

JCM Initiatives Update



March 2008

Joint and Common Market Initiatives

| Complete | Cost 3 Year Gross Benefit |
|----------------|------------------------------|
| Implementation | Cost 3 Year Gross Benefit |

| Evaluation | Cost 3 Year Gross Benefit |
|-----------------|------------------------------|
| Not Recommended | Cost 3 Year Gross Benefit |



| | | | 2006 | | 2007 | | 2008 | |
|-------------|---|--|---|-----------------------------|---|--------------------------------------|---|--|
| Commercial | 1 | FTR Market Convergence | Alignment of FTR Timelines and Products (Note: All MISO cost) | \$600,000 \$3,008,657 | | | Cross Border FTRs in the allocations Cross border FTRs in auctions | \$4,000,000 Analyzing \$8,000,000 \$4,374,524 |
| | 2 | Price Rationalization and Convergence at the Border | | | PJM implementation of marginal losses Alternative Border Pricing Point Calculation | \$600,000 N/A \$200,000 N/A | | |
| | 3 | Reduce Hurdle Rate | Alignment of PJM Operating Reserves and MISO Revenue Sufficiency Guarantee (Note: All MISO cost) | \$600,000 \$3,764,432 | Depancaking of PTP ancillary services (Control Area Services, T.O. Control Center Services, Reactive, Black Start) | \$400,000 (\$2,505,757) | | |
| | 4 | Broader Price Transparency and Common Reporting | Existing MISO & PJM Websites Linking of sites Data Available at Both Sites (LMPs, Tie Flows, Loads) | \$500,000 \$1,952,165 | Standard Data Exchange (Web Services) LMPs, Contingencies, Loads, Dispatch Signals, Outages, Emergency Event/Notifications | \$3,000,000 \$2,547,477 | Implementation of single MISO & PJM Website (Individual Websites go away) | \$750,000 N/A |
| | | | Common Search Capabilities | \$200,000 \$1,125,000 | | | Standard Data Visualization and Reporting Portal Create a single MISO & PJM Data and Report Portal | \$8,500,000 \$4,158,174 |
| | | | Enhanced Joint Website to Host Joint meeting and Events Calendar, Joint Documents and Reports | \$600,000 \$1,125,000 | | | | |
| | 5 | Increased Market Opportunities | Moving JOUs between markets | \$100,000 \$156,851 | | | Shared Regulation Market | \$8,000,000 Analyzing |
| | 6 | Operational Consistency | Common Long Term Transmission Queue | \$200,000 \$1,091,108 | Common Time Zones (Note: All PJM cost) | \$5,000,000 N/A | Single Resource Adequacy Solution | \$8,000,000 N/A |
| | | | MISO Ramp Viewer | \$150,000 \$913,703 | Central location to view both ramp viewers | \$100,000 \$1,527,405 | Common Ramp Portal | \$750,000 \$2,091,108 |
| | | | Alignment of OASIS Business Practices | \$500,000 \$1,365,867 | Coordinated OASIS | \$1,200,000 Analyzing | | |
| | | | Single OASIS | \$8,000,000 \$6,168,760 | Reserve Sharing | \$8,000,000 N/A | | |
| | | | Common Treatment of Dynamic Schedules/Pseudo-Ties | \$200,000 \$382,934 | Market to Market Relaxation of Constraints | \$80,000 \$1,000,000 | | |
| | | | 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 |
| | | | Market Flow Threshold Assessment | N/A Reliability | Market Flow Threshold Reported to IDC | \$300,000 Reliability | Netting in the IDC | Analyzing Analyzing |
| | | | | | Outage Coordination | N/A Reliability | | |
| | 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 |
| Reliability | 1 | Emergency Energy Agreement | Alignment of Agreements and Practices | \$100,000 Reliability | | | Super Regional Reserve Sharing | Analyzing Analyzing |
| | 2 | Black Start and Restoration | | | Alignment of Agreements and Practices | \$500,000 \$936,000 | | |
| Plan | 1 | Joint Expansion Planning and Common Deliverability Studies | Joint Expansion Planning (Coordinated System Plan) | \$20,000 Reliability | Cross Border Cost Sharing of Expansions | Reliability | | |
| | 2 | | Common Deliverability Studies | \$100,000 Reliability | | | | |
| Total | | 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 Initiatives

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 |
| C | Build and Test |
| C | Update Process and Procedures |
| G | Customer Training |
| C | Cutover to Production Phase 1 |
| C | Cutover to Production Phase 2 |
| G | 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 (LTTR) allocation is underway.
 - Survey results for prioritization of 2008 initiatives indicated that the Market Participants are most interested in a multi-period monthly auction.
- 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.
 - Posting of the LTTR results.
 - Test and propagate the Phase 3 components related to Settlement changes
- 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

- None at this time.

OR & RSG Alignment

Milestone Summary

| | |
|----------|-----------------------------|
| C | Analyze Product |
| R | Stakeholder Review |
| R | Develop System Requirements |
| R | Modify Applications |
| R | Conduct Testing |
| R | Implement Changes |

R Overall Status

JCM Leads

- Midwest ISO: M. Robinson
- 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 filed draft tariff language with FERC addressing RSG cost allocation re-design on March 3, 2008.
- 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 | Tech. Software Design Document |
| C | Obtain Estimates from Vendor |
| C | Modify Applications |
| Y | Conduct Testing |
| Y | Implement Changes |

Y 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 software has been delivered.
- The PJM Members Committee passed the Constraint Relaxation change at their January 24, 2008, meeting.
- Finalized functional specifications and detail design.
- PJM has received software from vendor and is currently testing the software.

UPCOMING ACTIVITIES

- Identify JOA changes which will be taken through the RTOs stakeholder processes.
- Midwest ISO having internal discussions on possibility of total elimination of constraint relaxation and will have future discussions with PJM.
- Since this project is tied to the Ancillary Services Market, the Midwest ISO completion dates have been moved to coincide with the new September 9, 2008, launch date.
- PJM will determine whether to move the PJM production date to September 9th at the Markets and Reliability Committee Meeting on April 24, 2008.

ISSUES & CONCERNS

- None at this time.

Common Ramp Portal

Milestone Summary

| | |
|---|---|
| G | Develop scope document |
| G | Review scope document with stakeholders |
| G | 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 met with Real-Time Ops on the Common Ramp Portal. Agreed the goal should be for PJM's and Midwest ISO's viewers to submit requests to the other as ramp is requested. Nik Browning has developed initial scope.

UPCOMING ACTIVITIES

- Midwest ISO to schedule meeting with Midwest ISO IT and PJM to discuss goals.
- PJM will begin analysis on this initiative in the second quarter of 2008.

ISSUES & CONCERNS

- None

Black Start and Restoration

Milestone Summary

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

Y **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

- Reviewed tariff language with Midwest ISO Market Settlements.
- Tariff language distributed to stakeholders February 20, 2008.

UPCOMING ACTIVITIES

- Tariff language will be presented at the April 1, 2008, Market Subcommittee Meeting for vote.
- FERC filing for Midwest ISO Tariff changes.
- Technical comparison between Midwest ISO and PJM current system restoration plan.

ISSUES & CONCERNS

- None

Cross Border Cost Sharing of Expansion

Milestone Summary

| | |
|---|---|
| C | FERC Issues Order Reliability Cost Sharing |
| C | Reset Milestones |
| C | Compliance Filing on Reliability Cost Sharing |
| G | Develop Proposal for Economic Cost Sharing |
| G | Submit Economic Cost Sharing Proposal to FERC |
| G | FERC Issues Order on Economic Cost Sharing |

G Overall Status

JCM Leads

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

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 submitted a joint compliance filing for reliability projects including revisions to the Joint Operating Agreement on March 3, 2008.
- No interventions/ comments were filed in response to the March 3, 2008 compliance filing. Order expected early May.
- 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.

UPCOMING ACTIVITIES

- RTOs to submit compliance filing containing a proposal to allocate cross border economic transmission project costs by August 1, 2008 .
- Three follow-up meetings to the March 18th meeting have been scheduled. PJM, PJM's TOs, Midwest ISO, and Midwest ISO's TOs will meet on April 21, 2008, and May 5, 2008, to further develop the methodology. Also, a meeting of stakeholders and PJM, PJM's TOs, Midwest ISO and Midwest ISO's TOs is scheduled for May 19, 2008.

ISSUES & CONCERNS

- None at this time.

JCM Further Analysis Initiatives

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

- None at this time.

Dynamic Dispatch. Sched./Dispatch. Trans.

Milestone Summary



Review Analysis with Stakeholders

Determine Next Steps



Overall Status

JCM Leads

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

Legend



Completed

On Target – No Issues

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

- None at this time.

JCM Hold Initiatives

Shared Regulation Market

Milestone Summary

| | |
|---|---|
| G | Resolve CA Consolidation Issues |
| G | Analyze Options Shared Reg. Mkt. |
| G | Perform Detail Study |
| G | Identify Changes Policies, Procedures, applications, etc. |
| G | Review Results with Stakeholders |
| G | Go/No Go Decision |

G Overall Status

JCM Lead

- 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

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

- None at this time.

Cross Border FTRs in the Allocations

Milestone Summary

| | |
|---|--|
| G | Determine allocation process changes to create alignment |
| G | Define business rules for resolving differences |
| G | Perform Detail Cost/Benefit Analysis |
| G | Review Results with Stakeholders |
| G | Go/No Go Decision |

G 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

- Prioritization Survey discussed at the Midwest ISO Market Subcommittee. The survey was sent to Midwest ISO market participants on February 5, 2008. The results of the survey may impact when this initiative begins.

UPCOMING ACTIVITIES

- Analysis on this initiative will begin in the second half of 2008.

ISSUES & CONCERNS

- None at this time.

Coordinated OASIS

Milestone Summary

| | |
|---|---|
| C | Perform Analysis |
| C | Stakeholder Review |
| G | Re-evaluate Initiative based on NAESB 890 work |

G 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

- 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 third 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 |
| G | 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 Initiatives

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