

**ORGANIZATION OF MISO STATES, INC.**  
**Board of Directors Meeting**  
**Conference Call Notes**  
**September 14, 2006**

Steve Gaw, President of the Organization of MISO States, Inc. (OMS), called the August 10, 2006 Meeting of the OMS Board of Directors to order via conference call at approximately 2:00 p.m. (CDT). The following board members or their proxies participated in the meeting:

Randy Rismiller, proxy for Kevin Wright, Illinois  
Frank Bodine, proxy for John Norris, Iowa  
Jeff Johnson, proxy for Mark David Goss, Kentucky  
Laura Chappelle, Michigan  
Burl Haar, proxy for Ken Nickolai, Minnesota  
Steve Gaw, Missouri  
Greg Jergeson, Montana  
Tim Texel, proxy for Eugene Bade, Nebraska  
Susan Wefald, North Dakota  
Kim Pizzingrilli, Pennsylvania  
Gary Hanson, South Dakota  
David Sapper, proxy for Dan Ebert, Wisconsin

Absent

Indiana  
Manitoba  
Ohio

State Agency members participating

AW Turner – Kentucky  
Michigan Staff  
Candace Beery – Montana  
Mike Proctor – Missouri  
Kevin Holtsberry – Ohio  
Jerry Lein – North Dakota  
Pennsylvania Staff

Others participating

Graham Edwards & Roy Jones – MISO

OMS Staff participating - Bill Smith, Julie Mitchell

The directors and proxies listed above established the necessary quorum for the meeting of at least eight directors being present.

## **Treasurer's Report - August 2006**

OMS Treasurer Kim Pizzingrilli, presented the August 2006 Treasurer's report.

### **Cash On Hand**

The beginning balance as of August 1 for the Wells Fargo Business Performance Savings Account was \$55,779.78. Interest earned for this month was \$154.17. The August 31, 2006 balance was \$55,933.95.

The beginning balance as of August 1 for the Chase Bank One Checking account was \$75,850.45. The total disbursements from the checking account for August 2006 were \$27,011.91, deposits totaled \$40,055.21 and interest earned was \$39.82. As of August 31, 2006, the checking account bank balance was \$93,077.58 and the book balance was \$88,893.75.

The total savings and checking account balances as of August 31, 2006 is **\$ 144,827.70**.

**Kim Pizzingrilli moved to approve the Treasurer's report. Jeff Johnson seconded. The motion was approved by unanimous voice vote.**

### **Review of the August 29, 2006 Executive Committee Meeting**

Steve Gaw highlighted the following from the Executive Committee Meeting:

- Progress report from the nominating committee.
- Report from the personnel committee: confidential personnel contracts were distributed to the Board.
- Demand Response Initiative.
- Review of the draft budget.
- Deadlines in office lease renewal.

### **Briefings**

#### **MISO Update – Graham Edwards**

President Edwards gave an update on MISO's projects highlighting ASM and Resource Adequacy.

#### **MISO Report on status of Ancillary Services Market – Roy Jones**

Roy Jones gave a status report and laid out the plan for the remainder of the year, including meetings with individual states. He also took questions from the Board.

### **Business Items**

#### **1. MISO Advisory Committee Issues**

- The Board discussed the voting items on the MISO Advisory Committee agenda. The reps are to vote in the best interest of OMS.

#### **2. Approval of the OMS Budget of 2007 – Bill Smith**

Bill Smith presented the final version of the 2007 OMS budget.

**Laura Chappelle moved to accept the budget as presented. Gary Hanson seconded. The motion was approved by unanimous voice vote.**

#### **3. Transmission Rights Task Force Proposals - Mike Proctor**

Mike Proctor reviewed the background for the proposals and then reviewed the proposals themselves.

**4. MISO 2007 Capital Project Rankings – Burl Haar**

Burl Haar gave background on the rankings and then went over the MISO capital project rankings. The Board then discussed the projects and their rankings.

**5. Review of Pending Projects - Bill Smith**

Bill Smith briefly went over the pending projects, highlighting the upcoming activity on the RECB project.

**Administrative Update - Bill Smith**

Bill Smith gave the administrative update, highlighting the following:

- The ICF benefit study
- DC Energy present info to the Market WG on the impact of virtual supply bids to RSG
- ModernGrid Initiative is planning a Midwest meeting
- Next month's AC meeting is in Saint Paul.

**Announcements:**

- Next OMS Executive Committee Meeting will be held Tuesday, Sept. 26 at 2:00 pm (CDT).
- Next regular OMS Board Meeting will be held Thursday, October 12 at 2:00 pm (CDT).

**Meeting adjourned at 3:40 pm CDT**

## OMS

**Organization of MISO States  
Report of the Treasurer  
Kim Pizzingrilli, Pennsylvania PUC  
to the  
Board of Directors  
September 14, 2006  
Report for August 2006**

### **CASH ON HAND**

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TREASURER'S REPORT  
Organization of MISO States  
August 31, 2006

Certificates of Deposit

Balance as of 8/1/06

Certificates of Deposit Balance as of 8/31/06

Wells Fargo Business Performance Savings Account

Balance as of 8/1/06

8/31/06      DEP      Interest on Savings

Business Performance Savings Account Balance at 8/31/06

Chase Bank One Commercial Checking with Interest

Balance as of 8/1/06

8/1/06	DEP	ACH from Midwest ISO	\$	40,000.00
8/22/06	DEP	OM Fed Ex reimbursement	\$	15.39
8/31/06	DEP	Interest on Checking	\$	<u>39.82</u>

Total Deposits

Checks and Charges

Date	Check #	Descriptions		
8/10/06	W/D	PayChex fee for July 2006.		106.06
8/10/06	2080	Intercall for conference calls for OMS BOD, EX	\$	843.70
8/10/06	2081	IA travel reimbursement for MISO Market	\$	512.39
8/10/06	2082	MI travel reimbursement for MISO Ancillary	\$	500.45

8/10/06	2083	MT for travel reimbursement for MISO ASM	\$	1,218.51
8/10/06	2084	ND for travel reimbursement for OMS WG Chairs	\$	888.57
8/10/06	2085	OH for travel reimbursement for MISO Finance	\$	285.15
8/10/06	2086	OH for travel reimbursement for MISO AC and	\$	191.72
8/10/06	2087	ED for travel reimbursement for Transmission	\$	255.88
8/10/06	2088	ED for travel reimbursement for MISO Annual	\$	110.41
8/10/06	2089	ED for travel reimbursement for OMS Conference	\$	34.95
8/10/06	2090	ED for travel reimbursement for MISO AC and	\$	95.82
8/10/06	2091	ED amended travel reimbursement for MISO AC	\$	62.00
8/23/06	2092	DWX for OMS website hosting for September	\$	35.00
8/23/06	2093	Intercall for conference calls for OMS BOD, EX	\$	1,055.37
8/23/06	2094	100 Court Investors, LLC for OMS office rent and	\$	874.21
8/23/06	2095	Infomax for copier, fax and printer lease for	\$	172.31
8/23/06	2096	Qwest for July 2006 telephone, fax, DSL charges.	\$	207.35
8/23/06	2097	IA travel reimbursement for MISO Market	\$	487.74
8/23/06	2098	MN travel reimbursement for OMS Conference on	\$	240.60
8/23/06	2099	MN travel reimbursement for MISO Structure	\$	625.28
8/23/06	2100	ED travel reimbursement for MISO AC in Carmel	\$	39.50
8/23/06	2101	ED travel reimbursement for NARUC Summer	\$	19.30
8/23/06	W/D	Chase Bank One Visa for July 2006 charges. (See	\$	3,728.34
8/30/06	WD	August Payroll (Including Employer & Employee	\$	11,754.63
8/31/06	WD	OM - Deferred Compensation Deposit (Including	\$	750.00
8/31/06	WD	ED - Deferred Compensation Deposit (Including	\$	1,916.67

**Total Checks and Charges**

**CHECKING ACCOUNT BALANCE 8/31/06**

**CERTIFICATES OF DEPOSIT, SAVINGS AND CHECKING ACCOUNT BALANCES AS C**

**CHASE CHECKING ACCOUNT RECONCILIATION**

	<u>Check #</u>	<u>Amount</u>
Bank Balance 8/31/06		\$ 93,077.58
Less: Checks O/S	W/D	\$ 750.00
	W/D	\$ 1,916.67
	1970	\$ 57.40
	2081	\$ 512.39
	2084	\$ 888.57
	2100	\$ 39.50
	2101	\$ 19.30
 Book Balance 8/31/06		 <u>\$ 88,893.75</u>

**CHASE OMS VISA CARD PURCHASES**

- ED Marathon Oil Indianapolis for gas for rental car for travel to MISO AC and BOD Meetings on
- ED Wyndham Indianapolis for hotel room for MISO AC and BOD Meetings on July 18 - 20, 2006
- ED Thrifty Car Rental MEL-RAC, LLC for rental car for MISO AC and BOD Meetings on July 18 -
- ED Booking Fee for travel to Camp NARUC in Lansing and MISO AC Meeting in Carmel on Aug
- ED Booking Fee for travel to OPSI Retreat in MD and MISO AC Meeting in St. Paul on Septembe
- ED Booking Fee for reissue of airline ticket originally purchased June 27, 2006 for travel to NAF
- ED Airfare for travel to Camp NARUC in Lansing and MISO AC Meeting in Carmel on August 15
- ED Airfare for travel to OPSI Retreat in MD and MISO AC Meeting in St. Paul on September 17 -1
- ED Marriott San Francisco deposit for OMS-OPSI Regulator Luncheon at NARUC Summer Meet
- ED Bart Concourse H Station for train to hotel.
- ED Marriott San Francisco for hotel room for travel to NARUC Summer Meeting on July 30 - Aug
- OM Fed Ex for personal overnight mail charge. (*Reimbursed to OMS*).

Total Chase Card Purchases July 2006

TOTALS

\$	-	
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		<hr/>
		\$ -
		<hr/>

\$	55,779.78	
	154.17	
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		<hr/>
		\$ 55,933.95
		<hr/>

\$	75,850.45	
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\$	40,055.21	



\$ 27,011.91

\$ 88,893.75

YF 8/31/06

\$ 144,827.70

July 18 - 20, 2006 in	\$	3.83
in Carmel.	\$	185.30
20, 2006 in Carmel.	\$	84.45
August 15 - 16, 2006.	\$	25.00
for 17 -19, 2006.	\$	25.00
for UC Summer Meeting on	\$	25.00
August 15 - 16, 2006.	\$	450.21
August 17 - 19, 2006.	\$	565.52
Meeting on July 31, 2006 in San	\$	1,900.00
	\$	6.00
August 1, 2006 in San	\$	442.64
	\$	15.39
	<u>\$</u>	<u>3,728.34</u>

# Organization of MISO States, Inc.

\*\*DRAFT - 2007 Budget - DRAFT \*\*

August 30, 2006

	Budget 2005	Actual 2005	Budget 2006	Actual 2006 (YTD)	Draft CY 2007 budget
1 Ordinary Income/Expense					
2 Income					
3 MISO Grant	600,000	200,000	525,000	120,000	480,000
4 Interest - Checking Acct and CDs	1,000	5,568	2,000	181	2,000
5 Miscellaneous revenue		62		360	0
6 Total Income	<u>601,000</u>	<u>205,630</u>	<u>527,000</u>	<u>120,540</u>	<u>482,000</u>
Cash carried forward from prior year	<u>373,237</u>	<u>373,237</u>	<u>133,802</u>	<u>133,802</u>	<u>150,000</u>
Total funds available	<u>974,237</u>	<u>578,867</u>	<u>660,802</u>	<u>254,342</u>	<u>632,000</u>
7 Expense					0
8 Personnel Compensation and Benefits					
9 Compensation - Exec Director	125,000	120,559	130,000	68,427	135,000
10 Compensation - Admin Asst	60,000	56,345	66,000	34,130	71,000
11 Compensation - additional personnel	75,000		35,000	485	35,000
12 Other Personnel Expenses					
13 Staff Training	3,500		3,000		2,000
14 Paychex Accounting Fees	400	1,237	1,000	825	1,500
15 Total Personnel Expenses	<u>263,900</u>	<u>178,141</u>	<u>235,000</u>	<u>103,867</u>	<u>244,500</u>
16 Office Expenses (non-personnel)					
17 Computers	4,000	85	6,500	32	5,000
18 Furniture/Office Equipment	1,000		2,000	432	1,500
19 Rent, parking, other occupancy	8,000	10,491	14,000	6,119	10,500
20 Books, subscriptions, reference	6,000	2,825	4,000	2,080	3,000
21 Equip rental & maintenance					
22 Computer support	2,600	4,871	4,000	4,798	6,000
23 Web Site Hosting	1,000	455	1,000	240	600
24 Printer/Copier/Fax Rental	3,000	2,060	3,000	1,206	2,500
25 Postage, shipping, delivery	500	698	800	811	1,200
26 Printing & copying	500	2,403	400	285	600
27 Supplies	5,000	1,190	3,000	664	1,800
28 Phone, Fax, DSL	3,500	2,717	3,500	1,657	3,000
29 Miscellaneous Operating Expense	1,500	2			0
30 Total Office Expenses (non-personnel)	<u>36,600</u>	<u>27,796</u>	<u>42,200</u>	<u>18,324</u>	<u>35,700</u>
31 Organizational (corp) and Insurance Expenses					
32 Professional, Audit, Other	2,500	2,967	2,500	2,987	3,200
35 General Office Insurance	2,800	2,510	2,800		2,800
36 Workers' Comp	1,200	1,591	1,300	247	1,300
37 Directors & Officers Insurance	3,500	3,500	3,500	3,500	3,500
38 Total Organization and Insurance Expense	<u>10,000</u>	<u>10,568</u>	<u>10,100</u>	<u>6,734</u>	<u>10,800</u>
39 Consultants / DC Counsel	200,000	15,663	60,000		60,000

40	OMS - meetings and training					
41	Officers	3,000	2,098	3,000	191	3,000
42	Exec Dir	12,000	10,054	10,000	6,825	10,000
43	Other Staff	3,500		3,500	554	3,500
44	<b>Total OMS Officer and Staff Expenses</b>	<b>18,500</b>	<b>12,152</b>	<b>16,500</b>	<b>7,570</b>	<b>16,500</b>
45	MISO Meeting Expenses					
46	MISO work groups and committees	18,000	26,871	26,400	32,071	36,000
47	MISO BOD,AC - Lead States	15,000	19,875	20,000	2,962	20,000
48	Exec Dir (MISO AC,BOD)	6,000	7,133	8,000	3,342	8,000
49	<b>Total MISO Meeting Expenses</b>	<b>33,000</b>	<b>46,747</b>	<b>46,400</b>	<b>35,033</b>	<b>64,000</b>
50	OMS Meetings					
51	OMS Annual Meeting					
52	Director attendance expense	10,000	11,514	12,000	4,925	12,000
53	Annual Meeting Location Costs	1,200	1,964	1,200	428	2,000
54	<b>Total OMS Annual Meeting</b>	<b>11,200</b>	<b>13,477</b>	<b>13,200</b>	<b>5,352</b>	<b>14,000</b>
55	Regular OMS BOD Meeting					
56	Regular BOD Mtg Location Costs	1,200	1,380	1,500	1,256	1,500
57	Regular BOD Meeting attendance expense	10,000	1,748	10,000	2,727	10,000
58	<b>Total Regular OMS BOD Meeting</b>	<b>11,200</b>	<b>3,128</b>	<b>11,500</b>	<b>3,983</b>	<b>11,500</b>
59	OMS Executive Committee Meeting					
60	OMS Exec Com Mtg attendance expense	3,000		3,000		3,000
61	OMS Exec Comm - Meeting Location	500		500		500
62	<b>Total OMS Executive Committee Meeting</b>	<b>3,500</b>	<b>0</b>	<b>3,500</b>	<b>0</b>	<b>3,500</b>
63	Conference Calls	12,000	15,400	16,000	7,005	16,000
64	OMS Work Group Meetings - attendance expense	6,000	9,460	6,000	8,030	12,000
65	OMS Work Group meeting - location costs		257			
66	FERC/DOE Tech Conference Expenses	5,000	4,600	37,400	3,268	5,000
67	OMS Technical Training	6,000	-135	6,000	24,482	50,000
68	Technical training location costs		161			
69	<b>Total OMS Meeting and Training Expenses</b>	<b>54,900</b>	<b>46,347</b>	<b>93,600</b>	<b>52,120</b>	<b>112,000</b>
70	<b>Total Expenses</b>	<b>616,900</b>	<b>337,414</b>	<b>503,800</b>	<b>223,649</b>	<b>543,500</b>
71	<b>Operating surplus of funds available over expenses</b>	<b>357,337</b>	<b>241,453</b>	<b>157,002</b>	<b>30,694</b>	<b>88,500</b>
72	<b>Depreciation allowance</b>	<b>-135</b>	<b>3,488</b>			<b>0</b>
	<b>Net Surplus of available funds over expenses</b>	<b>357,472</b>	<b>237,965</b>	<b>157,002</b>	<b>30,694</b>	<b>88,500</b>

# **TRTF Approved Proposal to Modify the Annual FTR Allocation/Auction in Fulfillment of the MSC's January 10, 2006 Motion**

## **Annual ARR Allocation**

### Item 1: Allocation of ARRs Instead of FTRs

Going forward, qualified Market Participants will be eligible to be allocated Auction Revenue Rights (ARRs) instead of Financial Transmission Rights (FTRs) in the MISO Annual Allocation. Any allocated ARRs may be self-scheduled in the MISO Annual FTR Auction such that the Market Participant automatically receives the corresponding FTRs associated with their allocated ARRs if so desired.

### Item 1a: ARR Product Definition

ARRs will be defined as Seasonal On and Off Peak just as allocated FTRs are today.

### Item 2: Allocation Stages

The MISO Annual Allocation will be conducted in three stages: Stage 1A, Stage 1B, and Stage 2.

Stage 1A will be a single Tier.

Stage 1B will be a single Tier.

Stage 2 will be a determination by MISO of each qualified Market Participant's pro-rata share, if any, of the residual dollars from the FTR seasonal auctions (see Item 2e for more detail).

### Item 2a: Definition of Stage 1A

In Stage 1A, in each individual ARR Zone in which a qualified Market Participant serves load, the Market Participant will have an opportunity to nominate ARRs up to the Candidate Baseload ARR Rights it possesses for that ARR Zone, and which source from any of the Reserved Source Points in the Baseload Reserved Source Set (BRSS) for each of the individual ARR Zones up to the qualified Market Participant's pro-rata load share of the ARR Zone. Said another way, since Candidate Baseload ARR Rights are based on Baseload Usage in a given ARR Zone, a Market Participant cannot request more ARRs sinking in a particular ARR Zone in Stage 1A than their Baseload Usage in that ARR Zone. For instance, if the Market Participant is only 10% of the load in an ARR Zone, the Market Participant cannot request more than 10% of the MW capacity of any Reserved Source Point.

### Item 2b: Survival of Stage 1A

If by some regulatory action a market design change is approved that would otherwise eliminate Stage 1A or otherwise abrogate a qualified Market Participant's Candidate Baseload ARR Rights,

the MISO will use all available authority to ensure a transition period during which the Stage 1A Candidate Baseload ARR Rights are maintained. This transition period will be for 10 years.

#### Item 2c: Stage 1A Linkage to the MTEP

The feasibility of existing ARRs in Stage 1A shall be maintained by including the maintenance of this feasibility in the MTEP criteria for system expansion. Any transmission projects added to the MTEP as a result of this process will be subject to normal stakeholder review and, as with all proposed MTEP projects, will be subject to final approval by the MISO Board. To assist the Board in its determination, a cost/benefit analysis of any projects proposed for this purpose will be provided in addition to normal information provided for MTEP projects.

#### Item 2d: Definition of Stage 1B

In Stage 1B, in each individual ARR Zone in which a qualified Market Participant serves load, the Market Participant will have an opportunity to nominate ARRs up to the Candidate Peak ARR Rights it possesses for that ARR Zone, and which source from any of the Reserved Source Points in the Peak Reserved Source Set (PRSS) for each individual ARR Zone up to its pro-rata load share of the ARR Zone. Said another way, since Candidate Peak ARR Rights are based on Peak Usage in a given ARR Zone, a Market Participant cannot request more ARRs sinking in a particular ARR Zone in Stage 1B than their Peak Usage in that ARR Zone, and if the LSE is only 10% of the load in an ARR Zone, they cannot request more than 10% of the MW capacity of any Reserved Source Point.

#### Item 2e: Definition of Stage 2

In Stage 2, each Market Participant will be informed by MISO of how many remaining Candidate ARR rights they have outstanding that were not utilized in Stage 1 either because the Market Participant did not exercise their Candidate ARR nomination rights, or because the Market Participant's nominations were curtailed to some extent. MISO will further inform the Market Participant what percentage its outstanding Candidate ARRs are of all outstanding Candidate ARRs. The Market Participant will then receive a corresponding percentage share of the dollar value of the system capability sold in the annual FTR auction that was not otherwise disbursed to holders of ARRs allocated in Stage 1. For instance, if an entity has 50 MW of Candidate ARRs outstanding after Stage 1, then in Stage 2 MISO will inform them of this and, as an example, that this 50 MW represents 1% of all outstanding Candidate ARRs. The Market Participant will then get 1% of the dollars generated by the annual FTR auction after dollars associated with Stage 1 allocated ARR paths are disbursed.

#### Item 3: Definition of Candidate Baseload ARR Rights

Candidate Baseload ARR Rights shall be a MW amount equal to each qualified Market Participant's Baseload Usage.

#### Item 3a: Fungibility of Candidate Baseload ARR Rights

A qualified Market Participant with Candidate Baseload ARR Rights may transfer ownership of such Rights to another Market Participant.

#### Item 4: Definition of Candidate Peak ARR Rights

Candidate Peak ARR Rights shall be a MW amount equal to each qualified Market Participant's Peak Usage.

#### Item 4a: Fungibility of Candidate Peak ARR Rights

A qualified Market Participant with Candidate Peak ARR Rights may transfer ownership of such Rights to another Market Participant.

#### Item 5: Definition of an ARR Zone

ARR Zones will include the following two general categories:

Category 1: Network Integrated Transmission Service (NITS) OASIS reservation Points-of-Delivery (PODs) extant during the Reference Year. This includes external interface CPnodes for Point-to-Point (PtP) exports.

Category 2: Subzones within NITS PODs that meet qualification criteria. Non-POD ARR Zones will be established where supported by transmission and energy supply arrangements in place during the Reference Year. In most cases, simple criteria will identify valid subzones as follows:

- OATT or GFA service agreements, and/or
- Identified supply resources (e.g., listed in power supply contracts or on NITS spec. sheets)
- State regulatory jurisdictional boundaries that separate load and generation within a single POD.

In circumstances where the above Category 2 criteria are insufficient to clearly determine whether a proposed ARR Zone qualifies, it will be necessary to define zones based on broader guidelines, including:

- Evaluation of contractual arrangements and past scheduling practices.
- Agreement among effected parties.

ARR Zone definitions will not change over time to match changing load zone configurations.

A Load Zone may be defined in future Commercial Model changes to span multiple ARR Zones to the extent that sufficient data can be provided to MISO to support such a definition.

#### Item 6: Definition of Baseload Usage

Baseload Usage shall be defined as 50% of Peak Usage.

For Market Participants utilizing point-to-point transmission service, 50% of the point-to-point transmission service MW amount will be assumed to be Baseload Usage.

#### Item 7: Definition of Peak Usage

Peak Usage shall be defined as a Market Participant's forecasted peak load usage in a given ARR Zone. MISO will develop a standard process of determining ARR Zone Peak Usage to avoid inconsistency in forecasting approach or opportunities for gaming.

#### Item 8: Definition of Baseload Reserved Source Set (BRSS)

The Baseload Reserved Source Set (BRSS) shall be defined as those Baseload Supply Resources that have met the Resource Qualification Requirements for inclusion as a Reserved Source Point for a given ARR Zone. Interfaces are understood to serve as proxies for Baseload Supply Resources located external to the MISO market footprint and are eligible for inclusion in the BRSS.

#### Item 8a: Additions/Changes to the BRSS

Additions to the BRSS may be made if the total MW capacity of the existing BRSS in a given ARR Zone is less than the Baseload Usage plus 15% of all qualified Market Participants in the given ARR Zone unless MW from an old Reserved Source Point are being removed and substituted with MW being added to a different existing, or new, Reserved Source Point in the BRSS. A SFT will be conducted and only those ARRs sourcing at the new Baseload Supply Resource determined to be feasible without making infeasible Stage 1A ARRs for the given ARR Zone that were feasible in the most recent ARR Annual Allocation will be eligible to be added to the BRSS.

MWs from an existing Reserved Source Point may be removed from the BRSS to free up more system capability for the feasibility of ARRs from a new Reserved Source Point based on a new Baseload Supply Resource provided that the qualified Market Participant requesting the removal of the Reserved Source Point MWs is the same qualified Market Participant whose ownership or contractual relationship with a Baseload Supply Resource was the basis for the original inclusion of the Reserved Source Point in the BRSS. Furthermore, the removal of MWs from a Reserved Source Point cannot result in a net reduction of MW eligible to be requested from all Reserved Source Points in Stage 1A unless all Market Participants serving load in that ARR Zone agree to this outcome.

A qualified Market Participant may increase the feasibility of ARRs from a new Baseload Supply Resource by utilizing the Feasibility Upgrade Process.

#### Item 8b: Baseload Composition of "Slice-of-System" or "System Power" Contracts



For entities with contractual relationships defined as slice-of-system or system power, thus obscuring whether the contractual relationship is with one or more Baseload Supply Resources, every effort will be made by the asset owners to define from which Baseload Supply Resources a portion of the slice of system contracted for power originated, and to what percent, for the purpose of defining those Baseload Supply Resources that may be included in a given ARR Zone's BRSS at a certain MW amount. Absent agreement by the asset owners, current Tariff procedures will be utilized by MISO to determine the default breakdown of the contract.

#### Item 9: Definition of Peak Reserved Source Set (PRSS)

The Peak Reserved Source Set (PRSS) shall be defined as all supply resources, inclusive of Baseload Supply Resources, that have met the Resource Qualification Requirements for inclusion as a Reserved Source Point for a given ARR Zone. Interfaces are understood to serve as proxies for supply resources located external to the MISO market footprint and are eligible for inclusion in the PRSS.

#### Item 9a: Additions/Changes to the PRSS

Additions to the PRSS may be made if the total MW capacity of the existing PRSS in a given ARR Zone is less than the Peak Usage plus 15% of all qualified Market Participants in the given ARR Zone unless MW from an old Reserved Source Point are being removed and substituted with MW being added to a different existing, or new, Reserved Source Point in the PRSS. A SFT will be conducted and only those ARRs sourcing at the new supply resource determined to be feasible without making infeasible Stage 1A or Stage 1B ARRs for the given ARR Zone that were feasible in the most recent ARR Annual Allocation will be eligible to be added to the PRSS.

MWs from an existing Reserved Source Point may be removed from the PRSS to free up more system capability for the feasibility of ARRs from a new Reserved Source Point based on a new supply resource provided that the qualified Market Participant requesting the removal of the Reserved Source Point MWs is the same qualified Market Participant whose ownership or contractual relationship with a supply resource was the basis for the original inclusion of the Reserved Source Point in the PRSS. Furthermore, the removal of MWs from a Reserved Source Point cannot result in a net reduction of MW eligible to be requested from all Reserved Source Points in Stage 1A unless all Market Participants serving load in that ARR Zone agree to this outcome.

A qualified Market Participant may increase the feasibility of ARRs from a new supply resource by utilizing the Feasibility Upgrade Process.

#### Item 9b: Composition of "Slice-of-System" or "System Power" Contracts

For entities with contractual relationships defined as slice-of-system or system power, thus obscuring from which specific resources contract for power was sourced, every effort will be made by the asset owners to define from which resources a portion of the slice of system contracted for power originated, and to what percent, for the purpose of defining those supply resources that may

be included in a given ARR Zone's PRSS at a certain MW amount. Absent agreement by the asset owners, current Tariff procedures will be utilized by MISO to determine the default breakdown of the contract.

#### Item 10: Definition of Baseload Supply Resources

Baseload Supply Resources shall be defined as those supply resources with an average capacity factor of at least 50% over the Reference Year and the 2 years previous to the Reference Year for a total of 3 years, or the life of the unit to the extent the unit had not been in operation for 3 years up to and including the Reference Year. The MISO planning department in consultation with stakeholders will determine how, exactly, this capacity factor will be calculated. In determining capacity factors for supply resources, data from the single month with the lowest capacity factor for that supply resource will be excluded. For Point-to-Point transmission service, or network resources external to the MISO region, the holder of the service may opt to use the above process to the extent that the supply resource behind the transmission service can be identified, or the holder may opt to use the scheduling factor of the transmission service. If the scheduling factor of the path is used, that scheduling factor must also be at least 50% to qualify as a Baseload Supply Resource.

For new resources, a class average for the technology type shall be used. The MISO shall develop and post a table identifying the assumed capacity factor for various unit types.

#### Item 11: Definition of Reserved Source Point

A Reserved Source Point shall be defined as any generator node or interface point that meets the Resource Qualification Requirements for a given ARR Zone. The MW amount of Candidate Baseload ARR Rights or Candidate Peak ARR Rights that may be sourced from a Reserved Source Point shall be limited to the MW amount from that Reserved Source Point that met the Resource Qualification Requirements.

#### Item 12: Resource Qualification Requirements

The Resource Qualification Requirements for a supply resource to qualify for inclusion as a Reserved Source Point in the BRSS or PRSS is that a qualified Market Participant must have had a capacity and energy ownership interest in, or a capacity and energy contract with, the supply resource that either began in, ended in, or remained in effect throughout the Reference Year for the applicable ARR Zone. Furthermore, if for such owned or contracted for resources, the transmission service was approved but not yet in service during the Reference Year, or the resource was under construction but not yet in service during the Reference Year, the resource will qualify for inclusion in the BRSS or PRSS provided that deliveries under the contracted for or owned resource began prior to December 31, 2005. Only the capacity and energy MW amount owned or contracted for qualifies, not the entire MW capacity of the resource should it be greater than the owned or contracted for MW amount. This ownership or contractual relationship must be, or have been, for a duration of at least 5 years as verified by MISO. Contracts for which roll-over rights were exercised such that the duration of the contract was effectively at least 5 years would qualify. If two Market Participants had or have contracts that meet all of the above qualification requirements for

the same supply resource such that the resource would otherwise qualify as a Reserved Source Point for more than one ARR Zone, then the Market Participant that contracted with the resource most recently will be given priority in determining which ARR Zone for which the resource will serve as a Reserved Source Point.

#### Item 12a: Resource Qualification Requirement Exception

To the extent that the qualification requirements in Item 12 result in any Market Participant having insufficient MW in its PRSS to meet its Baseload Usage within a given ARR Zone, then the Resource Qualification Requirements for contract/ownership duration for that Market Participant within that ARR Zone will be reduced from a required 5 year duration to a 1 year duration for the PRSS up to the Market Participant's Baseload Usage. This exception will apply only to the initial determination of Reserved Source Sets, any future additions or substitutions will have to meet the 5 year contract/ownership duration requirement.

#### Item 13: Definition of the Reference Year

The Reference Year for all initial ARR Zones at the start of this process shall be comprised of the four Seasons starting March 2004 and ending February 2005. For any ARR Zone added after the start of this process as a result of an expansion of the MISO market footprint, the Reference Year shall be comprised of the four most recent complete Seasons just prior to the integration of the applicable area.

#### Item 14: Feasibility Upgrade Process

If a qualified Market Participant wishes to fund the transmission upgrades necessary to make feasible otherwise infeasible ARRs, the MISO will provide the qualified Market Participant a detailed description of the upgrades that would be necessary to achieve the desired ARR feasibility to the extent that this is not currently provided for under the tariff or MISO procedures. The Market Participant may then utilize existing tariff provisions to be compensated for the upgrade.

#### Item 15: Transition of the FTR Restoration Process

The current restoration process will be discontinued.

#### **Annual FTR Auction**

No change will be made to the MISO Annual FTR Auction process.

# MEMO

Date: September 12, 2006

To: OMS Board members

From: OMS Long-Term Development and Governance Work Group -  
Burl Haar and David Sapper, Co-Chairs

Subject: Recommended rankings of Midwest ISO's 2007 capital budget  
projects

The OMS Long-Term Development and Governance Work Group (LDG WG) has reviewed the capital budget projects proposed by MISO for 2007. The projects have been identified by the Midwest ISO as "Required" or "Discretionary". The goal of the LDG WG was to develop a recommendation for the OMS Board as to the appropriate ranking of the Discretionary projects from the OMS perspective. The LDG WG has had the benefit of input from staff members from several OMS member state commissions in this endeavor.

The overriding goal of the LDG WG in ranking the 2007 capital projects, as it was in 2006, is to give greatest weight to projects that appear to have the potential to advance the priorities OMS has presented to the Midwest ISO Board at the Midwest ISO's most recent Annual Stakeholder Meeting – i.e., operational excellence, demonstrable benefits, cost control, greater emphasis on regional planning, commitment to resource adequacy, coordination with neighbors, openness, and support for the regional state committee concept.

The proposed capital budget initiatives for 2007 include projects that address nearly all of these objectives, with the possible exception of supporting the regional state committee concept. Arguably, nearly every project could be said to directly affect operational excellence. Other objectives with direct impacts would be resource adequacy and coordination with neighbors.

One project, Standard Topology Modeling - Phase III, is noteworthy because it appears to be an effort to enhance the Midwest ISO's transmission planning capability. The consensus of the WG was that is an important direction for the Midwest ISO to pursue. The Midwest ISO's planning workload is likely to grow with the development of regionally beneficial transmission planning, long-term financial transmission rights, and resource adequacy policies. Thus, the LDG WG recommends that the OMS urge the Midwest ISO to pay even greater attention to transmission planning in the future.

Attachment A is an Excel spread-sheet that lists all proposed 2007 capital budget projects in two general groupings; i.e., Required and Discretionary. The column labeled

“Comment” includes the Midwest ISO’s estimate of project benefits as reflected in net present value calculations.

In addition, Discretionary projects are listed in the spread-sheet according to the size of the proposed budget, from largest to smallest. Be advised that the total *proposed* capital budget for 2007 is around \$140 million. Discretionary projects represent about \$110 million of that, and the first two Discretionary projects listed; i.e., Ancillary Services (#1D) and Resource Adequacy (#2D), together comprise over 60% of the \$110 million. By comparison, the total cost of the *approved* 2006 capital budget was slightly over \$30 million.

While all of the proposed projects contain elements that address the OMS priorities, the ranking offered here endeavors to give greatest weight to the most clearly delineated projects with the most direct alignment with those priorities. Consistent with the order of the priorities stated in the OMS comments at the Midwest ISO’s most recent Annual Stakeholder Meeting, the LDG WG’s recommended ranking of the Midwest ISO’s proposed capital projects gives considerable weight to projects that would most directly improve operational excellence, based on the project descriptions.

Also attached is a PDF file from MISO that provides more detail about each of the projects. The projects in the MISO report are not in the same order as Attachment A, but can be cross referenced with Attachment A using the project title.

The LDG WG also wants to draw the Board’s attention to an ostensibly obvious, but nevertheless important, threshold issue:

Giving a high ranking to the Ancillary Services and Resource Adequacy projects, as has been done in Attachment A, obviously suggests rather overt support for both projects. This takes on slightly heightened significance given the considerable cost of these two projects. Is that something OMS is comfortable doing?

In addition, the LDG WG wishes to draw the OMS Board’s attention to the Midwest ISO’s inclusion of the project entitled Computer Room Expansion (7R on the spread-sheet) as a Required project. In light of the Midwest ISO’s plans to construct a new building in the near future, the LDG WG does not see the need to move forward with this project at this time. It appears that the Midwest ISO’s back-up facility in Indianapolis has considerable unused space and could be used for expansion needs on an interim basis. Consequently, there are at least three options for the OMS Board to consider in making its recommendations to the Midwest ISO on this point: 1) re-categorize the Computer Room Expansion project as a Discretionary project; 2) delay the project until 2008; or 3) urge the Midwest ISO to provide more detail about why the Computer Room Expansion project is needed in this capital budget cycle.

As a follow-up to last year’s capital project budgeting exercise, the Board should be aware that information about the implementation and operations status of approved 2006

capital projects has been somewhat ambiguous and unclear. For example, MISO dropped some budgeted projects without much notice or explanation. Although there is a place for budget flexibility, especially in a rapidly changing business environment, the Midwest ISO nevertheless should inform stakeholders when major approved budget initiatives are discontinued or are steered in directions unforeseen at the time of approval. Thus, the LDG WG recommends that the OMS continue to urge the Midwest ISO to report regularly to stakeholders the status of its approved 2007 capital budget projects. The OMS comments to the Midwest ISO Board on cost accountability and cost recovery (e.g., stated rate proposal) suggested such regular reporting.

Finally, it is noteworthy that the capital budget information for 2007 includes the Midwest ISO's estimate of project benefits. Recall that the Midwest ISO proposed its 2006 capital budget without information on estimated benefits. In its comments on the 2006 budget, the OMS emphasized the importance of developing a credible methodology for evaluating the actual and expected benefits of the Midwest ISO's activities. Although the Midwest ISO has not yet thoroughly explained how it derived its benefit estimates, providing such estimates is a step in the right direction and the Midwest ISO has assured the LDG WG that it will be responsive to OMS' recommendation to provide detail about the benefit estimation methodology.



# Stakeholder Summary

## Study Multi-Time Network Analysis Tool-Phase III

CBR

### Project Details

<b>Exec Sponsor</b>	Scott Herbst		
<b>Business Owner</b>	Jason L Marshall		
<b>Business Area</b>	Forward Operations		
<b>Start Date</b>	04/01/07	<b>End Date</b>	10/01/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

### Project Description and Deliverables

Hardware and software enhancements to allow Study Multi-Time Network Analysis Tool (SMTNET) to coordinate and batch process transmission and generation outages utilizing the state estimator model. Multiple time points and off-peak time points can be studied. It will also allow the use of the Voltage Stability Analysis Tool (VSAT) on the SMTNET model. Additional necessary enhancements identified through use of the tool after completion of phase II will be made as well.

### Business Issues Addressed

These enhancements will allow outage coordination to study outages utilizing project conditions on the state estimator model and multiple time points including off-peak. Outage coordination studies focus on a single point in time (usually peak). As transmission constraints can occur during the off-peak hours; a transmission constraint may later be identified in real-time. This should obviate the need for the extra study and reduce the number of CT commitments and canceled outages.

### Value Obtained

MISO will be able to utilize this tool to coordinate transmission outages using the state estimator model. Multiple time points can be studied throughout the day including off-peak hours. This should result in fewer outages cancelled at the last minute and fewer commitments of peakers to mitigate constraints that were not seen in the outage coordination studies. Market Participants will see cost savings associated with better peaker commitment and lower market-wide charges due to outage cancellations.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits through 2009

<b>Staff Efficiency / Cost Avoidance</b>	<input type="text" value="\$0"/>
<b>HW / SW Purchase Avoidance</b>	<input type="text" value="\$162,360"/>
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text" value="\$0"/>
<b>Other Quantified Savings</b>	<input type="text" value="\$0"/>
<b>Market Participant Savings</b>	<input type="text" value="\$3,780,000"/>
<b>Total Project Benefits</b>	<input type="text" value="\$3,942,360"/>

### NPV Analysis

Based on Discount Rate of 4.710%	
<b>NPV 3-yr</b>	<input type="text" value="\$2,873,467"/>



# Stakeholder Summary

Outage Scheduler

CBR

## Project Details

<b>Exec Sponsor</b>	Scott Herbst		
<b>Business Owner</b>	Jason Brown		
<b>Business Area</b>	Outage Coordination		
<b>Start Date</b>	01/02/07	<b>End Date</b>	06/30/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

## Project Description and Deliverables

Purchase, install, test and put into production a new MISO outage scheduling package to coordinate and manage transmission and generation outage requests for both planned and forced facility outages in the MISO RC footprint.

## Business Issues Addressed

There are several concerns with the current outage scheduler. One is the stability; it is apparent that the existing software has reached its design limitations. The data and application structure is non-optimal for the size of the data base used and the volume of use the applications receives. Another issue is the difficulty of use on the part of our external/internal customers.

## Value Obtained

Stable environment to maintain outage scheduling data.

## Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

## Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<i>2007 Forecast</i>	<input type="text"/>	<input type="text"/>
<i>2008 Forecast</i>	<input type="text"/>	<input type="text"/>
<i>2009 Forecast</i>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

## Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	\$29,700
<b>HW / SW Purchase Avoidance</b>	\$200,000
<b>Outside Svs / Maintenance Avoidance</b>	\$0
<b>Other Quantified Savings</b>	\$0
<b>Market Participant Savings</b>	\$0
<b>Total Project Benefits</b>	\$229,700

## NPV Analysis

Based on Discount Rate of 4.710%

**NPV 3-yr**



### Project Details

<b>Exec Sponsor</b>	Todd Hillman		
<b>Business Owner</b>	Anastasia Heinzelman		
<b>Business Area</b>	Customer Services		
<b>Start Date</b>	01/01/07	<b>End Date</b>	12/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

### Project Description and Deliverables

Create a software program to streamline access to data currently residing in multiple (three) software systems and paper files. Project also includes converting 15 file cabinets of paper-based market participant data into electronic files.

### Business Issues Addressed

The Customer Services department accesses data from multiple software systems and paper based files; a time intensive process which slows customer response time and efficiency of the internal staff.

### Value Obtained

Improve customer response time and increase efficiency in accessing and viewing data.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	\$1,010,196
<b>HW / SW Purchase Avoidance</b>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	\$0
<b>Other Quantified Savings</b>	\$0
<b>Market Participant Savings</b>	\$0
<b>Total Project Benefits</b>	\$1,010,196

### NPV Analysis

Based on Discount Rate of 4.710%

**NPV 3-yr**



# Stakeholder Summary

## Resource Adequacy

CBR

### Project Details

<b>Exec Sponsor</b>	Ron McNamara		
<b>Business Owner</b>	Mike Robinson		
<b>Business Area</b>	Market Management		
<b>Start Date</b>	01/01/07	<b>End Date</b>	12/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

### Project Description and Deliverables

Resource Adequacy will develop a modified pricing system intended to incent market participants to invest in generation and transmission resources. Phase I (2007), a proof-of-concept will be conducted to develop a simulation model to predict how proposed changes to the pricing model will affect the market. In parallel, a metrics tool will be developed to gauge the impact of the pricing changes on Market Participant investment resources. Based on a successful proof-of concept, the existing market software will be upgraded to reflect the pricing changes during Phase II (2008) and Phase III (2009) of the project. In Phases II and III the metrics tool will continue to be utilized in addition to the development of a training tool to determine the effectiveness of demand response.

### Business Issues Addressed

The project is designed to promote long-term adequate resources for market participants.

### Value Obtained

Long term cost-savings are expected through improved reliability of the grid and price stability as a result of increases and improvements to resources.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	<input type="text" value="\$0"/>
<b>HW / SW Purchase Avoidance</b>	<input type="text" value="\$0"/>
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text" value="\$0"/>
<b>Other Quantified Savings</b>	<input type="text" value="\$0"/>
<b>Market Participant Savings</b>	<input type="text" value="\$0"/>
<b>Total Project Benefits</b>	<input type="text" value="\$0"/>

### NPV Analysis

Based on Discount Rate of 4.710%

**NPV 3-yr**

### Project Details

<b>Exec Sponsor</b>	Ronald McNamara		
<b>Business Owner</b>	Paul Gribik		
<b>Business Area</b>	Market Development and Analysis		
<b>Start Date</b>	01/01/07	<b>End Date</b>	12/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

### Project Description and Deliverables

The project will provide a system (hardware and software) to conduct Day-Ahead and Real-Time market simulations of Reliability Assessment Coordination, Day-Ahead and Real-Time operations. The system allows MISO to shadow current operations and determine whether optimal decisions were made. MISO can then undertake alternate case analyses and implement new metrics that measure MISO's performance in scheduling and dispatching its Day-Ahead and Real-Time markets.

### Business Issues Addressed

Currently, an environment does not exist to simulate changes to dispatch or commitment which could cause changes in binding transmission constraints in the Real-Time Market. Current systems are incapable of modeling these changes, their effect on market dispatch and on LMPs. This limits the ability to evaluate possible effects of changes in protocols.

### Value Obtained

Improved ability to simulate operations will help us identify drivers of quantities such as RSG and proposed make whole payments. The system will also enable MISO to simulate operations under changed conditions to evaluate the value of improved forecasts and other information and changes in protocols. Outputs from this system will help in other research studies and add secondary intangible benefits that will improve market performance and information flow for future pricing and cost analysis. Quantified benefits do not currently reflect the estimated impact of the improvements to the overall market as a result of this tool.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	\$244,200
<b>HW / SW Purchase Avoidance</b>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	\$116,000
<b>Other Quantified Savings</b>	\$0
<b>Market Participant Savings</b>	\$0
<b>Total Project Benefits</b>	\$360,200

### NPV Analysis

Based on Discount Rate of 4.710%	
<b>NPV 3-yr</b>	<input type="text" value="(\$66,995)"/>

Project Details			
<b>Exec Sponsor</b>	Roy Jones		
<b>Business Owner</b>	Roy Jones		
<b>Business Area</b>	Ancillary Services		
<b>Start Date</b>	07/14/06	<b>End Date</b>	03/01/08
<b>Stakeholder Request</b>	No	<b>Required?</b>	No
Project Description and Deliverables			
<p>The end result is hardware, software, and procedures required for MISO to run the Operating Reserves and Regulation Markets. The potential exists to achieve substantial customer benefits incremental to the MISO day-ahead and real-time energy markets through the co-optimization of certain Ancillary Services.</p>			
Business Issues Addressed			
<p>The business issues addressed with the project: 1) Capture advantage of increasing the reserve pool size, 2) Realize the advantage of applying a footprint wide contingency for determining reserve amounts, and 3) Better align the MISO and Balancing Authority functions. For Regulation services: 1) Optimization of the intra-day regulation services due to non-coincident peaks, and 2) Capture the value of load diversity on a footprint wide basis.</p>			
Value Obtained			
<p>Potential implementation benefits; such as those described in the Issues Addressed and filed with FERC indicate Gross Annual Benefits \$172-326M, with Net Annual Benefits of \$147-301M. These will be achieved through co-optimization of certain Ancillary Services (Operating Reserve and Regulation markets)</p>			

Current Request Cost Components		
	Capital	Operating
Internal Labor		
Outside Services		
Hardware		
Software		
Other		
<b>Total Current Request</b>		
Multi-Year Project Forecast		
	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>		
<i>2007 Forecast</i>		
<i>2008 Forecast</i>		
<i>2009 Forecast</i>		
<b>Total Estimated Cost</b>		
Project Benefits Through 2009		
<b>Staff Efficiency / Cost Avoidance</b>		\$0
<b>HW / SW Purchase Avoidance</b>		\$0
<b>Outside Svs / Maintenance Avoidance</b>		\$0
<b>Other Quantified Savings</b>		\$0
<b>Market Participant Savings</b>		\$570,500,000
<b>Total Project Benefits</b>		\$570,500,000
NPV Analysis		
Based on Discount Rate of 4.710%		
<b>NPV 3-yr</b>	\$423,502,687	

### Project Details

<b>Exec Sponsor</b>	Ronald McNamara		
<b>Business Owner</b>	Dhiman Chatterjee		
<b>Business Area</b>	FTR Market Administration		
<b>Start Date</b>	06/01/07	<b>End Date</b>	12/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

### Project Description and Deliverables

Based on stakeholders request to offer similar products as PJM, this project enhances FTR auctions so MISO and PJM markets are aligned. Allows MISO to perform balance of period auctions.

### Business Issues Addressed

Stakeholders currently do not get comparable products between MISO and PJM as MISO offers single period auctions and PJM offers multi-period auctions.

### Value Obtained

Comparable product in both the Midwest ISO and PJM markets

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	<input type="text"/>	\$0
<b>HW / SW Purchase Avoidance</b>	<input type="text"/>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text"/>	\$0
<b>Other Quantified Savings</b>	<input type="text"/>	\$0
<b>Market Participant Savings</b>	<input type="text"/>	\$0
<b>Total Project Benefits</b>	<input type="text"/>	\$0

### NPV Analysis

<b>NPV 3-yr</b>	<input type="text" value="(\$1,183,656)"/>	Based on Discount Rate of 4.710%
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Project Details			
<b>Exec Sponsor</b>	Wayne Schug		
<b>Business Owner</b>	Dave Francis		
<b>Business Area</b>	Business Continuity		
<b>Start Date</b>	02/01/07	<b>End Date</b>	12/31/08
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

**Project Description and Deliverables**

Hardware, software and internal labor required to decrease the time required to failover to the backup systems. The initial effort will be focused on the reduction of critical systems failover time. The second phase is to drive to independent failover at subsystem level.

**Business Issues Addressed**

Meeting the NERC standard for recovery from a catastrophic event. Provide the system recovery times to maintain system wide reliability and in meeting the ancillary service markets availability and calculations requirements.

**Value Obtained**

Improved reliability of systems through decreased failover time.

Current Request Cost Components		
	Capital	Operating
<b>Internal Labor</b>		
<b>Outside Services</b>		
<b>Hardware</b>		
<b>Software</b>		
<b>Other</b>		
<b>Total Current Request</b>		

Multi-Year Project Forecast		
	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>		
<b>2007 Forecast</b>		
<b>2008 Forecast</b>		
<b>2009 Forecast</b>		
<b>Total Estimated Cost</b>		

Project Benefits Through 2009	
<b>Staff Efficiency / Cost Avoidance</b>	\$0
<b>HW / SW Purchase Avoidance</b>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	\$0
<b>Other Quantified Savings</b>	\$0
<b>Market Participant Savings</b>	\$0
<b>Total Project Benefits</b>	\$0

**NPV Analysis**

Based on Discount Rate of 4.710%

**NPV 3-yr** (\$7,438,808)

### Project Details

<b>Exec Sponsor</b>	Jim Schinski		
<b>Business Owner</b>	Jim Schinski		
<b>Business Area</b>	IT		
<b>Start Date</b>	01/01/07	<b>End Date</b>	12/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	Yes

### Project Description and Deliverables

Project will replace production servers that have reached end of life. Test servers will also be replaced to ensure compatibility with production system software and operating system.

### Business Issues Addressed

Replacement will enable vendor support of hardware and reduce potential for hardware failure in order to maximize the availability and reliability of the Midwest ISO computer systems.

### Value Obtained

Project will help mitigate the risk of unscheduled production outages from hardware failure.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	<input type="text"/>	\$0
<b>HW / SW Purchase Avoidance</b>	<input type="text"/>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text"/>	\$0
<b>Other Quantified Savings</b>	<input type="text"/>	\$0
<b>Market Participant Savings</b>	<input type="text"/>	\$0
<b>Total Project Benefits</b>	<input type="text"/>	\$0

### NPV Analysis

Based on Discount Rate of 4.710%

**NPV 3-yr**

### Project Details

<b>Exec Sponsor</b>	Jim Nichols		
<b>Business Owner</b>	Kerry Baker		
<b>Business Area</b>	Resource Management		
<b>Start Date</b>	01/01/07	<b>End Date</b>	12/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	Yes

### Project Description and Deliverables

701 Security Enhancements - Security landscaping to protect existing infrastructure. Security upgrades planned for 2007 in Carmel will allow for monitoring of the new facility and reduce the possibility of vehicular access into 701. The St. Paul security projects include access system upgrades that will allow integration with Carmel and floorplan modifications designed around the multi-tenant environment.

### Business Issues Addressed

Currently St. Paul uses a different software for card access control, the upgrade allows Carmel to monitor St. Paul. Physical exterior modifications in Carmel help resist vehicular penetration and St. Paul floorplan alterations further protect against the multi-tenant environment.

### Value Obtained

Ability to protect assets at all Midwest ISO facilities.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	<input type="text" value="\$0"/>
<b>HW / SW Purchase Avoidance</b>	<input type="text" value="\$0"/>
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text" value="\$0"/>
<b>Other Quantified Savings</b>	<input type="text" value="\$0"/>
<b>Market Participant Savings</b>	<input type="text" value="\$0"/>
<b>Total Project Benefits</b>	<input type="text" value="\$0"/>

### NPV Analysis

Based on Discount Rate of 4.710%

**NPV 3-yr**



### Project Details

<b>Exec Sponsor</b>	Harszy/Schinski		
<b>Business Owner</b>	Larson/Seidu/Voss/Feaster		
<b>Business Area</b>	Forward Operations & IT		
<b>Start Date</b>	02/01/07	<b>End Date</b>	11/30/07
<b>Stakeholder Request</b>	Yes/No	<b>Required?</b>	No

### Project Description and Deliverables

This estimate provides funds for Reliability System Enhancements. Candidates currently identified for 2007 include projects for Short-Term Load Forecasting, ICCS, State Estimator and real-time contingency analysis. Although the project has been identified as discretionary, it is anticipated that a subset of required changes, such as small changes required by FERC order, will be accomplished using these funds as well.

### Business Issues Addressed

Each year stakeholders and internal requests identify functionality improvements for the existing reliability systems.

### Value Obtained

Sample benefits include data accuracy in forecasting short-term load forecast and state estimator and automation of manual studies in real time contingency analysis which will increase accuracy and efficiency. All Reliability System project candidates will be judged on their specific cost/benefit before proceeding.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	<input type="text"/>	\$0
<b>HW / SW Purchase Avoidance</b>	<input type="text"/>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text"/>	\$0
<b>Other Quantified Savings</b>	<input type="text"/>	\$0
<b>Market Participant Savings</b>	<input type="text"/>	\$0
<b>Total Project Benefits</b>	<input type="text"/>	\$0

### NPV Analysis

Based on Discount Rate of 4.710%

**NPV 3-yr**

### Project Details

<b>Exec Sponsor</b>	John Bear		
<b>Business Owner</b>	John Bear		
<b>Business Area</b>	Operations		
<b>Start Date</b>	01/01/07	<b>End Date</b>	12/01/07
<b>Stakeholder Request</b>	Yes/No	<b>Required?</b>	No

### Project Description and Deliverables

This estimate provides funds for Market System Enhancements. Candidates currently identified for 2007 include projects for FTR options and long-term FTRs, PSS automation, and operational and market pricing improvements in DART. Although the project has been identified as discretionary, it is anticipated that a subset of required changes, such as small changes required by FERC order, will be accomplished using these funds as well.

### Business Issues Addressed

Each year stakeholders and internal requests identify functionality improvements of the existing market systems including DART, FTR, PSS and other market systems.

### Value Obtained

Projects identified in 2007 will provide operational improvements and/or market pricing improvements through changes to the day-ahead, real-time, scheduling and FTR systems. All Market System candidates will be judged on their specific cost/benefit before proceeding.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	<input type="text" value="\$0"/>
<b>HW / SW Purchase Avoidance</b>	<input type="text" value="\$0"/>
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text" value="\$0"/>
<b>Other Quantified Savings</b>	<input type="text" value="\$0"/>
<b>Market Participant Savings</b>	<input type="text" value="\$0"/>
<b>Total Project Benefits</b>	<input type="text" value="\$0"/>

### NPV Analysis

Based on Discount Rate of 4.710%

**NPV 3-yr** (\$4,884,578)

### Project Details

<b>Exec Sponsor</b>	Wayne Schug		
<b>Business Owner</b>	Deepal Rodrigo		
<b>Business Area</b>	Data Management		
<b>Start Date</b>	02/01/07	<b>End Date</b>	05/01/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

### Project Description and Deliverables

This project will select, test and deploy an Enterprise-wide Information Management (EIM) System and allow MISO to better manage data from 40 different data repositories. System will integrate the multiple existing databases so that data inquiries may be made through one source.

### Business Issues Addressed

A consistent process will be used in managing the life cycle of data resources. This will ensure better management and control of the integrity and quality of the disparate data repositories that are currently used at Midwest ISO.

### Value Obtained

A consistent way to manage the important data resource will be accomplished by utilizing appropriate tools. Data quality improvements and operational efficiencies are expected results of the project.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	\$204,000
<b>HW / SW Purchase Avoidance</b>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	\$288,000
<b>Other Quantified Savings</b>	\$0
<b>Market Participant Savings</b>	\$0
<b>Total Project Benefits</b>	\$492,000

### NPV Analysis

Based on Discount Rate of 4.710%

**NPV 3-yr**

### Project Details

<b>Exec Sponsor</b>	Wayne Schug/Todd Hillman		
<b>Business Owner</b>	Deepal Rodrigo		
<b>Business Area</b>	OPM		
<b>Start Date</b>	03/01/07	<b>End Date</b>	10/01/07
<b>Stakeholder Request</b>	Yes	<b>Required?</b>	No

### Project Description and Deliverables

This project changes e-data functionality to a web services paradigm which will allow Market Participants to access data based on their electronic subscription profile. The project also allows MISO to provide additional information as requested by stakeholders, such as expanding constraint lists to include monitored and contingent elements and the corresponding physical elements. This e-data functionality is currently offered by PJM.

### Business Issues Addressed

This project allows Stakeholders better access to MISO data to optimize their operations.

### Value Obtained

Enhanced transparency of the market and improved access to the specific data streams that are important to individual stakeholders. This value has not yet been quantified. Staff efficiency estimates for MISO are based on reduction of individual data requests.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	\$274,560
<b>HW / SW Purchase Avoidance</b>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	\$0
<b>Other Quantified Savings</b>	\$0
<b>Market Participant Savings</b>	\$0
<b>Total Project Benefits</b>	\$274,560

### NPV Analysis

Based on Discount Rate of 4.710%

**NPV 3-yr**

### Project Details

<b>Exec Sponsor</b>	Scott Herbst		
<b>Business Owner</b>	Chetty Mamandur		
<b>Business Area</b>	Forward Operations - Standard Topology Modeling		
<b>Start Date</b>	10/02/06	<b>End Date</b>	07/31/08
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

### Project Description and Deliverables

This project continues the Topology Modeling whereby a centralized Modeling database will be developed to contain planning and EMS related modeling detail and updates as needed. The planning data portion will be completed in 2006; this phase will complete the EMS portion. This database will be utilized to build planning models (which includes MTEP, AFC, NERC/MMWG series models, interconnection) and EMS models.

### Business Issues Addressed

Multiple groups in MISO and member companies are using power system network models to perform analysis for operating and planning horizons. It is critical that these models are accurate and consistent to ensure valid conclusions and decisions. This project ensures required consistencies across models used by all groups in MISO and member systems.

### Value Obtained

Accurate and consistent network models across MISO and member companies, facilitated by a centralized modeling database. Additionally, the system enables organized submission of modeling changes and updates by member systems and updating and maintaining the modeling data. Members benefit by only submitting a network modeling once, rather than multiple times.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	\$1,647,360
<b>HW / SW Purchase Avoidance</b>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	\$0
<b>Other Quantified Savings</b>	\$500,000
<b>Market Participant Savings</b>	\$823,680
<b>Total Project Benefits</b>	\$2,971,040

### NPV Analysis

Based on Discount Rate of 4.710%	
<b>NPV 3-yr</b>	<input type="text" value="(\$210,612)"/>

### Project Details

<b>Exec Sponsor</b>	Jim Schinski		
<b>Business Owner</b>	Jim Schinski		
<b>Business Area</b>	IT		
<b>Start Date</b>	01/01/07	<b>End Date</b>	12/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

### Project Description and Deliverables

IT Infrastructure projects considered for 2007 will support MISO's business needs for security improvements, backup improvements, and phone systems. Major 2007 projects include: database changes to market systems to speed performance (0.5M), server consolidation (0.5M), increased audit controls and reduced risk when moving applications among environments (0.5M), phone system upgrades (0.6) ICCS failover upgrades (0.1M) and the development of safe environments to create and test new applications (0.1).

### Business Issues Addressed

Proposed projects address development needs, reduce database complexity and improve Cyber Security and system backups.

### Value Obtained

Infrastructure improvements will enhance testing and development environments and database performance thus promoting operational efficiencies and minimizing unscheduled outages. Reduction of ongoing technical refresh costs are expected as a result of this investment. Each project will be considered based upon its cost and benefit.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	<input type="text" value="\$501,270"/>
<b>HW / SW Purchase Avoidance</b>	<input type="text" value="\$724,800"/>
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text" value="\$10,500"/>
<b>Other Quantified Savings</b>	<input type="text" value="\$2,943,000"/>
<b>Market Participant Savings</b>	<input type="text" value="\$0"/>
<b>Total Project Benefits</b>	<input type="text" value="\$4,179,570"/>

### NPV Analysis

Based on Discount Rate of 4.710%	
<b>NPV 3-yr</b>	<input type="text" value="\$653,928"/>



# Stakeholder Summary

## DART Server System Upgrade

CBR

### Project Details

<b>Exec Sponsor</b>	Jim Schinski		
<b>Business Owner</b>	Curtis Reister		
<b>Business Area</b>	IT		
<b>Start Date</b>	01/01/07	<b>End Date</b>	04/28/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

### Project Description and Deliverables

A Proof of Concept is underway in 2006 to determine if server improvements can result in a boost of overall system throughput. If the proof of concept proves viable, 17 existing servers will be replaced with 17 servers that can provide more memory. The expected performance goal is to increase Day-Ahead market results posted as defined by the Tariff by 3-4%.

### Business Issues Addressed

The current DART systems is deployed on older generation [G3] DL380's with 4 gig unexpandable RAM memory. This hardware limitation results in slower system performance when solving Day Ahead and RAC cases. A 2006 Proof of Concept will provide a comparative analysis between current system performance, newer iterations of the same server technologies [i.e. G4], and servers with completely new architectures (like the Sun Galaxy servers) to determine if server improvements can result in a boost of overall system throughput.

### Value Obtained

Improved system performance of Day-Ahead and RAC cases. This project will improve MISO's ability to meet its obligation for posting results of the Day-Ahead market on-time as defined by the Tariff. The ability of MISO to meet this obligation has decreased from approximately an 80% success rate to a 65% success rate primarily due to performance constraints of existing hardware. Market Participant savings only reflect an estimate savings in load time.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2007

<b>Staff Efficiency / Cost Avoidance</b>	\$69,300
<b>HW / SW Purchase Avoidance</b>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	\$0
<b>Other Quantified Savings</b>	\$0
<b>Market Participant Savings</b>	\$104,400
<b>Total Project Benefits</b>	\$173,700

### NPV Analysis

Based on Discount Rate of 4.710%

**NPV 3-yr**



# Stakeholder Summary

## Other Business Software Applications

CBR

Project Details			
<b>Exec Sponsor</b>	Jim Schinski		
<b>Business Owner</b>	Jay Bonnet		
<b>Business Area</b>	Business Applications		
<b>Start Date</b>	01/01/07	<b>End Date</b>	12/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No
Project Description and Deliverables			
<p>This project represents upgrades to existing software and automation of manual processes to promote efficiency and mitigate risk including potential compliance issues and future software incompatibilities. The major projects proposed for 2007 include Finance applications for accounts payable, project budgeting, credit systems and expense (0.7M); continuation of corporate-wide roll-out of document management system (0.3M), Siebel enhancements (0.3M), and website management applications (0.2M).</p>			
Business Issues Addressed			
<p>The project will promote efficiency improvements for existing manual and/or tedious processes. In addition, compliance and quality risks of the current system are expected to be reduced or mitigated by the project.</p>			
Value Obtained			
<p>This project represents upgrades to existing software and automation of manual processes to promote efficiency and mitigate risk including potential compliance issues and future software incompatibilities. Benefits as a result of the upgrades include: improved consistency and accuracy of credit balancing and resettlements applications for market participants, stabilized critical data feed for PTP applications, faster publishing turnaround for FERC, NERC required documents and online training materials, surveys, reservations, calendars, meeting minutes, etc. for use by Market participants, Generators, and Transmission Owners, and faster time-to-market for additional modifications/enhancements to systems.</p>			

Current Request Cost Components		
	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>
Multi-Year Project Forecast		
	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>
Project Benefits Through 2009		
<b>Staff Efficiency / Cost Avoidance</b>	\$672,327	
<b>HW / SW Purchase Avoidance</b>	\$16,500	
<b>Outside Svs / Maintenance Avoidance</b>	\$0	
<b>Other Quantified Savings</b>	\$0	
<b>Market Participant Savings</b>	\$0	
<b>Total Project Benefits</b>	\$688,827	
NPV Analysis		
Based on Discount Rate of 4.710%		
<b>NPV 3-yr</b>	(\$5,836,371)	





Project Details			
<b>Exec Sponsor</b>	Clair Moeller		
<b>Business Owner</b>	Renuka Chatterjee		
<b>Business Area</b>	TAM-AFC Engineering		
<b>Start Date</b>	02/01/07	<b>End Date</b>	10/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No

**Project Description and Deliverables**

In addition to routine software enhancements to the Joint Operating Agreement (JOA) systems, this project proposes changes to netting of market flows, the current allocation engine and the impact calculator.

**Business Issues Addressed**

Currently methods of market flow calculations place a burden on the Midwest ISO to provide requested market flow relief under TLR particularly on external flowgates. Enhancements for netting of market flows, threshold change and allocation engine changes will reduce market impacts. MISO currently does not get the counter flows accounted for at the NERC IDC which can cause higher redispatch.

**Value Obtained**

Increased reliability via Midwest ISO achieving the market flow relief requested. Reduction of congestion costs for market participants and improved seams coordination. Allows Midwest ISO to operate the flowgate allocations more efficiently.

Current Request Cost Components		
	Capital	Operating
Internal Labor		
Outside Services		
Hardware		
Software		
Other		
<b>Total Current Request</b>		

Multi-Year Project Forecast		
	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>		
<i>2007 Forecast</i>		
<i>2008 Forecast</i>		
<i>2009 Forecast</i>		
<b>Total Estimated Cost</b>		

Project Benefits Through 2009	
<b>Staff Efficiency / Cost Avoidance</b>	\$0
<b>HW / SW Purchase Avoidance</b>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	\$368,000
<b>Other Quantified Savings</b>	\$0
<b>Market Participant Savings</b>	\$4,800,000
<b>Total Project Benefits</b>	\$5,168,000

NPV Analysis	
Based on Discount Rate of 4.710%	
<b>NPV 3-yr</b>	\$3,661,187



# Stakeholder Summary

## Available Flowgate Capacity Enhancements

CBR

Project Details			
<b>Exec Sponsor</b>	Clair Moeller		
<b>Business Owner</b>	Renuka Chatterjee		
<b>Business Area</b>	TAM-AFC Engineering		
<b>Start Date</b>	02/01/07	<b>End Date</b>	10/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	No
Project Description and Deliverables			
<p>External software enhancements to increase automation of Available Flowgate Capacity (AFC) calculations and alleviate seams AFC coordination issues. 2007 projects include AFC Engine Switch, automation of non-firm transmission service requests and AFC check for spot in service.</p>			
Business Issues Addressed			
<p>Improve efficiency of processing transmission service requests through increased automation in the calculation of Available Flowgate Capacity (AFC) values. The current AFC application is too inefficient to operate and does not produce consistent, transparent results; real-time and long-term AFC calculations use different models. Consistent treatment of transmission service request processing.</p>			
Value Obtained			
<p>Improved predictability and consistency of AFC calculations for market participants. Proposed AFC engine is same as the one used by PJM and TVA. Moving from RFCALC to Power GEM will allow MISO to more effectively calculate AFC and better utilize the capability of the transmission system. Other updates will allow TAs more time to assess the TSRs where constraints are found, improve operational efficiencies, reduce congestion charges, and help ensure compliance with Seams Agreement commitments.</p>			

Current Request Cost Components		
	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>
Multi-Year Project Forecast		
	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>
Project Benefits Through 2009		
<b>Staff Efficiency / Cost Avoidance</b>	<input type="text" value="\$630,960"/>	
<b>HW / SW Purchase Avoidance</b>	<input type="text" value="\$500,000"/>	
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text" value="\$450,000"/>	
<b>Other Quantified Savings</b>	<input type="text" value="\$0"/>	
<b>Market Participant Savings</b>	<input type="text" value="\$1,241,520"/>	
<b>Total Project Benefits</b>	<input type="text" value="\$2,822,480"/>	
NPV Analysis		
Based on Discount Rate of 4.710%		
<b>NPV 3-yr</b>	<input type="text" value="\$1,580,243"/>	

### Project Details

<b>Exec Sponsor</b>	Jim Schinski		
<b>Business Owner</b>	Jim Schinski		
<b>Business Area</b>	IT		
<b>Start Date</b>	01/01/07	<b>End Date</b>	12/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	Yes

### Project Description and Deliverables

This project will increase data storage capacity for settlements, data management and other ongoing operational requirements. Additionally, encryption devices and LT01 tape drives replacement will allow safer back-ups and increased storage capacity.

### Business Issues Addressed

This project will address storage capacity requirements and safe back-up storage through encryption devices.

### Value Obtained

Capacity increase will maintain the appropriate level of access to the necessary operational data while enabling continuous data storage.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	<input type="text"/>	\$0
<b>HW / SW Purchase Avoidance</b>	<input type="text"/>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text"/>	\$0
<b>Other Quantified Savings</b>	<input type="text"/>	\$0
<b>Market Participant Savings</b>	<input type="text"/>	\$0
<b>Total Project Benefits</b>	<input type="text"/>	\$0

### NPV Analysis

Based on Discount Rate of 4.710%

**NPV 3-yr**



# Stakeholder Summary

## Cyber Security NERC Standards Compliance

CBR

### Project Details

<b>Exec Sponsor</b>	Jim Schinski		
<b>Business Owner</b>	Steve Spesard		
<b>Business Area</b>	Information Technology		
<b>Start Date</b>	01/01/07	<b>End Date</b>	06/30/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	Yes

### Project Description and Deliverables

The North American Electric Reliability Council (NERC) first issued Cyber Security Standards in 2003 requiring utilities responsible for delivering bulk electricity to the North American electrical grid to identify and protect critical cyber assets.

NERC has drafted an updated suite of Cyber Security Standards (CIP 002-009) with significant number of individuals control points that must be addressed. A gap analysis is planned (4th quarter 2006) to identify those control points that are not currently in compliance with the new standards. This project anticipates modifications to existing software and new software/hardware will be required in 2007. One example is the ability to remove access within 24 hours of an employee's (in)voluntary termination.

### Business Issues Addressed

Key focus of this project is compliance with the NERC CIP 002-009 Standards. Penalties are undetermined at this time; however, a gap analysis and mitigation strategy will lessen penalties to MISO.

### Value Obtained

Completion of this project will ensure compliance with the new NERC Cyber Security standards (CIP 002-009)

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	<input type="text" value="\$0"/>
<b>HW / SW Purchase Avoidance</b>	<input type="text" value="\$0"/>
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text" value="\$0"/>
<b>Other Quantified Savings</b>	<input type="text" value="\$0"/>
<b>Market Participant Savings</b>	<input type="text" value="\$0"/>
<b>Total Project Benefits</b>	<input type="text" value="\$0"/>

### NPV Analysis

**NPV (3-yr)**  Based on Discount Rate of 4.710%

Project Details			
<b>Exec Sponsor</b>	William Phillips		
<b>Business Owner</b>	Doug Taylor/Alan Adams/Tom Mallinger/Ed Skiba		
<b>Business Area</b>	Interregional Coordination & Planning		
<b>Start Date</b>	01/01/07	<b>End Date</b>	12/31/09
<b>Stakeholder Request</b>	No	<b>Required?</b>	Yes

**Project Description and Deliverables**

Continue with creation of a virtual joint and common market between MISO and PJM as required by FERC mandate and developed through an open stakeholder process. The scope of the project for the period of 2007 through 2009 includes the following JCM initiatives: Alternative Border Pricing Point Calculation, Central Location to view both Ramp Viewers, Coordinated OASIS, Black Start and Restoration, Dynamic Dispatchable Schedules/Dispatchable Transactions, Relaxation of Constraints, Alignment of PJM Operating Reserves and Midwest ISO RSG, Alignment of FTR Products and Timelines. The 2008 initiative is Common Ramp Portal.

**Business Issues Addressed**

The current list of initiatives have been reviewed with stakeholders and filed with FERC indicating the specific years the initiatives are addressed. The key issue being addressed with this project is addressing the Midwest ISO and PJM commitment to continue to strive to achieve a virtual joint and common market based on cost/benefits analysis of each of the initiatives.

**Value Obtained**

Provide the highest level of interregional reliability. Deliver the lowest cost energy and ancillary services to load across the combined MISO and PJM regions. Plan, build and operate the combined MISO and PJM transmission facilities for maximum joint benefit across the region.

Current Request Cost Components		
	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

Multi-Year Project Forecast		
	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

Project Benefits Through 2009	
<b>Staff Efficiency / Cost Avoidance</b>	<input type="text" value="\$0"/>
<b>HW / SW Purchase Avoidance</b>	<input type="text" value="\$0"/>
<b>Outside Svs / Maintenance Avoidance</b>	<input type="text" value="\$0"/>
<b>Other Quantified Savings</b>	<input type="text" value="\$0"/>
<b>Market Participant Savings</b>	<input type="text" value="\$14,021,000"/>
<b>Total Project Benefits</b>	<input type="text" value="\$14,021,000"/>

NPV Analysis	
Based on Discount Rate of 4.710%	
<b>NPV 3-yr</b>	<input type="text" value="\$9,582,954"/>

### Project Details

<b>Exec Sponsor</b>	Wayne Schug		
<b>Business Owner</b>	Lou Mickler/Dave Francis		
<b>Business Area</b>	Operations Performance Management		
<b>Start Date</b>	01/06/07	<b>End Date</b>	12/31/07
<b>Stakeholder Request</b>	No	<b>Required?</b>	Yes

### Project Description and Deliverables

The computer room expansion project include expanding floorspace for all site locations (Carmel, St. Paul and Back-Up site) for increased server capacity. Additional cooling is required for the increased floorspace and heat load.

### Business Issues Addressed

In order to accommodate new business functions in the computer rooms, additional floorspace and cooling capacity is required.

### Value Obtained

Sufficient floorspace, power and cooling to support Midwest ISO servers. Outside Services savings reflect the maximization of a portion of the computer room floorspace which would otherwise be leased off-site at a charge of \$51,000/month.

### Current Request Cost Components

	Capital	Operating
Internal Labor		
Outside Services		
Hardware		
Software		
Other		
<b>Total Current Request</b>		

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>		
<i>2007 Forecast</i>		
<i>2008 Forecast</i>		
<i>2009 Forecast</i>		
<b>Total Estimated Cost</b>		

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	\$0
<b>HW / SW Purchase Avoidance</b>	\$0
<b>Outside Svs / Maintenance Avoidance</b>	\$1,917,000
<b>Other Quantified Savings</b>	\$0
<b>Market Participant Savings</b>	\$0
<b>Total Project Benefits</b>	\$1,917,000

### NPV Analysis

Based on Discount Rate of 4.710%	
<b>NPV 3-yr</b>	(\$8,533,812)



## Control Room Video Projection System End-of-life Replacement

### Project Details

<b>Exec Sponsor</b>	Jim Schinski		
<b>Business Owner</b>	James Berry		
<b>Business Area</b>	Data Center Services		
<b>Start Date</b>	01/01/07	<b>End Date</b>	12/31/09
<b>Stakeholder Request</b>	No	<b>Required?</b>	Yes

### Project Description and Deliverables

Multi-phased initiative to replace existing discontinued Christie DLV1280-DX projectors to new Christie DLV1400-DX projectors at the Carmel and St. Paul control room facilities. At each phase, the current analog video cabling will be upgraded to new DVI video cabling. Phase I (2006) 12 projectors in Carmel. Phase II (2007) 10 projectors in Carmel. Phase III (2008) 16 projectors in Carmel, 9 PCs that control the projectors, 4 Christie CX50 Projector Cubes at St. Paul control room. Phase IV (2009) 17 projectors in Carmel. Also during Phase IV, 4 Christie CX50 mProjector Cubes at the St. Paul control Room will be replaced.

### Business Issues Addressed

Due to age of the existing video projection equipment, maintenance needs increase. The current model is discontinued and refurbishing costs are starting to exceed replacement. Potential failure of a unit results in video wall down-time and reliability concerns.

### Value Obtained

This proposal ensures availability of the control center video wall. Quantified benefits include internal labor and costs associated with maintaining the older projectors and factors in the salvage value.

### Current Request Cost Components

	Capital	Operating
Internal Labor	<input type="text"/>	<input type="text"/>
Outside Services	<input type="text"/>	<input type="text"/>
Hardware	<input type="text"/>	<input type="text"/>
Software	<input type="text"/>	<input type="text"/>
Other	<input type="text"/>	<input type="text"/>
<b>Total Current Request</b>	<input type="text"/>	<input type="text"/>

### Multi-Year Project Forecast

	Capital	Operating
<b>Total Actuals (Prior Yrs)</b>	<input type="text"/>	<input type="text"/>
<b>2007 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2008 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>2009 Forecast</b>	<input type="text"/>	<input type="text"/>
<b>Total Estimated Cost</b>	<input type="text"/>	<input type="text"/>

### Project Benefits Through 2009

<b>Staff Efficiency / Cost Avoidance</b>	\$3,960
<b>HW / SW Purchase Avoidance</b>	\$390,000
<b>Outside Svs / Maintenance Avoidance</b>	\$0
<b>Other Quantified Savings</b>	\$145,000
<b>Market Participant Savings</b>	\$0
<b>Total Project Benefits</b>	\$538,960

### NPV Analysis

<b>NPV 3-yr</b>	(\$1,666,718)	Based on Discount Rate of 4.710%
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