WILL RE-REGULATION END MERCHANT GENERATION? (AND SHOULD WE CARE)?

Harvard Electricity Policy Group
May 30, 2002

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Introduction

- Merchant generation has been a success story (so we should care).
  - New, efficient capacity
  - Laws of economics working
  - Markets working
- But re-regulation now threatens merchant generation
  - Faulty economics -- the curious notion of “withholding”
  - Market intervention in New York
  - Is volatility a political impossibility?
  - Can a capacity requirement compensate?
- Wall Street’s doing the withholding
- Avoiding a return to cost-plus generation
Merchant Generation Provides 120 GW of New Capacity in Five Years

Good? Muy Bueno!

- Capital Efficient – e.g., least cost capital structures, sale/leasebacks.
- Fuel Efficient – e.g., least cost fuel source, fuel mix, heat rates, capital v. operating costs.
- Location Efficient – e.g., supply/demand (price), interconnection costs.
- Risk Efficient – owner has risk, not customers.
- Tax Efficient – e.g., synthetic leases.
- Operationally Efficient – e.g., lower forced outage rates.
- Environmentally Efficient – e.g., externalities internalized, no eminent domain used.
Meanwhile, the Law of Supply and Demand Is Working on the Supply Side ...

Supply responds to higher prices in the Midwest and summer prices go way down.

Source: Power Markets Week Price Index Database, Day Ahead Spot Prices for July-August of years shown.
And Working on the Demand Side....

Demand responds to higher prices in California

Source: California Energy Commission, ISO Energy Year-to-Date Data, weather and growth adjusted.
Markets Are Still Working

- PJM State of the Market Report for 2000
  - Energy markets “reasonably competitive”
  - Capacity markets “reasonably competitive”
  - Regulation market “competitive”
- NYISO Annual Report on Markets for 2001
  - “markets performed relatively well”
  - “markets have been workably competitive”
  - “results to date are encouraging…”
Yet, Re-Regulation Looms

- Faulty economics -- the curious notion of “withholding”
- New York’s AMP and new supply
- Volatility impossible?
- Can a capacity requirement compensate?
- Wall Street now doing the withholding
- Can we avert a return to cost-plus generation?
Faulty Economics: Curious Notion of “Withholding”

- Are these economic/physical “withholders”?  
  - Grocer charging more than wholesale?  
  - Airline charging more than incremental fuel?  
  - Factory running at less than capacity?  
  - Employee seeking a salary more than commuting expense?  
- Novel “duty to deal” not part of antitrust law.  
- Expectation that a generator in central pool with capacity requirement should be a marginal cost bidder in the real time market has morphed into a “market power” principle with sweeping application to:  
  - bilateral markets  
  - pure energy markets  
  - forward markets  
  - wholesale trading
Extension of Withholding Principle from Central Pool to Bilateral Market

Producer surplus (return of/on capital) placed at regulatory risk if “withholding” principle is applied to individual units in bilateral market.
Extension of Withholding Principle to Wholesale Trading

- Wholesale trading now 6 billion MWh annually – almost double annual retail sales.
- Refund condition invites buyer to renege on obligation by claiming agreed-upon price more than seller’s “out of pocket” costs.
- Large regulatory risks will transcend narrow margins in wholesale trading, cutting market participants and market liquidity.
New York: “AMP” Debuts As a Market Power Fix to a Seams Problem
New York Now Facing Capacity Shortage in 2005

- “Generation project development activity has ground to a halt in most of the Northeast.” ESAI 2-15-02
- First of four factors affecting development: “Re-regulation” ESAI 4-1-02

![Graph showing New York Needs and New York Approved capacity]

- Uncertain
- On Hold
- Cancelled
- Under Construction
Volatility Critical – For Wall Street Itself

THE TOPS IN FINANCIAL MARKETS: $1,000 INVESTED IN 1966
WITH AND WITHOUT 5 HIGHEST DAYS EACH YEAR

$1,000 Invested in 1966

$1,000 Rises to $11,710 With 5 Highest Days

$1,000 Shrinks to $151 Without 5 Highest Days

Source: Birinyi Associates, as reported at www.fundadvice.com/FEhtml/MTStrategies/0112.html.
Disturbing Data Points

- Vintaging: Treat *new* new generation (after today) differently from *old* new generation (after Order 888’s promise) to avoid negative effect of mitigation. FERC NYISO Order


- Market mitigation: Needed so “can control prices when supplies are low.” Senior FERC Official.
Can a Capacity Requirement Compensate?

- Energy prices way above $1,000/MWh are necessary to sustain peaking units, e.g., 1 day in 10 years LOLP in an energy only system equates to $12,000-27,500/Mwh energy cap (Hobbs, et al.; Kahn).
- Such energy prices are no longer possible under price caps, market mitigation, the “withholding” concept, and political reality.
- A capacity requirement is a necessary but not sufficient condition for generation adequacy, e.g., energy only system with $12,000/Mwh energy cap ≈ energy/capacity system with $1,000/Mwh energy cap + $61,000/Mw/year capacity price.
- Presumes producer surplus from energy revenue and actual capacity revenue (not problematic revenue such as with a capacity cap).
So Is Wall Street Taking a Powder?

◆ Goldman, Sachs:
  ■ Investors will perceive “a potential open-ended refund obligation for industry participants…”
  ■ “...capped upside in periods of scarcity but no downside protection in periods of surplus.”
  ■ Investors “redirect their investment dollars…”

◆ Deloitte & Touche:
  ■ Adds “risk of unpredictable regulatory ‘refunds’ to the normal business risk…”
  ■ Higher risks and constrained returns lead to capital flight.
The Real Withholding Problem Emerges

Regulatory risk causes “economic withholding” – capital is withheld from new generation capacity.

DECLINES IN GENERATOR VALUATION
RELATIVE TO S&P 500
JUNE 19, 2001 TO MAY 24, 2002
The Next 120 GW Won’t Be Easy
Can We Avoid a Return to Cost-Plus, Rate Based Generation?

◆ Focus on market structure – not behavioral micro-management.
◆ Respect contracts.
◆ Disavow retroactive refunds.
◆ Limit “withholding” concept to generator bids in the real time market of a central pool with a capacity requirement.
◆ Include a capacity requirement in the Standard Market Design.
◆ Explicitly recognize role of volatility in achieving efficient generation, transmission and demand side investment.
THANK YOU!