Market Power and Mitigation in US Energy Markets

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Market Power Mitigation in Electric Markets

- In traditional electric markets:
  - FPA Section 203 merger analysis
  - FPA Section 205 Market-Based Rate analysis
  - *Ex Post* review by the Office of Enforcement
- In deregulated ISO/RTO electric markets:
  - The above, plus market mitigation conducted by Independent Market Monitors (IMM)
- These analyses were created before the development of capacity and ancillary services markets in ISO/RTO markets, which are solely screened by market mitigation.

Electric Market-Based Rates

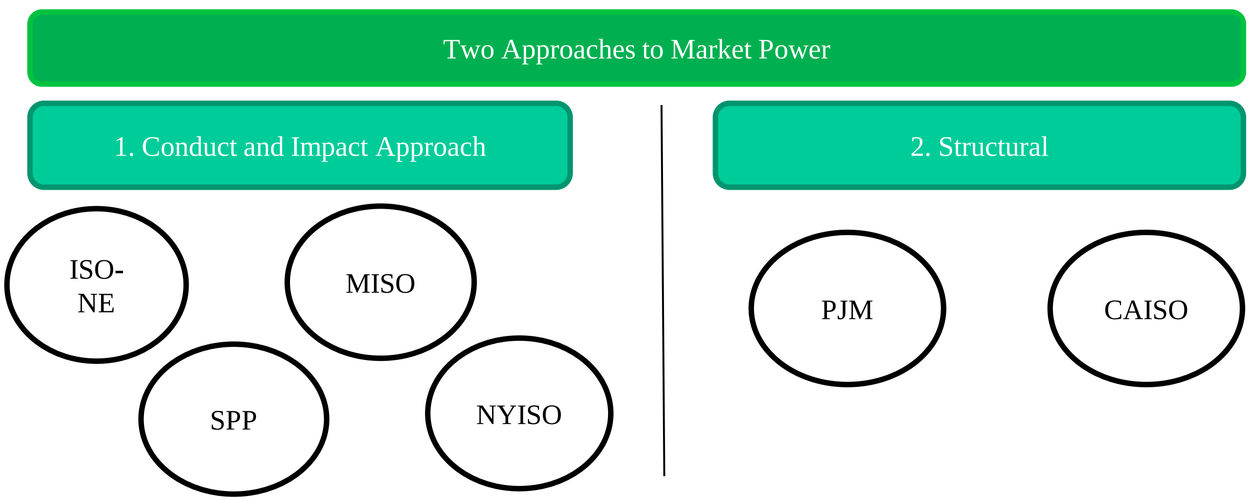
- Under FPA Section 205, FERC is required to ensure that rates charged by public utilities for wholesale power are just, reasonable, and not unduly discriminatory or preferential.
  - FERC has broad rate-making authority; thus, no single rate-making approach is required.
- A seller must demonstrate to FERC that it lacks the ability to exert horizontal (i.e., generation) and vertical (i.e., transmission and other inputs to electric power production) market power.
- FERC uses the general antitrust techniques of defining the relevant geographic and product markets to examine a seller's posture relative to other sellers.
  - FERC analyzes a seller's potential to exert market power rather than a seller's cost of service to ensure that rates charged are just and reasonable.

Electric Market-Based Rates

- If a seller demonstrates that it lacks the ability to exert horizontal and vertical market power, FERC grants the seller authorization to sell electric energy, capacity, and ancillary services at market-based rates.
- If a seller cannot make this demonstration, there is a rebuttable presumption the seller has market power.
  - FERC may initiate an investigation pursuant to FPA Section 206 setting rates subject to refund;
  - The seller may present evidence to disprove the presumption that it has market power; or
  - The seller may propose mitigation to eliminate market power concerns.
- In an RTO/ISO market, a seller may rely upon FERC-approved market monitoring and mitigation to allow for continued market-based rate authorization.

Mitigation in Organized Electricity Markets

- Market monitors screen for market power on regular intervals (e.g. every hour or five minutes).
- If market power is identified, the unit is mitigated to its reference level (i.e. its cost of producing electricity).
- Then the market model is re-run and the new results form the energy price.



Market Power Identification

- **How is an exercise of market power identified and mitigated?**

1. Conduct and Impact Approach

- **Conduct Test**
  - Does an offer exceed its reference level by a pre-specified threshold?
    - Ex. Exceeded by $100/Mwh or 300%?

Yes → Impact Test

No → Not Mitigated

- **Impact Test**
  - Does the impact on the market clearing price exceed a pre-specified limit?
    - Ex. 200% or $100/Mwh

Yes → Mitigated

No → Not Mitigated

2. Structural

- **Three pivotal supplier test.**
  - Are the three largest suppliers available to relieve a given constraint jointly necessary?

Yes → Mitigated

No → Not Mitigated

Market Power Mitigation in Capacity Markets

- Centralized capacity markets exist in PJM, ISO-NE, NYISO and MISO. The IMM conducts mitigation for those markets.
- All of these use a generalized "offer cap" to represent the cost of a competitive offer in the capacity auction.
- These offer caps are not tied to the cost of the specific unit being mitigated, but are instead based on market-wide or technology-specific assumptions.
- These offer caps must be approved by the Commission.
- Units that wish to offer higher than this level must submit their costs to the IMM for review and approval.

Market Power Mitigation in Natural Gas Markets

- Natural gas pipelines are typically monopolies with strong market power and limited competition. To ensure NGA required “just and reasonable” rates, the Commission generally requires cost-of-service ratemaking.

- FERC allows market-based rates for gas storage and related services if 1) the market-based rates are in the public interest and needed to encourage new capacity and customers are adequately protected; or 2) the seller shows that it lacks power in relevant markets.

- FERC also closely monitors the wholesale natural gas markets, using public and nonpublic data, to detect and deter potential market manipulation. When manipulation is identified, FERC may assess civil penalties, disgorge unjust profits, and mandate compliance improvements.