

# ISO/RTO Market Monitoring Structure and Challenges

## Harvard Electricity Policy Group Sixty-Third Plenary Session

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June 2, 2011

# Why is Oversight of Electricity Markets Needed ?

- FERC's Market-based Rates Policy Represented A Partial Deregulation Of The Industry.
- Full Deregulation of Electricity Faces Well Known Obstacles.
  - Wholesale Electricity Must Be Purchased Over One Network.
  - Demand Is Inelastic At The Time Of Delivery
  - Real Time Price Signals Are Poor.
- FERC Must Assure Just And Reasonable Rates.

# Achieving Just and Reasonable Rates Through Markets

- FERC, With Court Approval, Is Using Market Based Rates To Ensure Rates Are Just And Reasonable.
  - “Where there is a competitive market, the [FERC] may rely on market-based rates in lieu of cost-of-service regulation to ensure that rates satisfy th[e] requirement of section 205 of the FPA that rates ‘just and reasonable.’” Louisiana Energy & Power Auth. v. FERC, 141 F.3d 364 (D.C. Cir. 1998).
- FERC Assures Competitive Market Outcomes Through Approval Of Tariffs And Active Oversight
  - Each Market Files Tariffs Sheets Detailing Market Rules.
  - FERC Has Approved Price Caps And/Or Offer Mitigation In All ISO Markets.
  - FERC Has Rules To Prevent Market Manipulation.
  - Created A Division Of Energy Market Oversight.
  - Required ISO Markets To Have Independent Market Monitors

# Market Monitoring Governance and Responsibility -- FERC Order 719

- Governance
  - Independent of ISO Management and Market Participants
- Functions
  - Monitoring and Mitigation
  - Analysis and Reporting on Market Performance
  - Investigations and Referrals to FERC of Improper Participant Behavior
  - Identification of Market Design Problems
  - Recommendations to Improve Market Design

# What Value Do Market Monitors Provide ?

- On The Ground Review Of Market Participant Behavior And Market Operation.
  - May Refer Participants And Issues To FERC
- Implementation of Market Mitigation
- Assessment Of Market Design And Market Issues Independent Of ISO Management.
  - ISO Management Often Constrained By Stakeholder Process And Resources
  - May File Recommendations with FERC
- Comprehensive Reports On Market Outcomes And Performance.

# Who Watches Market Monitors ?

- ISO/RTO Boards Of Directors
  - Generally Have Authority To Hire And Fire Market Monitor
- FERC
  - Any Market Monitoring Suggestions Or Referrals Must Be Approved/Acted Upon By The Commission

# Challenges Facing Competitive Markets and Market Monitors

- Efforts To Prevent Exercise Of Generator Market Power Have Been Reasonably Successful.
  - Still Behavior That Requires Mitigation/Referral, But Entire Market Seldom Affected
- Getting Prices Right Is The Greatest Risk To Competitive Market Outcomes
  - Properly Pricing Scarcity In The Energy Market
  - Properly Pricing Capacity
- Regulatory Intervention Has Increased
  - Keep Prices Low
  - Achieve Policy Objectives

# Challenges to Getting Prices Right: New England's Forward Capacity Market

- A key FCM Design objective was to assure that new capacity set the price when new capacity was needed.
  - Included an Alternative Price Rule that permitted resources to provide capacity at very low prices (out of market capacity) that was intended to adjust the clearing price if the OOM capacity prevented new capacity from clearing.
- The original alternative price rule did not carry OOM forward so it was a weak rule. Over 2500 MW of Out of Market Capacity has cleared in the first 4 auctions.



# Results of the First Four Forward Capacity Auctions

	FCA #1	FCA #2	FCA #3	FCA #4
<b>Total qualified (MW)</b>	39,165	42,777	42,746	40,412
<b>Total cleared (MW)</b>	34,077	37,283	36,996	37,501
<b>NICR (MW)</b>	32,305	32,528	31,965	32,127
<b>Excess cleared (MW)</b>	1,772	4,755	5,031	5,374
<b>Clearing price (\$/kW-month)</b>	\$4.50	\$3.60	\$2.95	\$2.95

# Challenges to Getting Prices Right: New England's Forward Capacity Market

- States have been active in adding OOM capacity to the market
  - State of Connecticut RFPs for Kleen Energy Plant and Peaking RFP have added about 1100 MW of OOM generation.
  - All New England States have aggressively pursued energy efficiency programs. An average of 250 MW have cleared in the first four auctions.
  - Most New England states have renewable energy programs and targets.

# Will New Capacity Set the Price in the FCM ?

- Current Surplus Levels Mean No New Capacity Needed Until Significant Retirements Occur Or Load Grows Much More Quickly
  - Several Thousand MWs Of Oil Units May Retire When FCM Floor Price Expires
  - Nuclear Units Face Uncertain Futures
- FERC's recent order with a Minimum Offer Price Rule is stronger than the proposed Alternative Price Rule

# Challenges to Getting Prices Right: New England's Forward Capacity Market

- The Financial Impact Of Having New Capacity Set The Price In New England Would Be Significant.
  - 2013/14 Capacity Payments About \$1.1 Billion At \$2.95/KW Month. If Price Increased To \$12.00/KW-MO , Payments Would Increase to about \$4.5 Billion
  - Total 2010 Electricity Payments in New England were about \$8.5 Billion
- State Regulators And Legislators Will Likely Explore All Avenues To Prevent Such An Increase.

# Challenges to Getting Prices Right: Order 745 Demand Response Payments

- To overcome barriers to demand response Order 745 requires ISOs and RTOs to pay demand response the LMP if it passes a net benefits test.
- The net benefits test compares payments to DR providers to the decrease in  $LMP \times \text{Load}$  (consumer surplus)
- This payment and price setting rule is different than that used to dispatch generation, which is to minimize social welfare or the costs to operate generation

# Challenges to Getting Prices Right: Order 745 Demand Response Payments

- If DR Is Paid Under Order 745, Are Prices Still The Result Of A Competitive Market ?
  - If Distributed Generation Is Permitted As Demand Response, It Could Earn Both The LMP And A Payment At Retail. This Is Not Available To The Same Generator In The Wholesale Market.
  - Barriers To Demand Response May Exist When LMP Exceeds The Retail Rate, But The Net Benefits Test Threshold Will Likely Be Well Below The Retail Rate.
  - Customers Are Not Forced To Buy At The Retail Rate. Paying Customers To Reduce At Levels Below The Retail Does Not Seem Necessary.

# Looking Ahead

- Markets And Market Based Investment Face Risks From Price That Are Too Low As Well As Prices That Are Too High.
- The Combination Of Political Pressure For Lower Rates And Policy Preferences For Certain Generation Will Continue To Raise The Risk And Cost Of Merchant Generation.
- Market Designs Must Treat And Price Out Of Market Interventions Appropriately To Produce Competitive Prices.