

Electricity Policy: Getting Prices and Incentives Right

- I. Economists' critique of electricity 30 years ago
 - A. Regulation creates excessive incentives for more supply and particularly more capital intensive supply
 - B. Electricity prices are wrong all the time. Too low on-peak and too high off-peak. Leads to excessive peak demand and underutilization of generation facilities most of the time
- II. Where do we stand today on these two problems?
 - A. Restructured states are imposing installed capacity (ICAP) requirements essentially returning us to the world before restructuring. If excess generation investment was the problem how can socializing the costs of capacity be the solution?
 - B. In states that have restructured, retail prices are still average-cost recovery devices rather than marginal-cost signals. Of what importance is wholesale market restructuring without marginal cost pricing at the retail level? In Schweppe's original presentation in 1988 about the spot pricing of electricity, demand response by final consumers was essential.
- III. Why is there resistance to getting prices right?
 - A. Traditional regulation employs weighted-average rather than marginal-cost pricing. This suppresses the rents that would go to inframarginal producers under laissez-faire. Those rents are redistributed within states to consumers favored by the political system.
 - B. States electricity prices vary not because of differing marginal costs but because their inframarginal generation mix (old fully depreciated and pre-1970 clean air coal and hydro) varies. Thus increasing trade between the states would redistribute wealth.

IV. How do we get prices for transmission correct?

A. Static efficiency is locational marginal pricing

B. Dynamic efficiency more difficult.

1. Public good nature of transmission system - gains (and losses) from transmission investment cannot be restricted to those who invest.
2. Electricity transmission issues seem similar to unitization issues in petroleum reservoirs - a mismatch between current ownership and regulatory structure and physical nature of the grid.
3. FERC SMD and RTOs can be seen as analogous to forced unitization contract
4. Vertical integration and very limited trade may be the transaction-cost minimizing industrial organization because of the public-good nature of transmission investment.
5. Presumably vertically integrated utilities manage the tradeoffs between more transmission and more local generation? How do we do so over the entire Eastern Interconnection - via either centralized or decentralized decision processes?