JCM Initiatives Update



April 2008





Joint and Common Market Initiatives

Complete Cost 3 Year Gross Benefit

Cost

Cost 3 Year Gross Benefit

Implementation

3 Year Gross Benefit

Not Recommended

Evaluation

Cost 3 Year Gross Benefit

		The second second						
			2006		2007		2008	
			Alignment of FTR Timelines and Products	\$600,000			Cross Border FTRs in the allocations	\$4,000,000 Analyzing
	1	FTR Market Convergence	(Note: All MISO cost)	\$3,008,657			Cross border FTRs in auctions	\$8,000,000 \$4,374,524
	7	Price Rationalization and			PJM implementation of marginal losses \$600,000 N/A			
	2	Convergence at the Border			Alternative Border Pricing Point Calculation	\$200,000		
	$\overline{}$		Alignment of PJM Operating Reserves and	\$600,000	Depancaking of PTP ancillary services	\$400,000		
	3	Reduce Hurdle Rate	MISO Revenue Sufficiency Guarantee (Note: All MISO cost)	\$3,764,432	(Control Area Services, T.O. Control Center Services, Reactive, Black Start)		<u> </u>	'
		1 '	Existing MISO & PJM Websites Linking of sites Data Available at Both	\$500,000	Standard Data Exchange (Web Services) LMPs, Contingencies, Loads, Dispatch	\$3,000,000	Implementation of single MISO & PJM Website	\$750,000
	, ,	1	Sites (LMPs, Tie Flows, Loads)	\$1,952,165	Signals, Outages, Emergency Event/Notifications	\$2,547,477	(Individual Websites go away)	N/A
	4	Broader Price Transparency and Common Reporting	Common Search Capabilities	\$200,000	√		Standard Data Visualization and Reporting	\$8,500,000
	.)	1	Common Search Capabilities	\$1,125,000	<u></u>		Portal	\$0,500,000
	,)	1 7	Enhanced Joint Website to Host Joint	\$600,000			Create a single MISO & PJM Data and Report Portal	450 474
ı [)	1	meeting and Events Calendar, Joint Documents and Reports	\$1,125,000	4		Keport 1 ortal	\$4,158,174
Commercial	\Box	· · · · · · · · · · · · · · · · · · ·		\$100,000		-	Ci. I Describition Market	\$8,000,000
i i	5	Increased Market Opportunities	Moving JOUs between markets	\$156,851	4		Shared Regulation Market	Analyzing
ট	\neg	7		\$200,000	Common Time Zones	\$5,000,000	S. Ludius	\$8,000,000
	,)	1 7	Common Long Term Transmission Queue	\$1,091,108	(Note: All PJM cost)	N/A	Single Resource Adequacy Solution	N/A
il [,)	1	WIGO D. VI	\$150,000		\$100,000	S Stel	\$750,000
	.)		MISO Ramp Viewer	\$913,703	- Central location to view both ramp viewers	\$1,527,405	Common Ramp Portal	\$2,091,108
	,)	1	Alignment of OASIS Business Practices	\$500,000	Coordinated OASIS	\$1,200,000		
	.)		Allgallica	\$1,365,867	4	Analyzing	1	
	6	Operational Consistency	Single OASIS	\$8,000,000 \$6,168,760	Reserve Sharing	\$8,000,000 N/A	<u></u>	
	١	Operational Consistency	Common Treatment of Dynamic Schedules/Pseudo-Ties	\$200,000 \$382,934	Market to Market Relaxation of Constraints	\$80,000 \$1,000,000		
	, ,	1	Investigation of Loop Flow Across the Combined Footprint	N/A Analyzing	Dynamic Dispatchable Transactions and Schedules	Analyzing Analyzing	Loop Flow Study Phase II	Analyzing Analyzing
	, ,	1	Market Flow Threshold Assessment	N/A Reliability	Market Flow Threshold Reported to IDC	\$300,000 Reliability	Netting in the IDC	Analyzing Analyzing Analyzing
	, ,	1	Reliability		Outage Coordination	N/A Reliability		Allalyzing
	7	Single Market	Year 1 - Rule Alignment & Market Portal Design	\$15,000,000 \$5,000,000	Year 2 - Initial Market Portal Implementation	\$40,000,000 \$27,000,000	Year 3-5 - Implementation of Single Market	\$50,000,000 \$34,700,000
Hity	1	Emergency Energy Agreement	Alignment of Agreements and Practices	\$100,000 Reliability	\$27,000,000		Super Regional Reserve Sharing	Analyzing Analyzing
Reliability	2	Black Start and Restoration			Alignment of Agreements and Practices	\$500,000 \$936,000	_	
	1	Joint Expansion Planning and	Joint Expansion Planning (Coordinated System Plan)	\$20,000 Reliability	Cross Border Cost Sharing of Expansions	Reliability		
- Plan	2	Common Deliverability Studies	Common Deliverability Studies	\$100,000 Reliability				
Tota	tal	Costs 3-Year Gross Benefit	- 2006 -	\$3,770,000 \$14,885,717	2007	\$1,580,000 \$3,463,405	2008	\$750,000 \$2,091,108





JCM Committed







FTR Alignment

Milestone Summary

- C Analyze Product
- C Stakeholder Review
 C Submit Filings to FERC
- C Develop Business Rules
- C Finalize Functional Requirements
- C Design and Development
 - Build and Test
- C Update Process and Procedures
- G Customer Training
- C Cutover to Production Phase 1
- C Cutover to Production Phase 2
 - Cutover to Production Phase 3
- G Overall Status

JCM Leads

- Midwest ISO: E. Skiba
- PJM: S. Bresler

Legend

- **C** Completed
- G On Target No Issues
- Y Need to watch Some Issues
- R In Jeopardy Significant Issues

KEY ACCOMPLISHMENTS

- Midwest ISO:
 - ARR registration through Markets Portal is complete.
 - The Stage 1A Long-Term Transmission Rights (LTTR) allocation is complete. Results posted on April 9th.
 - The Stage 1B allocation is complete. Results posted on April 23rd.
- PJM:
 - PJM Members Committee endorsed a long-term, three-year FTR auction process at its November meeting. The construct will be filed with FERC in the Spring.
 - Submitted status report regarding stakeholder discussion FTR full funding uplift mechanisms to FERC on November 30, 2007. PJM stakeholders were unable to reach the required 2/3 majority on an alternative to the currently-filed and approved FTR Target Allocation mechanism.

UPCOMING ACTIVITIES

- Midwest ISO:
 - Update the FTR application with new credit requirements for the upcoming FTR auction.
 - Post the Stage 2 results.
 - Move the Phase 3 components related to Settlement changes into production.
- PJM:
 - Stakeholders have rejected the possibility of implementing a seasonal ARR/FTR process similar to the Midwest ISO process, however have confirmed continuing interest in developing a cross-border transmission right product.

ISSUES & CONCERNS





OR & RSG Alignment



Milestone Summary

С

Analyze Product

-<u>'`</u>

Stakeholder Review

Develop System Requirements

ь

Modify Applications

R

Conduct Testing

R

Implement Changes

R

Overall Status

JCM Leads

· Midwest ISO: M. Robinson

• PJM: S. Bresler

Legend

C Co

Completed

G

On Target - No Issues

Υ

Need to watch - Some Issues

R In Jeopardy – Significant Issues

KEY ACCOMPLISHMENTS

- On April 10, 2008, Midwest ISO submitted its answer to the comments and protests filed in response to Midwest ISO's March 3, 2008, filing that submitted indicative revisions to the EMT to incorporate alternative methodology for allocating the cost of Real Time RSG payments under the Tariff.
- PJM Members Committee endorsed package of Balancing Operating Reserves credit and allocation changes at its November meeting. The package of changes will be filed with FERC and if approved, implemented in the Fall 2008.

UPCOMING ACTIVITIES

 The RSG Task Force will continue to work to review the data analysis to determine cost causation and has developed an ad hoc group for this purpose.

ISSUES & CONCERNS

• Clearly different camps in terms of causation versus predictability (unclear that we will get to common rules).





Relaxation of Constraints



Milestone Summary

C C

Tech. Software Design Document

Obtain Estimates from Vendor

Modify Applications

Conduct Testing

Υ

Implement Changes



Overall Status

JCM Leads

- · Midwest ISO: T. Mallinger
- PJM: S. Bresler

Legend

- C Completed
- G On Target No Issues
- Y Need to watch Some Issues
- R In Jeopardy Significant Issues

KEY ACCOMPLISHMENTS

- Midwest ISO is testing its software.
- Finalized functional specifications and detail design.
- PJM has received software from vendor and is currently testing the software.
- At the April 24, 2008, Markets and Reliability Committee Meeting PJM decided to move their production date to September 9th to coincide with Midwest ISO's planned implementation.
- Midwest ISO and PJM identified changes to the JOA in support of this initiative.

UPCOMING ACTIVITIES

- Review JOA changes with the RTO stakeholders. Midwest ISO is scheduled to review changes at the May 6, 2008, Market Subcommittee Meeting.
- Since this project is tied to the Ancillary Services Market, the Midwest ISO, and PJM completion dates have been moved to coincide with the new September 9, 2008, launch date.

ISSUES & CONCERNS





Common Ramp Portal



Milestone Summary Develop scope document Review scope document with stakeholders Develop project plan G Overall Status

JCM Leads

- Midwest ISO: J. Marshall
- PJM: C. Advena

Legend

- C Completed
- G On Target No Issues
- Y Need to watch Some Issues
- R In Jeopardy Significant Issues

KEY ACCOMPLISHMENTS

 Midwest ISO developed a design document, which was provided to PJM April 14, 2008.

UPCOMING ACTIVITIES

 Conference call scheduled May 14, 2008, with Midwest ISO and PJM to discuss the design document.

ISSUES & CONCERNS

• Availability of IT resources could impact delivery time.





Black Start and Restoration



Milestone Summary

- Midwest ISO Technical Whitepaper
 Determine Tariff, Regulatory, Reliability
- Issues learning raining Regulatory, Reliability
- Obtain Midwest ISO Stakeholder Approval
 - Compare Midwest ISO & PJM Processes
- Y Midwest ISO Develop Tariff Changes
- Y Submit Regulatory Filings
 - Modify Policies, Procedures, Applications, Systems
 - Provide Training and Implement Changes



Overall Status

JCM Leads

- Midwest ISO: E. Skiba
- PJM: C. Advena

Legend

- C Completed
- G On Target No Issues
- Y Need to watch Some Issues
- R In Jeopardy Significant Issues

KEY ACCOMPLISHMENTS

 Tariff language presented at the April 1, 2008, Market Subcommittee Meeting for vote.

UPCOMING ACTIVITIES

- Midwest ISO has addressed comments to the Tariff language presented at the April 1, 2008, Market Subcommittee Meeting. Revised language is being presented at the May 6, 2008 Market Subcommittee Meeting. Stakeholders will have 30 days to provide comments.
- FERC filing for Midwest ISO Tariff changes.
- Technical comparison between Midwest ISO and PJM current system restoration plan.

ISSUES & CONCERNS

 Stakeholders were not able to come to an agreement on the tariff language presented at the April 1, 2008, Market Subcommittee Meeting. This could impact deadlines. Midwest ISO reassessing interim milestones with respect to current progress toward the longterm objective. More information will be provided at the June 6, 2008, Joint Stakeholder Meeting.





Cross Border Cost Sharing of Expansion

Milestone Summary

C

FERC Issues Order Reliability Cost Sharing

C

Reset Milestones

G

G

G

Compliance Filing on Reliability Cost Sharing

Sharing

Develop Proposal for Economic Cost

Submit Economic Cost Sharing Proposal to FERC **FERC Issues Order on Economic**

Cost Sharing

Overall Status

JCM Leads

- · Midwest ISO: E. Skiba
- PJM: S. Pincus

Legend

Completed

On Target - No Issues

Need to watch - Some Issues

In Jeopardy - Significant Issues

KEY ACCOMPLISHMENTS

- No interventions/ comments were filed in response to the March 3, 2008 joint compliance filing. FERC issued a letter order accepting the filing on April 9, 2008.
- An initial meeting between PJM, PJM's TOs, Midwest ISO and Midwest ISO's TOs was held on March 18, 2008, to discuss a process for moving forward on the cross-border economic transmission allocation methodology. A follow up meeting was held April 21, 2008.

UPCOMING ACTIVITIES

- A follow-up meeting to the March 18th and April 21st meetings has been scheduled. PJM, PJM's TOs, Midwest ISO, and Midwest ISO's TOs will meet on May 5, 2008, to further develop the cross-border economic transmission allocation methodology.
- RTOs to submit compliance filing containing a proposal to allocate cross border economic transmission project costs by August 1, 2008.
- Midwest ISO and PJM will facilitate a stakeholder meeting May 19 to discuss the August FERC Order tariff provisions for Midwest ISO – PJM Cross border cost allocation of economic transmission expansion projects.

ISSUES & CONCERNS





JCM Further Analysis







Loop Flow Study Phase II



Milestone Summary C Define Scope C Finalize Scope C Develop Flowgate Analysis Approach G Conduct Analysis G Quantify Contributors G Identify Mitigating Actions G Finalize Report G Present Findings to Stakeholders G Overall Status

JCM Lead

- Midwest ISO: T. Mallinger
- PJM: S. Williams

Legend

- C Completed
- G On Target No Issues
- Y Need to watch Some Issues
- R In Jeopardy Significant Issues

KEY ACCOMPLISHMENTS

- Midwest ISO and PJM identified list of 35 flowgates to be included in study.
- Reviewing use of internal EMS model for loop flow study.
- Investigating the use of PROBE Software to conduct this analysis.
- Identifying time frames to conduct analysis.
- · Collected Market flow data.
- Analyzing periods of time where constraints are binding in the two markets.

UPCOMING ACTIVITIES

- Complete Analysis
- · Quantify contributions
- · Identify mitigating actions

ISSUES & CONCERNS





Dynamic Dispatch. Sched./Dispatch. Trans.

Milestone Summary Review Analysis with Stakeholders Determine Next Steps G Overall Status

JCM Leads

- Midwest ISO: T. Mallinger
- PJM: S. Bresler

Legend

- C Completed
 - On Target No Issues
- Y Need to watch Some Issues
- In Jeopardy Significant Issues

KEY ACCOMPLISHMENTS

- Midwest ISO and PJM have completed initial analysis on proxy bus prices. When differences occur in proxy bus prices the differences generally converged within relatively short time frames.
- Results of analysis on proxy bus prices were presented at the February 1, 2008, Joint Stakeholder Meeting.

UPCOMING ACTIVITIES

- RTOs are continuing analysis of border price differentials since the PJM Marginal Losses initiative was implemented.
- RTOs are conducting preliminary analysis to determine if initiative should be taken off "hold" status.

ISSUES & CONCERNS





JCM Hold







Shared Regulation Market



Milestone Summary

G

Resolve CA Consolidation Issues Analyze Options Shared Reg. Mkt.

G

Perform Detail Study

G G Identify Changes Policies, Procedures, applications, etc.

Review Results with Stakeholders

Go/No Go Decision

Overall Status

JCM Lead

- Midwest ISO: T. Mallinger
- PJM: S. Bresler

Legend

- Completed
- On Target No Issues
- - Need to watch Some Issues
- In Jeopardy Significant Issues

KEY ACCOMPLISHMENTS

UPCOMING ACTIVITIES

• Analysis on this initiative is dependent on Midwest ISO opening its Ancillary Services Market and then having a period of approximately six to nine months to collect data.

ISSUES & CONCERNS





Cross Border FTRs in the Allocations

Milestone Summary Determine allocation process changes to create alignment Define business rules for resolving differences Perform Detail Cost/Benefit Analysis Review Results with Stakeholders Go/No Go Decision Overall Status

JCM Lead

· Midwest ISO: R. Doying

• PJM: S. Bresler

Legend

C Completed

G On Target – No Issues

Y Need to watch – Some Issues

R In Jeopardy – Significant Issues

KEY ACCOMPLISHMENTS

 The 2008-2010 FTR Projects Survey results were discussed at the March 4, 2008 Midwest ISO Market Subcommittee Meeting. The Cross Border FTRs in the Allocations Project was ranked as the third priority and will not be targeted for completion in 2008.

UPCOMING ACTIVITIES

• Commencement date for this project is to be determined.

ISSUES & CONCERNS





Coordinated OASIS



Milestone Summary

С

Perform Analysis

С

Stakeholder Review

Re-evaluate Initiative based on NAESB 890 work

G

Overall Status

JCM Leads

• Midwest ISO: E. Skiba

• PJM: C. Advena

Legend

C Completed

Completed

V N

On Target – No Issues

Need to watch - Some Issues

R

In Jeopardy - Significant Issues

KEY ACCOMPLISHMENTS

 At the June 1, 2007, JCM Joint Stakeholder meeting it was agreed to place this initiative on hold pending definition of NAESB OASIS changes resulting from FERC Order Number 890.

UPCOMING ACTIVITIES

 NAESB 890 work plan can be found at: http://www.naesb.org/weq/weq_order890.asp

ISSUES & CONCERNS

 NAESB FERC Order Group 5 items which includes "NAESB will develop business practice standards to facilitate coordination across multiple transmission systems" may address this initiative. Group 5 items currently scheduled for membership ratification by end of fourth quarter 2008.





Netting in the IDC



Milestone Summary

- G Conduct Analysis
- G Develop Draft Recommendation
- G Review Preliminary Recommendation with ORS
- G Conduct Detail Analysis/Cost Estimates
- G Prepare Final Recommendation to ORS
- G Present Recommendation to ORS
 - **ORS Action on Recommendation**
- G

Overall Status

JCM Leads

- · Midwest ISO: T. Mallinger
- PJM: J. Burlew

Legend

- C Completed
- G On Target No Issues
- Y Need to watch Some Issues
- R In Jeopardy Significant Issues

KEY ACCOMPLISHMENTS

UPCOMING ACTIVITIES

 Work to determine if this can be included as a component under the NAESB Annual Plan Item "Prepare recommendation for future path for TLR in concert with NERC, which may include alternative congestion management procedures."

ISSUES & CONCERNS

No issues at this time.





Completed







Completed Initiatives



Committed Initiatives

- Midwest ISO Ramp Viewer
- Moving JOUs Between Markets
- Broader Price Transparency Common Search Engine
- Broader Price Transparency Enhanced Joint Website
- Broader Price Transparency Link Midwest ISO PTP and PJM eData sites
- Common Long Term Transmission Queue
- Alignment of OASIS Business Practices
- Emergency Energy Agreements Alignment of Agreements and Practices (Decision not to proceed with initiative)
- Joint Expansion Planning (Coordinated System Plan)
- Common Deliverability Studies
- Common Treatment of Dynamic Schedules and Pseudo Ties
- PJM Marginal Losses
- Central Location to View Both Ramp Viewers

Require Further Analysis

- Production Cost Study
- Common Time Zones PJM Move to EST (Decision not to proceed with initiative)
- Market Flow Threshold Assessment (Decision to move forward with 12-month field test)
- Super Regional Reserve Sharing (Decision not to proceed with this initiative)
- Investigation of Loop Flow Across the Combined Footprint Phase I
- Outage Coordination
- Alternative Border Pricing Point Calculation (Decision not to proceed based on Midwest ISO and PJM analysis of proxy bus prices)
- Market Flow Threshold Reported to the IDC



