

Midwest ISO Update Report

ATC Customer Meeting

August 25, 2005

Rick Hensley

Manager – Customer Accounts



Overview



-
- Operations/Reliability**
- Experienced record peak demand on July 25th; 111,614 MW in the market footprint and 130,017 MW in the overall reliability coordination area
 - New peak set August 3rd with 112,197 MW in the market footprint and 131,434 in the reliability coordination area
- Computer System Performance**
- Maintained very good system availability in the month of July
 - Evaluating system changes to allow for faster Day-ahead case processing
 - Addressed data transfer issues between Day-Ahead and Real-Time System (DART) and Settlements (Lodestar) through software enhancements and process improvements.
- Markets**
- Completed second FTR allocation process on July 29th
 - Overall allocations were at 92% of nominations
 - Continued initiative to develop expanded Market reporting; revised reports to be provided by end of August, with additional mass data files to be provided by end of September
- Transmission Services**
- Decreased total number of yearly transmission service requests by 13
 - Awarded contract to provide independent tariff administration and planning services for Duke Energy
 - Services include evaluation and approval of all transmission services requests, calculation of Total and Available Transfer Capability, operation and administration of Duke OASIS, coordination of transmission planning and evaluation, processing and approval of all generation interconnection requests

Overview



Settlements

- Total open dispute count increased by 586 to 2,449 since the end of June
 - 1,738 disputes have been closed and an additional 877 have been denied since the start of the market
 - 87% of open disputes are related to Revenue Sufficiency Guarantee
- Addressing data transfer issues between real-time system (DART) and settlements (Lodestar) (see System Performance)
 - The first R155 statements will be posted on September 3, 2005.
- Additional resources deployed to reduce dispute backlog

Customer Relations

- Resolved 391 issues in June, with 89 remaining at month end
- Continued focus on integration of Customer Service with Information Technology assistance

Market Operations Daily Overview Report



Market Operations - Daily Overview Report

Publish Date: 8/11/05

				8/10/05	8/10/05	8/10/05
				Prior Forecast	Actual	Forecast
Peak Hour				HE 16	HE 16	HE 16
Minimum Hour				HE 04	HE 04	HE 04
Market Load (GW)				8/10/05	8/10/05	8/10/05
				Prior Forecast	Actual	Forecast
Peak				109.5	105.7	103.4
Minimum				66.8	67.9	65.2
Midwest Market Supply for Peak Hour at Economic Maximum (GW)				8/10/05	8/10/05	8/10/05
				Prior Forecast	Actual	Forecast
Total Resources (excludes units bid as "Emergency")				114.3	113.4	113.4
Outages (as entered in Outage Scheduler)				(6.3)	(6.3)	(5.9)
Intermittent Capacity (Wind and Hydro)				(3.9)	(3.9)	(3.9)
Unavailable (units bid as "Unavailable")				(6.4)	(7.2)	(7.2)
Net Resources				97.7	96.0	96.4
Committed Resources				97.4	97.1	91.6
Plus Net Imports				7.1	7.8	6.7
Adjusted Committed Resources				104.5	104.9	98.3
Emergency Only Resources				0.0	0.3	0.0
Balancing Authority Operating Reserves				5.8	6.2	6.2
Financial Summary				8/10/05	8/10/05	8/11/05
				Actual	Actual	Forecast
<i>Day-Ahead Market</i>						
Dollars Cleared				\$ 151,859,527	---	\$ 134,891,372
Energy Cleared (GWh)				2,012.0	---	1,918.2
Peak Demand Cleared (GW)				107.6	---	103.1
<i>Real-Time Market</i>						
Dollars Cleared				---	\$ 145,555,555	---
Energy Cleared (GWh)				---	1,915.0	---

Balancing Authority Operating Reserves Report



Balancing Authority Operating Reserves Report

Publish Date: 7/26/05

		7/25/05		7/25/05		7/26/05	
		Forecast - System Peak		Actual - System Peak		Forecast - System Peak	
		Peak Hour: HE 14		Peak Hour: HE 14		Peak Hour: HE 12	
		MTLF (MW)	Reserves (MW)	Load (MW)	Reserves (MW)	MTLF (MW)	Reserves (MW)
ALTE	Alliant Energy - East						
ALTW	Alliant Energy - West						
AMRN	Ameren						
CILC	AmerenCILCO						
CIN	Cinergy						
CONS	MECS - Consumers Energy						
CWLD	Columbia Water & Light						
CWLP	City Water, Light & Power (Springfield, IL)						
DECO	MECS - Detroit Edison						
DEVI							
FE	First Energy						
GRE	Great River Energy						
HE	Hoosier Energy Rural Electric Cooperative						
IP	AmerenIP						
IPL	Indianapolis Power & Light						
LGEE	LG&E Energy						
MDU	Montana-Dakota Utilities						
MGE	Madison Gas and Electric						
MP	Minnesota Power						
NIPS	Northern Indiana Public Service						
NSP	Northern States Power (Xcel Energy)						
OTP	Otter Tail Power						
SIGE	Southern Indiana Gas & Electric						
SIPC	Southern Illinois Power Cooperative						
UPPC	Upper Peninsula Power Co.						
WEC	Wisconsin Energy						
WPS	Wisconsin Public Service						
Total Midwest Market		0.0	0.0	0.0	0.0	0.0	0.0

Note: The Peak Hour and related data show in the Forecast -System Peak column for yesterday may differ from the the prior day's report. This will occur when the peak hour forecast is different than the actual peak hour. When this occurs, the forecast shown on the report containing the actuals is updated to provide a true forecast to actual comparison for the actual peak hour. The forecast provided is still the forecast that existed at the time the Forward Reliability Assessment Commitment process was run - just shown for a different hour. p. 4

Day-Ahead Clearing Report



Day-Ahead Clearing Report

Market Date: 7/24/05

Peak Hour: HE 16

Minimum Hour: HE 04

Publish Date: 7/25/05

	Demand Cleared (GW)				Supply Cleared (GW)			Net Sch. Interchange (GW)	Generation Resources Offered (GW at Econ. Max.)				
	Physical		Virtual	Total	Physical	Virtual	Total		Self Scheduled	Must Run	Economic	Emerg.	Total
	Fixed	Price Sen.											
Hour 01				0			0						0
Hour 02				0			0						0
Hour 03				0			0						0
Hour 04				0			0						0
Hour 05				0			0						0
Hour 06				0			0						0
Hour 07				0			0						0
Hour 08				0			0						0
Hour 09				0			0						0
Hour 10				0			0						0
Hour 11				0			0						0
Hour 12				0			0						0
Hour 13				0			0						0
Hour 14				0			0						0
Hour 15				0			0						0
Hour 16				0			0						0
Hour 17				0			0						0
Hour 18				0			0						0
Hour 19				0			0						0
Hour 20				0			0						0
Hour 21				0			0						0
Hour 22				0			0						0
Hour 23				0			0						0
Hour 24				0			0						0
At Minimum Hour													
Average													
At Maximum Hour													

Operations/Reliability



<p>Transmission Loading Relief (TLR) Events</p> <p>Level □ July</p> <p>3 – curtailing non-firm 4 – curtailing non-firm and reconfiguring 5 – curtailing firm 6 – emergency</p>	<p>Top Real-time Binding Constraints**</p> <table border="1"> <thead> <tr> <th>Constraint (Control Area, State)</th> <th>Hours July</th> </tr> </thead> <tbody> <tr><td>Minnesota-Wisconsin Stability Interface (NSP to ALTE, MN-WI)</td><td>83.17</td></tr> <tr><td>Pruntytown-Mount Storm 500 (PJM, West Virginia)</td><td>60.33</td></tr> <tr><td>Highway V-Preble 138 (WPS, Eastern Wisconsin)</td><td>55.08</td></tr> <tr><td>Gentlemen-Red Willow 345 (NPPD, Nebraska)</td><td>50.67</td></tr> <tr><td>East Frankfort-Tyrone 138 (Central Kentucky)</td><td>38.50</td></tr> <tr><td>Lanesville 345/138 Xfmr (CWLP, Central Illinois)</td><td>37.33</td></tr> <tr><td>Fox River Energy-Forest Junction 345 (WEC, Eastern Wisconsin)</td><td>34.00</td></tr> <tr><td>New London-Webster 230 (CIN, Central Indiana)</td><td>33.75</td></tr> <tr><td>Eau Claire-Arpin 345 (NSP to ALTE, Western to Central WI)</td><td>33.08</td></tr> <tr><td>Arnold-Hazleton 345 (ALTW, Eastern Iowa)</td><td>30.17</td></tr> <tr><td>Kammer 765/500 #9 (AEP to AE in PJM, OH-WV border)</td><td>25.58</td></tr> <tr><td>Dune Acres-Michigan City 138 1&2 (NIPS, Northwest, Indiana)</td><td>24.92</td></tr> <tr><td>North Appleton-Rocky Run 345 (WEC-WPS, Central Wisconsin)</td><td>20.67</td></tr> <tr><td>Havana-Ipava 138 (AMRN-IP, Central Illinois)</td><td>19.33</td></tr> <tr><td>NAS-Dayton Walther 138 (LGEE, Northern Kentucky)</td><td>19.08</td></tr> </tbody> </table>		Constraint (Control Area, State)	Hours July	Minnesota-Wisconsin Stability Interface (NSP to ALTE, MN-WI)	83.17	Pruntytown-Mount Storm 500 (PJM, West Virginia)	60.33	Highway V-Preble 138 (WPS, Eastern Wisconsin)	55.08	Gentlemen-Red Willow 345 (NPPD, Nebraska)	50.67	East Frankfort-Tyrone 138 (Central Kentucky)	38.50	Lanesville 345/138 Xfmr (CWLP, Central Illinois)	37.33	Fox River Energy-Forest Junction 345 (WEC, Eastern Wisconsin)	34.00	New London-Webster 230 (CIN, Central Indiana)	33.75	Eau Claire-Arpin 345 (NSP to ALTE, Western to Central WI)	33.08	Arnold-Hazleton 345 (ALTW, Eastern Iowa)	30.17	Kammer 765/500 #9 (AEP to AE in PJM, OH-WV border)	25.58	Dune Acres-Michigan City 138 1&2 (NIPS, Northwest, Indiana)	24.92	North Appleton-Rocky Run 345 (WEC-WPS, Central Wisconsin)	20.67	Havana-Ipava 138 (AMRN-IP, Central Illinois)	19.33	NAS-Dayton Walther 138 (LGEE, Northern Kentucky)	19.08
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<p>MISO Area Balancing Error</p> <p>MW □ July ■ Year-to-date*</p>	<p>Manual Redispatches</p> <p>Count</p> <p>July</p>	<p>Redispatch Cost</p> <p>Under Development</p>																																
<p>NERC Violations</p> <ul style="list-style-type: none"> • None YTD 																																		

* Apr-Dec Only

** Binding constraint is a transmission limit on the system that requires dispatch to be altered to keep flow from increasing on facility (e.g. transmission line, transformer)

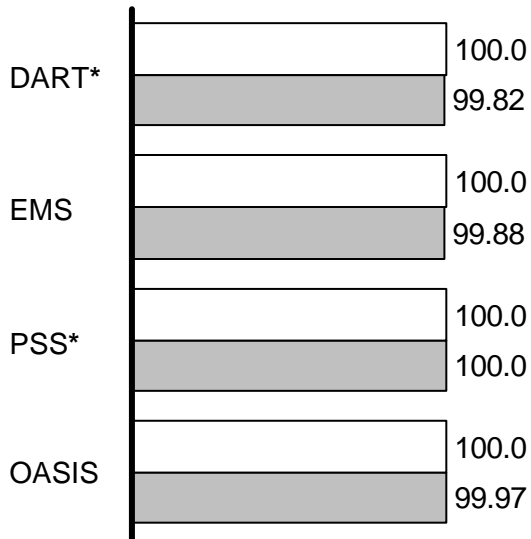
System Performance



Application Availability

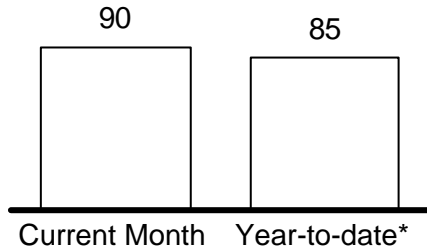
%, target = 99.7%

□ Current Month
 ■ Year-to-date



Day-ahead Post Time

% On-time posting

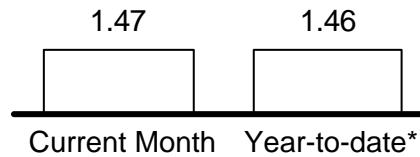


- 3 days late by average of 13.33 min.

Application Usability

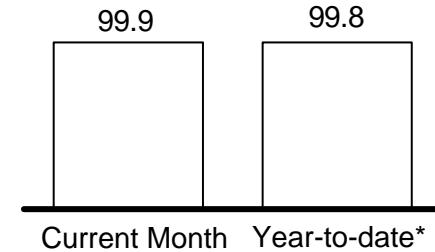
Portal Response Time **

Average response in seconds



Unit Dispatch System Solutions

% of 5-minute solutions, target = 98.5%



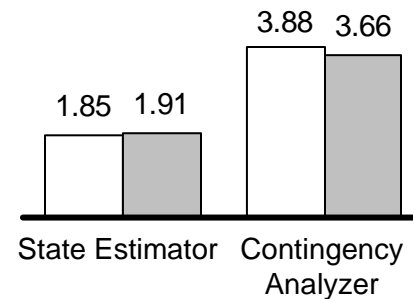
State Estimator & Contingency Analyzer Frequency

Solution Frequency minutes

State Estimator Target = 3

Contingency Analyzer Target = 5

□ Current Month
 ■ Year to Date



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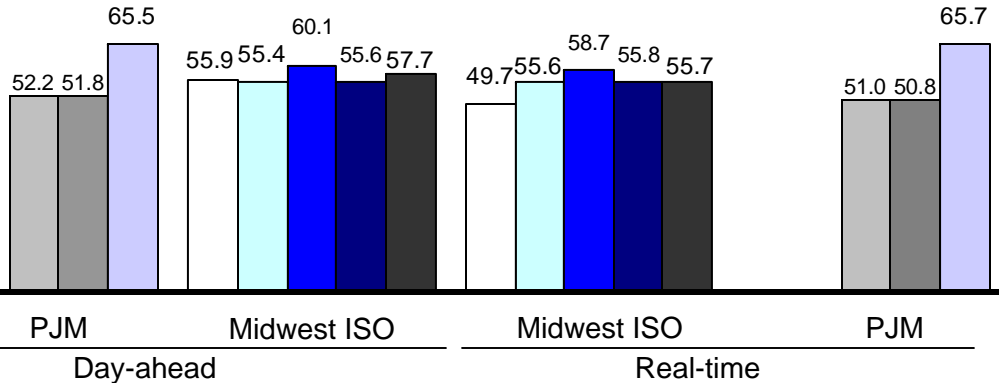
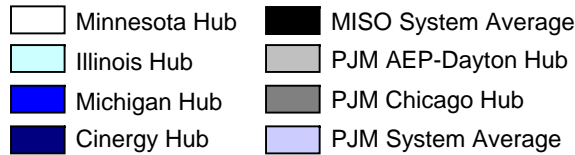
** Transactions excluding highly complex transactions

Market



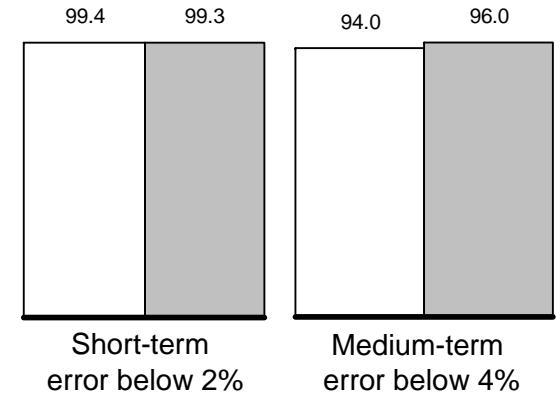
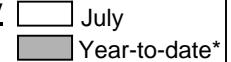
Locational Marginal Prices

Daily average \$/MWh



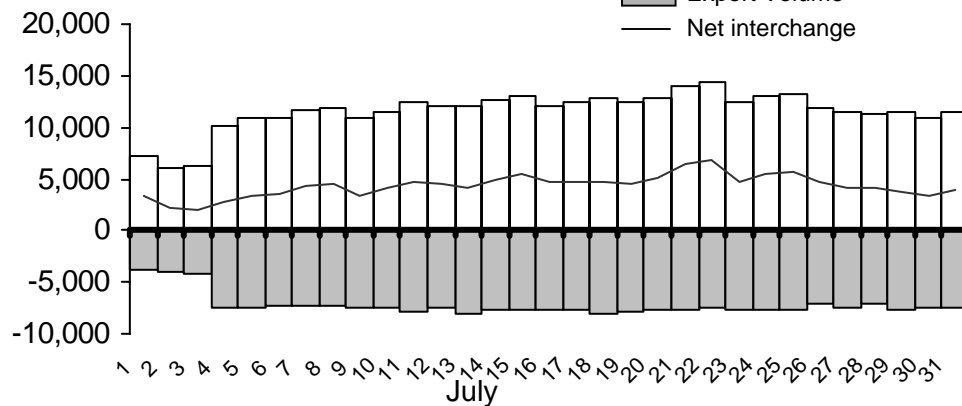
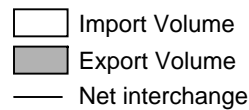
Load Forecast Accuracy

Percent



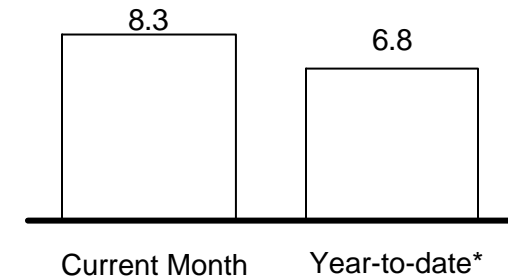
Net Scheduled Interchange

Average Hourly MW



Virtual Bids

Average Hourly Cleared Bids (GW)



* Apr-Dec Only

Next Steps



Areas of Improvement

- Congestion Management
- System Improvements
 - Market Portal
 - Physical Scheduling System (PSS)
 - Website
 - OASIS

Areas of Development

- Capacity Market
- Ancillary Services Market
- Joint and Common Market

Questions?



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