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Market Monitoring – the US Midwest experience

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In the markets operated by the Midwest Independent Transmission System Operator (MISO), the goal of market monitoring is to ensure that markets operate competitively and efficiently, in order to achieve the benefits of competition. Market monitoring should also provide improved transparency to the markets and increased confidence in the market overall.

Market monitoring is designed to identify:

- Flaws in market rules that create inefficiencies or gaming opportunities;
- Efficiency improvements;
- Market power abuses and manipulation;

The Independent Market Monitor (IMM) monitors the conduct and actions of both market participants and the MISO. The Midwest market was designed to have the market monitoring function separate from the MISO; it is performed by an independent entity outside the MISO organization. Independence of the Market Monitor from the RTO is important because it monitors the MISO's rules, procedures, and operations. The IMM is required to be independent of any market participant by adhering to conflict of interest restrictions that prevent the IMM from having any relationships with any market participant. The Monitor is also separate from the regulatory agency, although it reports frequently to regulators frequently.

The IMM's processes to accomplish this role include:

1. Downloading and processing of market data (initiated every 30 seconds).
2. Real-time screening and analysis to identify circumstances that require further investigation (monitoring reports are produced continually and email alerts/text messages are sent automatically to IMM staff 24/7).
3. Investigations of market operations or conduct identified through the daily screening or through the receipt of a complaint.
4. Periodic analysis and reporting, including:
 - ✓ Monthly and quarterly market reports to the Markets Committee and FERC;
 - ✓ Investigations on market conduct are reported to the Midwest ISO or to the FERC;
 - ✓ Assessments of an existing or proposed market rule or change of market design.
 - ✓ Annual State of the Market Report;
5. Provide advice to the RTO regarding market issues or recommendations to modify market rules and procedures;
6. Presenting information and conclusions regarding the performance of the market to:
 - ✓ Market participants (periodic through participant committees);
 - ✓ State regulators (quarterly);

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- ✓ Midwest ISO Board of Directors (monthly)
 - ✓ FERC (weekly or more as needed).
7. Development and maintenance of production software to implement the market power mitigation that runs in the Midwest ISO;

Market monitoring addresses a broad array of competitive and efficiency issues. This scope includes:

- The existence of market power: evaluating competitive issues and the effectiveness of market power mitigation measures.
- Abuses of market power: identifying conduct by participants to exercise market power.
- Market manipulation: detecting attempts to influence market outcomes or settlements through fraud or manipulation.
- Market performance: determining whether market rules and procedures provide efficient incentives and lead to efficient market outcomes.
- Operator performance: evaluating whether the Midwest ISO is operating the system in a manner that is consistent with their reliability requirements and not undermining market performance.

The IMM's scope of work is limited to market operations involving existing facilities. The IMM does not review the MISO planning process or its queue management. It does not administer or review renewable energy certification programs.

Among the tools used by the IMM are typical cost patterns for each generating unit. If market offers vary from the typical patterns, the IMM can inquire into the operator's reasons for the unusual offer. The IMM is aware that renewable units frequently offer at "zero" price, meaning that it will accept any price is set by the market. In the US Midwest, wind generators that receive government subsidies may even offer to provide power at negative prices. The IMM screens allow these offers if they conform to the expected patterns of that generator type.

Potomac Economics serves as the market monitor for four regional markets: MISO, Texas, New York, and New England. The market monitoring function requires an interdisciplinary team of experts, including economists, power system engineers, generation engineers, software developers, and other professionals with mathematics and statistics skills. Potomac Economics currently has 23 staff to perform market monitoring. The market monitoring function also requires an extensive market monitoring software system and data interfaces with the ISO. MISO budgets just over \$2 million annually for market monitoring.