The Impact of Competition on Electricity Prices: Can We Discern a Pattern?

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Measuring Retail Market Performance

- Current reported characteristics
  - percent of customers or load switching to alternative suppliers, by customer class
  - number of competitive suppliers making offers to residential customers
  - number of suppliers licensed to sell retail power (many may not be currently selling power in the state or taking new customers)
Measuring Retail Market Performance (continued)

- Competitive price data
  - aggregate state/utility data from DOE/EIA
  - standard offers/prices-to-compare
    - (need more information on customer prices from alternative suppliers)
  - would be nice to know market shares of suppliers -- including utility retail affiliate's share

- "Benchmarking" to the wholesale market
Status of State Retail Access and Percent Change in State Price 2002 to 2006 -- Residential Customers

U.S. Average: 23.2%

Source: Author's construct, percentages calculated from DOE/EIA data.
States Where the Residential Price is (Mostly) Determined in the Market

- 2006 or before:
  - Delaware
  - District of Columbia
  - Maine
  - Maryland
  - Massachusetts
  - Montana
  - New Jersey
  - New York

- Began in 2007
  - Connecticut
  - Illinois
  - Texas
Eight states with expired rate caps, regulated states and US average (1990 through June 2007)

Data Source: EIA
Weighted annual averages for all states, regulated states and states that ended price caps (1990 through June 2007)

Data Source: EIA

"Caps Expired States" (as of 2007):
CT, DC, DE, IL, MA, MD, ME, MT, NJ, NY, & TX

"Regulated States":
AL, AR, CO, FL, GA, IA, ID, IN, KS, KY, LA, MN, MO, MS, NC, ND, NE, NM, NV, OK, OR, SC, SD, TN, UT, VT, WA, WI, WV, & WY.

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## State comparisons of percentage change in prices

<table>
<thead>
<tr>
<th></th>
<th>Percent change 2002 to 2006</th>
<th>Percent change 2002 to 2007</th>
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</thead>
<tbody>
<tr>
<td>U.S. Average</td>
<td>23.2%</td>
<td>23.3%</td>
</tr>
<tr>
<td>Regulated states</td>
<td>20.8%</td>
<td>19.4%</td>
</tr>
<tr>
<td>States with market determined prices (price caps expired)</td>
<td>35.7%</td>
<td>39.7%</td>
</tr>
<tr>
<td>Connecticut</td>
<td>53.2%</td>
<td>72.9%</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>23.8%</td>
<td>27.5%</td>
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<tr>
<td>Delaware</td>
<td>33.6%</td>
<td>45.8%</td>
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<tr>
<td>Illinois</td>
<td>1.5%</td>
<td>21.9%</td>
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<tr>
<td>Massachusetts</td>
<td>55.6%</td>
<td>53.3%</td>
</tr>
<tr>
<td>Maryland</td>
<td>25.6%</td>
<td>33.8%</td>
</tr>
<tr>
<td>Maine</td>
<td>13.5%</td>
<td>14.8%</td>
</tr>
<tr>
<td>New Jersey</td>
<td>24.0%</td>
<td>30.1%</td>
</tr>
</tbody>
</table>

Data Source: DOE/EIA
Limitations to this approach

- Valid for state-to-state and regional comparisons, but
  - aggregates the entire state -- including IOU, alternative, municipal, and cooperative suppliers
    - retail access may not be available throughout the state
    - does not show the variation within the state between companies
  - company-level data is better, but is released more than one year later
    - consistency problems with small companies or states for some customer groups
- Used often because it is readily available and is a consistent data source from EIA
Is there another approach to examining retail prices?

- Compare the retail price with wholesale prices for energy, capacity, etc.
  - try to account for the price components for "full requirements" service to retail customers
  - begin with the energy component and fill in the gap
- Takes the wholesale price as a given -- just examines the retail market
Daily and monthly PJM prices and 2006 auction prices in the mid-Atlantic area

$/MWh

Data Source: PJM and state auction results

2006 Auction Price Range
PJM prices and Illinois auction price range

Data Source: PJM and Illinois auction results
Costs of "full requirements" service to retail customers*

- Energy
- Capacity
- Ancillary Services
- Transmission and RTO Administrative Costs
- Load change or "load following" risk (e.g., weather, economy, etc.)
- Customer migration risk (+ or -)
- Utility (or "counterparty") credit risk
- Regulatory or legislative change risk
- Administrative and legal costs to participate or serve retail customers
- Fuel price change risk

*Not all costs may apply in all cases.
What's the answer?

- Is the sum of the parts greater than the whole?
  - may be, due to loss of vertical economies and new costs and risks -- not offset by transmission scale economies and other cost savings
- Some of these costs or risks did not exist with regulation
- Another (better) approach?
  - examine company-level data and account for fuel use and fuel price changes, environmental control costs, market timing for customer groups, etc.