Market Power Tests
Gross Positions and Net Positions
Physical and Financial Dimensions

HEPG
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Market Monitor
• Internal PJM Market Monitoring Unit will become external PJM Market Monitoring Unit
• Pursuant to a FERC approved settlement
• Formed a new company – Monitoring Analytics, LLC
• Expect to begin separate operations in July
• Available to provide other monitoring services subject to strict conflict of interest policies
• Competition is used as a tool of regulation
• Laissez faire will never be adequate for wholesale power markets
• FERC – perfect competition is the goal
• Clear market power rules required
• Clear and effective market power mitigation required
• Goal is sustainable, competitive market design
• Competitive markets that result in investment incentives
• Market design cannot rely upon market power
FERC: Market Based Rates

• FERC’s Market Based Rates define competitive participant
• Derived from FERC’s Delivered Price Test
• Market power screens
• Market power tests
• Definition of the relevant market – supply available at 1.05 times clearing price
• HHI test
• Market share test
• Pivotal supplier test
• Three pivotal supplier test for local market power mitigation in energy market
• Definition of competitive local market structure
• Replaces offer capping of all units for local markets created by constraints
• Real-time analysis of market structure
• Offer caps based on cost data from each unit
• Based on FERC delivered price test logic
• TPS is a dynamic, real-time application that measures market structure based on PJM’s market logic and rules
• Market structure
• Market behavior or conduct
• Market performance or outcomes
• PJM’s real-time market power tests and mitigation may satisfy MBR requirements
• PJM tests only for local market power
• Incidence of mitigation in PJM is low
• Market structure tests are a measure of ability
• Market structure tests are not a measure of incentives
• Tests of efficacy
  – Mitigate when there is no market power
  – Do not mitigate when there is market power
• Outcomes
  – Competitive behavior and market outcomes
  – Non-competitive behavior and market outcomes
Gross vs Net Position

- Market structure test based on gross position uses total asset ownership.
- Market structure test based on net position uses total asset ownership net of offsetting positions, either physical or financial.
- Examples:
  - Obligation to serve load
  - Contract to sell power
  - Financial positions
- Net position is designed to be an incentive measure.
Net Position Analysis

• Net position analysis must be dynamic
• Net position analysis requires detailed real-time data
• Even management unlikely to have this data
• Net position analysis is complex
  – Analysis of regulatory risk
  – Analysis of retail competition
  – Dynamic financial positions
• Virtually impossible to fully reflect complete net position
• Market Based Rates (MBR) test results apply for three years, based on historical data
• MBR is static
• MBR cannot address dynamic hedging
  – Changes in ownership
  – Changes in retail competition
  – Financial hedges
• Structural test based on gross position is reasonable for MBR test
• Goal of net position analysis is to better reflect incentives
• Incentives are complex
• Net position unlikely to fully measure incentives
• Advantage to increased information about incentives?
• Related markets
What Is the Issue?

• Goal is to ensure competitive behavior and competitive market outcomes
• If net position increase incentives to behave competitively, not a concern
• If net position increase incentives to exercise market power, potential issue.
  – Structural test for ability to exercise market power
  – Direct tests of market power
• Do increased incentives to exercise market power create an issue?
• Net position does not measure ability to exercise market power in PJM markets
• Ability to exercise market power in PJM markets
  – Actual unit offers in day ahead and real time markets
  – Virtual offers
  – Complex strategies
• Accurate and complete information on ownership
• Accurate and complete information on affiliate relationships
• Accurate and complete information on positions in related markets – role of each market
• Comprehensive market power rules
  – Must offer
  – One offer per day
• Robust structural test for market power - TPS
• Detailed evaluation of actual exercise of market power in all forms
• Clear scarcity pricing rules
• Robust credit policy