001, except where noted

New England annual depreciation and interest costs are accounted for outside of the NE-ISO tariff structure

Ontario, PJM, New England and NY values from Ontario IMO Business Plan 2001-2003, No. 2000

NY ISO transition costs were obtained from the NY ISO Annual Report, 2000

ERCOT values taken from PUC of Texas Docket 23320 filings

Alberta values from Transmission Administrator and Power Pool of Alberta Annual Review/Report documents for 2000, and Cox Report and as provided by EAL professionals

Ontario startup costs based on 1999 - 2001 capital expenditures from the IMO Business Plan 2001 - 2003

ERCOT start-up costs based on 2000 - 2001 capital expenditures from "Year 2001 ERCOT Fund Summary" in Docket 23320 filings

California data from 2001 and from "Participant Charges at Electricity Exchanges. Pools and ISO" Prepared for the Power Pool of Alberta by Paul Cox (12/29/00) and revised (5/9/01)/

PJM represented in several configurations in table each of which used in weighted averages.

	Annual O&M Costs (\$ mm)	Annual Amortized Depreciation & Interest Costs (\$ mms)	Total Annual Revenue Requirement with Debt & Interest (\$ mm)	Annual Energy (TWh)	Unit O&M Costs (\$/MWh)	Unit Revenue Requirements (\$/MWh)	Peak Demand 2000	Trans. Miles	# FTE Employees	Staffing FTE/TWh	Start up Costs (\$ mm)
PJM (2000)	70.2	31.6	101.8	256	0.27	0.40	49,417	8,000	384	1.50	140
PJM without PJM West (2002)			128.9	256		0.50		8,000			
PJM with PJM West (2002)			137.3	314		0.44		13,100			
New York	53.7	6.9	60.6	149	0.36	0.41	30,311	10,800	222	1.49	82
New England	55.7		55.7	122	0.46	0.46	23,300	7,000	323	2.65	55
Calif ISO			228.0	270		.084	45,990	25,526	544	2.01	
ERCOT	44.6	77.4	122.1	281	0.16	0.44	57,606	37,000	250	0.89	137
Alberta TA and SC	6.3		21.4	54		0.40	7,785	10,540	76	1.41	
Ontario	57.6	28.4	86.0	150	0.39	0.58	23,728	18,000	417	2.79	1.72

Weighted average \$/MWh RTO Carrying Cost 0.51

Weighted average \$/MWh RTO Carrying Cost without CA ISA 0.45

- The RTO West study notes that judgment needed to apply resulting benchmarks to RTO West because:
 - Different base year data was used for each region
 - Certain attributes of different regions not noted, including that ISO costs may include upgrades that would have occurred with or without RTO formation, such as regional upgrades, SCADA upgrades and Y2k upgrades.
- The study assumes no parallel savings at any of the TOs or CAOs in the RTO.
- Costs do not include associated stakeholder participation costs.
- The study notes that CA is high in startup costs and that without CA that costs are relatively tightly grouped in a range.

While the study also looks at operations of secondary exchanges and schedule coordinate functions but this summary does not address these costs as it assumes they are not considered Day 1 functions.

Report to Congress: Impacts of the FERC's Proposal for Standard Market Design (and Appendices). DOE. April 30, 2003.

Costs to implement SMD, including establishment and operation of RTOs (p.17) are exhibited on a consolidated basis in the DOE report and shown on an annual basis as an annual revenue requirement.

- While data is presented for each region of the country it is not broken out between start-up and ongoing costs and the estimates are drawn from other studies.

Summary table for RTO/SMD costs for 2005 in 2002 dollars
Table 3.2

Region	RTO Annual Revenue Requirement (\$MM)	Annual Generation (TWhs)	RTO/SMD Costs (\$s per MWh)
ISO New England	63	130	0.48
NY ISO	135	163	0.83
PJM	287	702	0.41
MISO	155	784	0.20
SPP	33	80	0.41
RTO West	116	284	0.41
WestConnect RTO	34	82	0.41
California RTO	234	278	0.84
Rocky Mountain	22	54	0.41
SeTrans	117	463	0.25
GridSouth	109	219	0.50
GridFlorida	109	208	0.52
TVA	45	177	0.25
Total	1,457	3,623	0.40
Other Benchmarks:			
Ontario IMO	85.3	154	0.55
ERCOT	121.9	292	0.42

Notes to table provided in study, page 18.

Volume No.
Official Stenographers Report
Before the
**FEDERAL ENERGY
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ELECTRICITY MARKET DESIGN
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(23) QSE to be scheduled through the ERCOT ISO.
These QSEs must
(24) self-provide all wholesale energy to serve their load,
and
(25) they can provide, don't have to but can provide their

Page 87

(1) ancillary services. ERCOT does not operate an
energy or
(2) spot market, or a spot market. We simply deal with
the
(3) schedules that the QSEs bring to us.
(4) We do operate an ancillary service market for
(5) those QSEs that do not self-provide their ancillary
(6) services, and we operate a balancing energy market
for the
(7) whole interconnect. We'll talk a little bit about that in
a
(8) minute.
(9) We then settle all wholesale energy accounting
(10) between the QSEs and then the QSEs settle with
their
(11) individual competitive retailers.
(12) (Slide.)
(13) Feel free to ask questions anytime if you'd like
(14) to. We've been asked why we went to single control
area
(15) operation within ERCOT. It was a long decision after
a lot
(16) of discussion. I think it was basically and foremost an
(17) issue of fairness. We operated, as I said, a wholesale
(18) competitive market for four-and-a-half years, and in
that
(19) time frame, we realized that control area generators
and
(20) control area load had an unfair advantage over
non-control
(21) area generation and load by virtue of scheduling
balances
(22) basically in order to control the frequency and do the
(23) things control areas do, they used inadvertent energy
to
(24) settle their imbalances where the non-control area
entities
(25) often had some pretty stiff tariffs for their
imbalances.

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(1) We did work on ways to turn that into cash. We spent
a lot
(2) of time working on turning it into some form of
financial
(3) transactions. What we found was that in order, if you
don't
(4) penalize the control area for what it is supposed to
do,
(5) that is, to control the frequency and the transmission
(6) unloading, it's really hard to come up with a financial
tool
(7) without really just sort of trading money in a circle
based

(8) on inadvertent energy.
(9) Secondly, we did it for simplicity. We had ten
(10) control areas. We knew that the competitive retailers
would
(11) be selling in more than one control area, and we just
(12) realized it was simpler to settle as one control area
rather
(13) than first between ten, and then between the
competitive
(14) retailers within those control areas, and then within
the
(15) competitive retailers across control area lines. This
way
(16) we can do one settlement and it's accomplished.
(17) Finally, it just fits the market. ERCOT has a
(18) lot of functionality in the retail end that I'll talk a
(19) little bit about in a minute, and since we do a lot of
the
(20) retail things, it just made sense to do them within one
(21) control area rather than having to do it in ten
separate
(22) areas.
(23) MR. KELLY: Sam, question. What was the
cost of
(24) the conversion to a single control area and was it an
(25) overnight conversion, or was it that as old equipment
got

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(1) phased out, you moved to a central entity?
(2) MR. JONES: It was a one-step conversion. We
(3) actually installed new power and market operating
systems
(4) within the ERCOT facilities to operate as a single
control
(5) area. The QSEs that were created, many of which for
the old
(6) control areas which were generation control, in most
cases
(7) had to install new equipment. Some of the municipal
and
(8) coop control areas could make a conversion pretty
much with
(9) what they had, but there was quite a bit of new
equipment, a
(10) totally new system for ERCOT. As far as the cost, it
would
(11) be very difficult for me to break that out. It was a part
(12) of our overall cost including our facilities,
communications
(13) and everything. The retail and the wholesale was so
(14) intermixed, it's very difficult to say the exact cost for a
(15) single control area conversion was a certain number
of
(16) dollars.
(17) CHAIRMAN WOOD: What was the total,
Sam, for
(18) retail and wholesale?
(19) MR. JONES: The total wholesale and retail
(20) conversion cost was in the neighborhood of \$120

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million for
[21] facilities and systems.

[22] (Slide.)

[23] MR. JONES: How does the single control area
[24] work? Well ERCOT is the frequency control point
within our
[25] region. The QSEs do not control the frequency, they
control

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[1] to a signal from ERCOT based on several elements
but
[2] basically ERCOT operations deploys balancing
energy,
[3] regulation, and spinning reserves to control the
frequency
[4] and the transmission loading of the interconnect.
[5] In order to accomplish that, we require the QSEs
[6] to submit day-ahead 15-minute interval balanced
schedules to
[7] ERCOT. Every 15 minutes, they will designate their
load and
[8] what resources or how much of their generating fleet
will be
[9] used to meet that load. They can adjust those
schedules at
[10] any time up to one hour ahead of real time based on
their
[11] observing possible changes due to weather variations
and
[12] also to correct for congestion if they want to do that.
[13] They also submit day-ahead ancillary service bids
[14] for providing ancillary services. They also designate
how
[15] much of their own ancillary service requirements they
will
[16] self-provide and how much ERCOT should procure
for them off
[17] the market. They also submit balancing energy bids
up to an
[18] hour ahead. We clear that market every 15 minutes
for use
[19] 30 minutes ahead of when we clear it, because we
have to
[20] have time to notify the QSEs they've been selected
for them
[21] to arrange for the generation to occur. So using those
[22] every 15 minutes for balancing energy, and then on a
real
[23] time basis, for regulation, we control the frequency of
the
[24] grid. We also deploy balancing energy to accomplish
that
[25] frequency control, but we also use it to control
congestion,

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[1] zonal congestion on the grid, and we'll talk a little bit
[2] more about that in a minute.
[3] We can also do generating unit-specific
[4] instructions to do local congestion. Then finally we

can

[5] issue at any time verbal instructions to QSEs if
needed for
[6] reliability purposes. We occasionally have to do that
with
[7] a mis-load forecast or something that occurs in the
system
[8] that needs correction on a very quick basis.
[9] Our transmission service is probably a little bit
[10] different from what you're used to. All transmission
[11] service in ERCOT is network, postage stamp
transmission
[12] service actually by our law. Senate Bill 7 that created
us
[13] specified that network service. All the load entities
pay
[14] for their transmission service based on their load ratio
[15] share. Basically, we take the annual transmission cost
of
[16] service as approved by the public utility commission
and
[17] then divide that up on the load ratio share for the
load,
[18] and they pay their share for the year. There's no
charge
[19] for transmission service for any energy that does
come in
[20] over the DC ties because it serves those load entities.
But
[21] for any energy that goes out over the D.C. tie, there is
a
[22] formula for charging just for that short-term
transmission
[23] usage.
[24] (Slide.)
[25] All schedules submitted by the QSE to ERCOT flow.

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[1] We don't have reservations, we don't have priority of
[2] service, we don't refuse schedules. Basically, all
[3] schedules flow and it's possible because ERCOT
operations is
[4] charged with managing the congestion that might
result from
[5] those schedules. And again, we'll talk about
congestion
[6] management in another slide. The cost of congestion
at
[7] start-up which began July 31st last year was a general
[8] uplift initially. We had no real estimate of what
[9] congestion costs would be. There was a lot of
discussion.
[10] Finally, it was decided, as a general uplift, unless it
[11] reached \$20 million in any 12-month sliding window,
then it
[12] would be directly assigned to those entities that
caused the
[13] congestion.
[14] We started the market over the peak of the
[15] summer, we experienced an unusual number of

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Comparative Analysis of RTO/ISO Operating Costs

August 17, 2004

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