



Joint and Common Market

MISO-PJM DAY-AHEAD MARKET COORDINATION STATUS UPDATE

**February 28, 2017
MISO-PJM JCM**



Overview

Purpose

- Provide status update and metrics related analysis on DA FFE exchange.

Takeaways

- MISO and PJM have been coordinating DA FFE exchange since 1/28/2016.
- FFE exchange coordination efforts have been successful.
- Metrics have shown the exchanges have generally achieved convergences in final results.

Outlines

- DA FFE exchange events summary
- Metric on FFE exchanges
- Next Steps

DA FFE Exchange Summary

FGID	FG NAME	OWNER	REQ RTO	Hrs	Avg MW	DA M2M payment (PJM->MISO)	MISO Avg SP	PJM Avg SP
2445	Batesvill_Hubbl_138kV_flo_Tanners_Creek_Miami_Fort_345kV	PJM	MISO	40	30	-\$32,865	\$ 124.28	\$ 27.39
2577	Roxana_Praxair_138_flo_Wilton_Center_Dumont_765	MISO	PJM	12	40	\$29,740	\$ 61.96	\$ 52.2
3227	0404_Quad_H471_for_15503_Cordo_Nelson	PJM	MISO	24	50	- \$25,589	\$ 0	\$ 22.03
3297	974_Zion_22_Zion_345kV_I_o_Pleasant_Prairie_22_Zion_345kV	PJM	MISO	46	136	- \$75,801	\$ 34.89	\$ 11.21
3336	Mercr_IP_Galesburg_161kV_flo_Nelson_Electric_Jct_345	MISO	PJM	187	27.73	\$672,481	\$ 122.43	\$ 215.84
Total				309		\$567,966		

- Total number of exchanges : 23 (PJM request: 15, MISO request: 8)
- Number of rejected requests: 0

Metric and Benefit Analysis

MISO and PJM have identified the following key metrics to measure performance of DA Market-to-Market Exchanges:

- Price convergence of MISO / PJM Day Ahead markets
- Non Monitoring RTO's FFE / Market Flow's gap in Real Time

Metric is based on exchange events after 4/1/2016 (total 87 hours).

- Rerun each RTO's DA solution to simulate "what if" the exchange did not occur
- Compare differences between exchange vs non-exchange cases.

Convergence Metrics on DA M2M Coordination

Date of event	FG ID	FG Name	Req. RTO	MW Exchange (MW)	MISO/PJM DA shadow prices difference			Non Monitoring RTO FFE/Market Flow Gap Change (before – after)
					Before	After	Difference	
4/15/2016	3336	Mercr_IP_Galesburg_1 61kV_flo_Nelson_Elect ric_Jct_345	PJM	25	\$89.22	\$63.15	(\$26.07)	-25
5/7/2016	3336		PJM	25	\$34.71	\$56.52	\$21.81	-25
6/13/2016	3297	974_Zion_22_Zion_34 5kV_I_o_Pleasant_Prai rie_22_Zion_345kV	MISO	100	\$38.14	\$25.65	(\$12.49)	-100
7/13/2016	3297		MISO	232	\$46.62	\$11.22	(\$35.40)	-232
7/14/2016	3297		MISO	200	\$83.93	\$46.42	(\$37.51)	-200
8/27/2016	3297		MISO	100	\$46.55	\$30.40	(\$16.15)	-100
9/11/2016	3227	0404_Quad_H471_for _15503_Cordo_Nelson	MISO	50	\$19.80	\$22.16	\$2.36	50

DA FFE exchange has generally resulted in MISO/PJM DA price convergence

- Over exchange on 5/7 and 9/11

Summary/Next Steps

Summary

- DA FFE exchange process has been successful
- Uncertainty of forecasting congestion is the primary driver for low number of exchange.

Next Steps

- RTOs are comfortable with the current exchange process and will continue to coordinate on DA FFE exchange.