ELECTRICITY RESTRUCTURING: REVIEWING THE REVIEWS

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INTRODUCTION

Issues are very important

- $300 billion dollar industry
- Crucial service
- Underwent “one of the largest single industrial reorganizations in the history of the world”

Involved considerable costs

- Transition costs for existing utilities
- Start-up costs for new institutions
- Distractions to management, disruptions to consumers

One estimate of costs just to develop, implement RTOs:

- $2 billion per year
COSTS, BENEFITS, AND QUESTIONS

With such costs, question is whether benefits are equally large or larger?
That is, has restructuring delivered on its promises?
Number of recent studies have examined this question:

- What has been effect on electricity prices, costs?
THE EVIDENCE

Examined total of 13 studies since last summer
Some characteristics:

▶ 10 quantitative, 3 more descriptive
▶ Of 10 quantitative, evenly split between:
  ▶ Econometric, based on modeling
  ▶ Comparative, using accounting data, simulation
▶ Most focused on retail price rather than wholesale
▶ Half authored by academics, half by consulting firms
▶ Several were sponsored by interested parties
Conclusions and Concerns

Conclusions of quantitative studies

- Six came to favorable conclusion regarding restructuring
- Two were essentially negative on effects
- Other two gave mixed assessments

My review of these studies focused on methodology

- Concluded that all of these studies have one or more significant defects that undermine their conclusions
- Report issued by APPA in November 2006

How could all these studies come to such divergent conclusions?
PROBLEMS WITH STUDIES

Fourfold path to failure:

1. "Big Bang" theory, based on airlines and telecom
   - Presumes deregulation is a single event at one point in time
   - Reality for electricity is many state and federal initiatives
     - Often phased in over time
   - Most studies treat "restructuring" too simplistic

2. Post-reform prices not market equilibrium
   - Roles of price freezes, stranded cost, excess capacity
   - Essentially involves administratively set prices
     - Anything but market equilibrium
(3) Inadequate characterization of causation
   ▶ Poorly specified models
   ▶ Too short a time period for estimation purposes
   ▶ Inadequate attention to statistical significance
(4) Failure to consider other issues
   ▶ Market power and mergers
   ▶ RTO costs and governance
   ▶ Quality of service vs. reliability

None of 10 quantitative studies addressed all of these simultaneously
   ▶ Many fail even to seriously consider these issues
   ▶ Can illustrate with one such study
EXAMPLE OF STUDY

- Estimates effect of restructuring by comparing actual electricity prices to predictions of what prices would have been without restructuring
- Econometric model of price as function of Fuel prices
  - Rate base costs
Uses that relationship to project what rates would have been in 1998-2004 for each region

- Compares projected rates to actual rates
- Calculates rate difference, multiplies by total sales
- Computes overall gains to U.S. consumers

This study concluded benefits totaled $34B
EVALUATION OF STUDY

(1) Uses single year-1999-as definition of restructuring
  ▶ Reality is that it occurred over time
(2) Mischaracterizes post-1998 prices
  ▶ Does not correct for rate freezes, stranded costs, excess capacity
(3) Model has prices as function only of fuel costs, rate base
  ▶ Other factors important
  ▶ Omissions troublesome since pre-1997 data used to project prices in different gas-price world of 1998-2004
This particular study has other problems

- (1) Predicted regional prices are lower in year or two before restructuring
  - Indicates missing explanatory factors
- (2) Largest savings in South where least restructuring has taken place
- Something fundamentally wrong with model
  - Conclusions are not reliable
Methodology of this study not unique
It has too simplistic definition of restructuring
  ▶ Same for 7 of 10 quantitative studies
It uses post-1998 data without regard to rate freezes, etc.
  ▶ So do all others, although 2 or 3 mention each issue
It uses simplistic model of prices
  ▶ Several others use equally simple models
CONCLUSIONS

Conclusion is that all of these studies are seriously flawed. Hence, we should not rely on these studies for insight into the effects of restructuring.

- Certainly no evidence here that restructuring has benefitted consumers.

Disturbing conclusion by itself.

- Also, because much advocacy based on these studies.