



MARKET MONITORING ISSUES

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Market Monitor



PJM's Operational Markets and Services

- Energy Markets
 - Day Ahead
 - Real Time
- Capacity Credits Markets
 - Daily
 - Monthly/multi-monthly
- Financial Transmission Rights Market
 - Auction Options
- Ancillary Services
 - Regulation Market
 - Spinning Reserve Market
 - Blackstart Service
 - Reactive Services

- Each market requires distinct monitoring
 - Indicators
 - Behaviors
 - Different metrics (product pricing)
 - Common metrics (market structure)
- Day ahead market
 - Pure financial transactions included
 - FTRs included
 - Interactions



Monitoring of PJM's Markets and Services

- Capacity markets
 - Different periods
 - Different market structure
 - Different rules
 - Different types of behavior
- Regulation/spinning markets
 - Geographic submarkets
 - Different rules
 - Different types of behavior
 - Relationship to energy markets

- Monitor **compliance with rules**, standards, procedures and practices of PJM.
- Monitor **actual or potential design flaws** in rules, standards, procedures and practices of PJM.
- Monitor **structural problems** in the PJM market that may inhibit a robust and competitive market.
- Monitor the potential of Market Participants to **exercise undue market power**.

Develop/modify market rules to:

- **Facilitate competition**
- **Limit returns to market power**
- **Provide incentives to competitive behavior**
- **Make exercise of market power more difficult**

Stop exercises of market power before significant impact

- **Discussion of issues** with relevant Market Participants; informal resolution of issues.
- **Issue demand letters** requesting a change in behavior by relevant Market Participants.
 - Provide demand letters to relevant Authorized Government Agencies. (FERC; DOJ; FTC; PUC)
- **Make regulatory filings** to address market issues and seek remedial measures.
- **Recommend modifications to rules**, standards, procedures and practices of PJM.
 - **Make recommendations** to PJM Committees or to PJM Board.
- **Evaluate additional enforcement mechanisms.**

FERC Policy Statement on Market Monitoring – May 27, 2005

- Modifies enforcement authority of MMUs
- MMUs may enforce only clearly stated tariff rules
- All other market-power related issues are referred to FERC Enforcement Staff
 - FERC investigations are confidential
 - FERC investigations not shared with MMUs
- Will require modifications to Market Monitoring Plan
 - Disputes with members over behavior
 - Demand letter

PJM has few clearly stated tariff rules explicitly regarding the exercise of market power:

- Local market power rule
- FTR/Inc/Dec rule
- No tariff rules governing the exercise of market power in the aggregate energy market
 - Overall offer cap in energy market
- No tariff rules governing the exercise of market power in the capacity markets
- No tariff rules governing the exercise of market power in the ancillary markets
 - Overall offer cap in regulation market

Relevant documents:

- FERC's Order Approving Market Monitoring Plan as Modified (March 10, 1999)
- PJM Board of Managers Review of Market Monitoring Organization (November 13, 2003)
- FERC's Guidance Order on Expedited Tariff Revisions for Regional Transmission Organizations and Independent System Operators (April 7, 2005)
- FERC's Policy Statement on Market Monitoring Units (May 27, 2005)

- **Independent Internal Market Monitoring**
 - Independent System Operator
 - ISO/RTO has no financial stake in market outcomes
 - ISO/RTO has independent Board
 - ISO and MMU are independent from all market participants
 - Market Monitoring Plan is not subject to modification by PJM members.
 - Amendment to PJM's Open Access Transmission Tariff subject to FERC approval
 - MMU is independent from ISO

- **MMU Accountability**
 - To FERC (per FERC MMU Orders and MM Plan).
 - To PJM Board.

Independent Internal Market Monitoring - MMU also monitors PJM

- Role of PJM in ensuring efficient market outcomes
- Operating reserves issues
 - Operator decisions
 - Impact on prices
- Actions when market is tight
 - DSM resources

Clear definitions required in Market Monitoring Plans

- Clear definition of MMU enforcement authority
- Clear definition of MMU reporting; accountability; independence
 - Roles of FERC, the PJM Board and PJM management
- Clear definition of MMU budget approval process
 - Roles of FERC, the PJM Board and PJM management
- Clear definition of MMU responsibility to prepare reports
 - For FERC
 - For PJM Board
 - For PJM Members
 - For Authorized Government Agencies

- Include diverse staff expertise
 - Economics/Engineering
 - Generation
 - Transmission
 - Power markets
 - Database/IT
- Build understanding of detailed market structure: macro/micro
- Build understanding of physical infrastructure
- Build understanding of operations
- Build in MMU data access/storage to RTO data designs
- Confidentiality protocols
- Complaint protocols

- Interaction with market participants is critical to understanding real markets
- Interaction with state Commissions is critical to understanding retail/wholesale interaction issues
- Interaction with RTO staff is critical to understanding real markets
- Coordination with FERC is essential to efficient monitoring and mitigation

- Market design
 - Market design critical for effective monitoring
 - Good market design does not obviate need for monitoring
- Market structure
 - Aggregate, supply-side market structure conditions not adequate to ensure competition
 - Transmission constraints limit competition in unpredictable ways
 - Full demand side participation a prerequisite - complex regulatory interactions to create required infrastructure
- Need to define market power as clearly as possible
 - Communicate definition to participants
 - Explain specific examples as they arise
- Need to define consequences of exercising market power
 - Explain specific examples as they arise

Subtle and complex ways to exercise market power

- Generally not aggregate energy market issue
- Local market power
- Operating reserves
- Bid parameters
- Retirements/mothballing
- Ramp violations
- Loop flows
- FTR/Inc/Dec
- Creation of congestion