

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

**Harvard Electricity Policy Group
Forty-Ninth Plenary Session
Los Angeles, California
December 6, 2007**

**Kenneth Rose, Ph.D.
Consultant and Senior Fellow
Institute of Public Utilities**

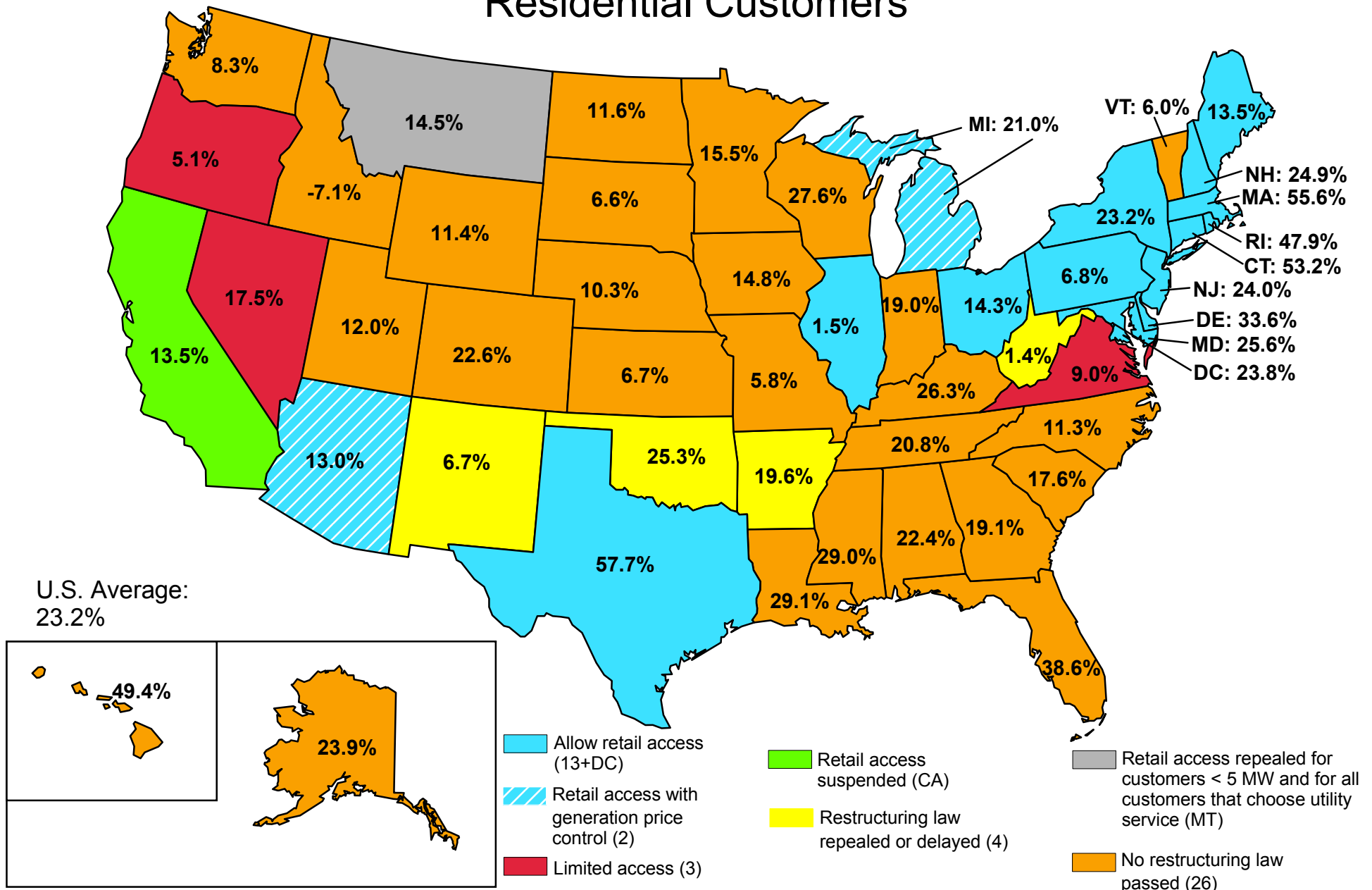
Measuring Retail Market Performance

- 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



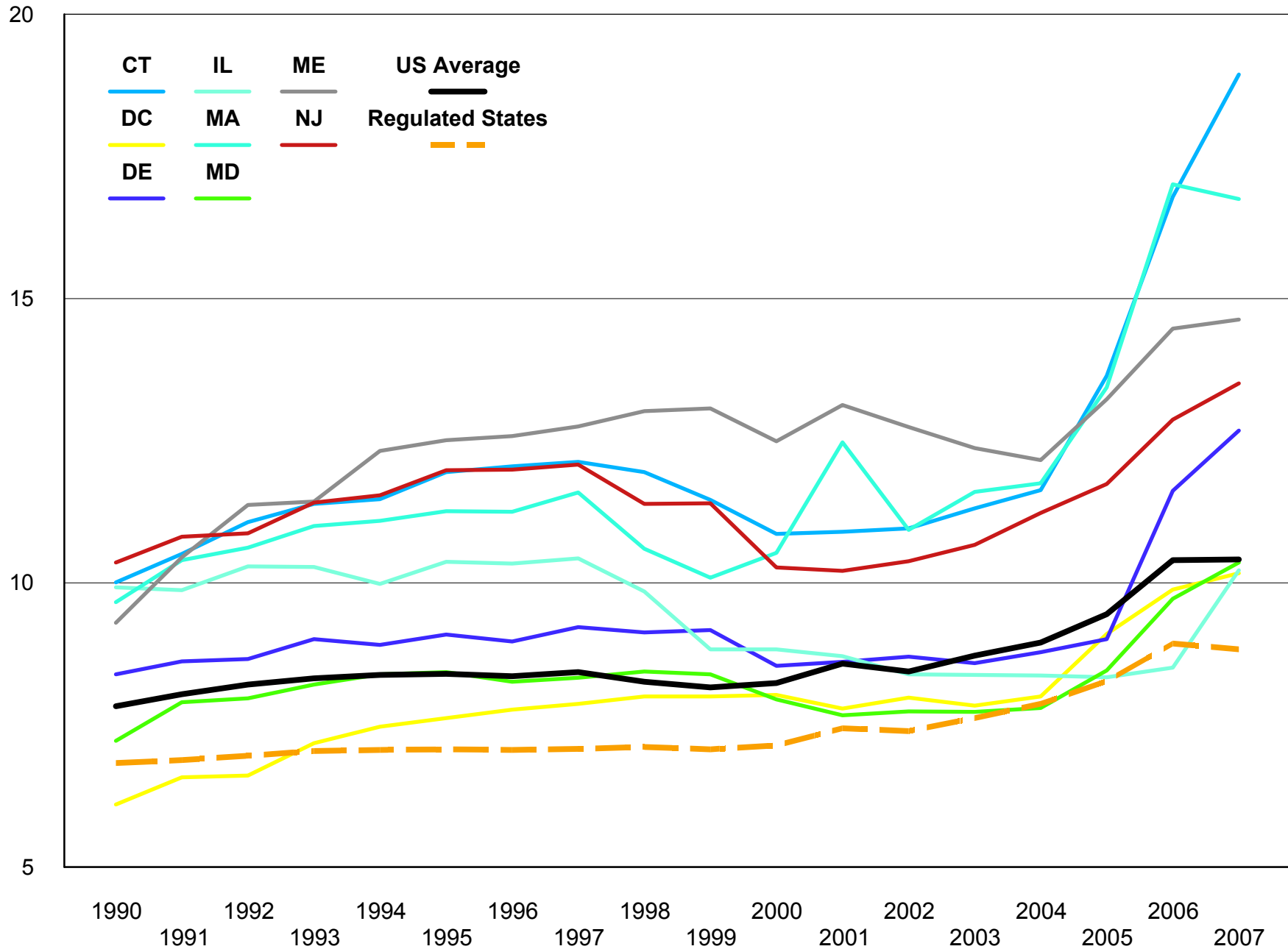
Source: Author's construct, percentages calculated from DOE/EIA data.

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)

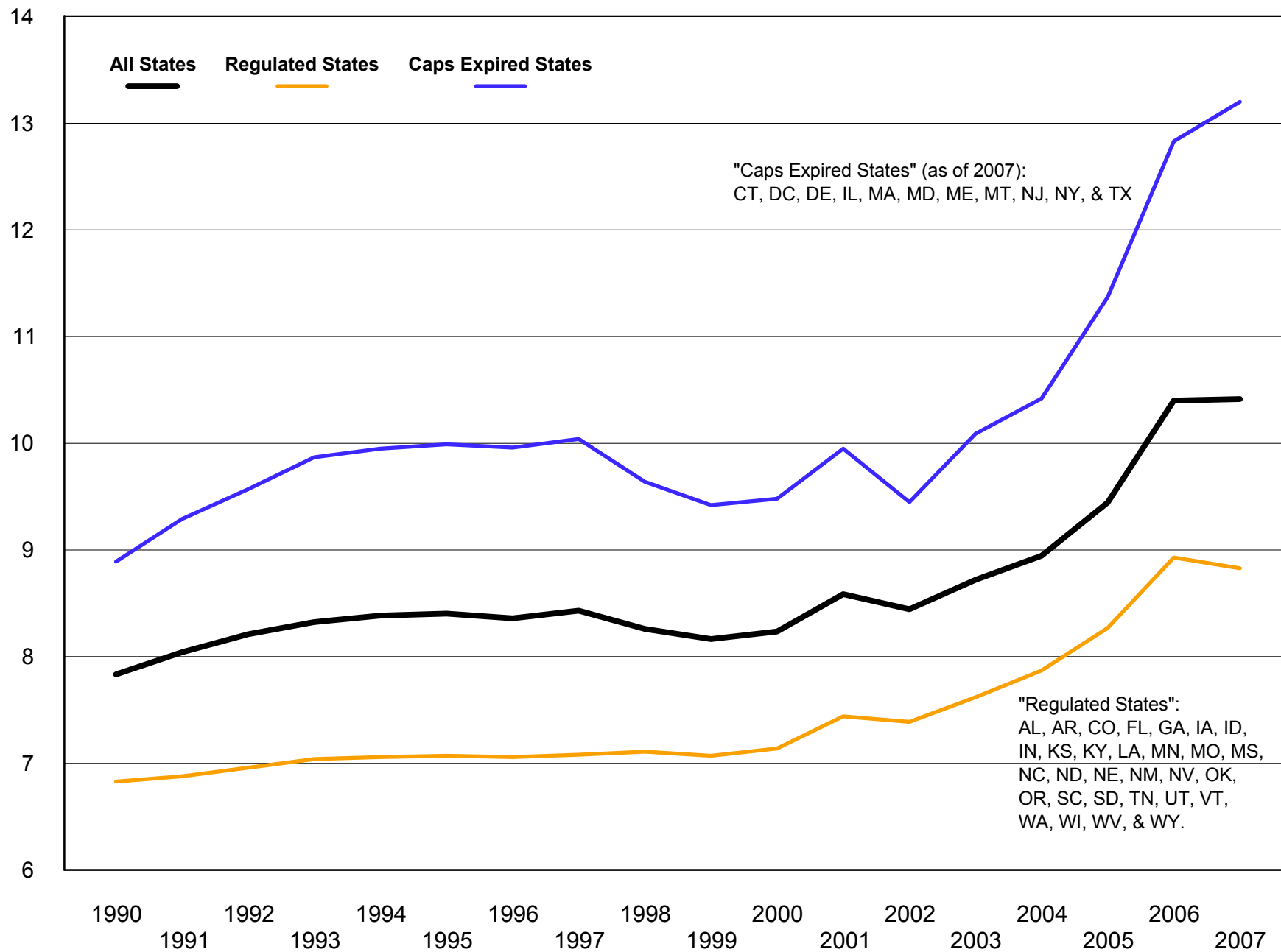
cents/kWh



Data Source: EIA

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

cents/kWh



State comparisons of percentage change in prices

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

Data Source: DOE/EIA

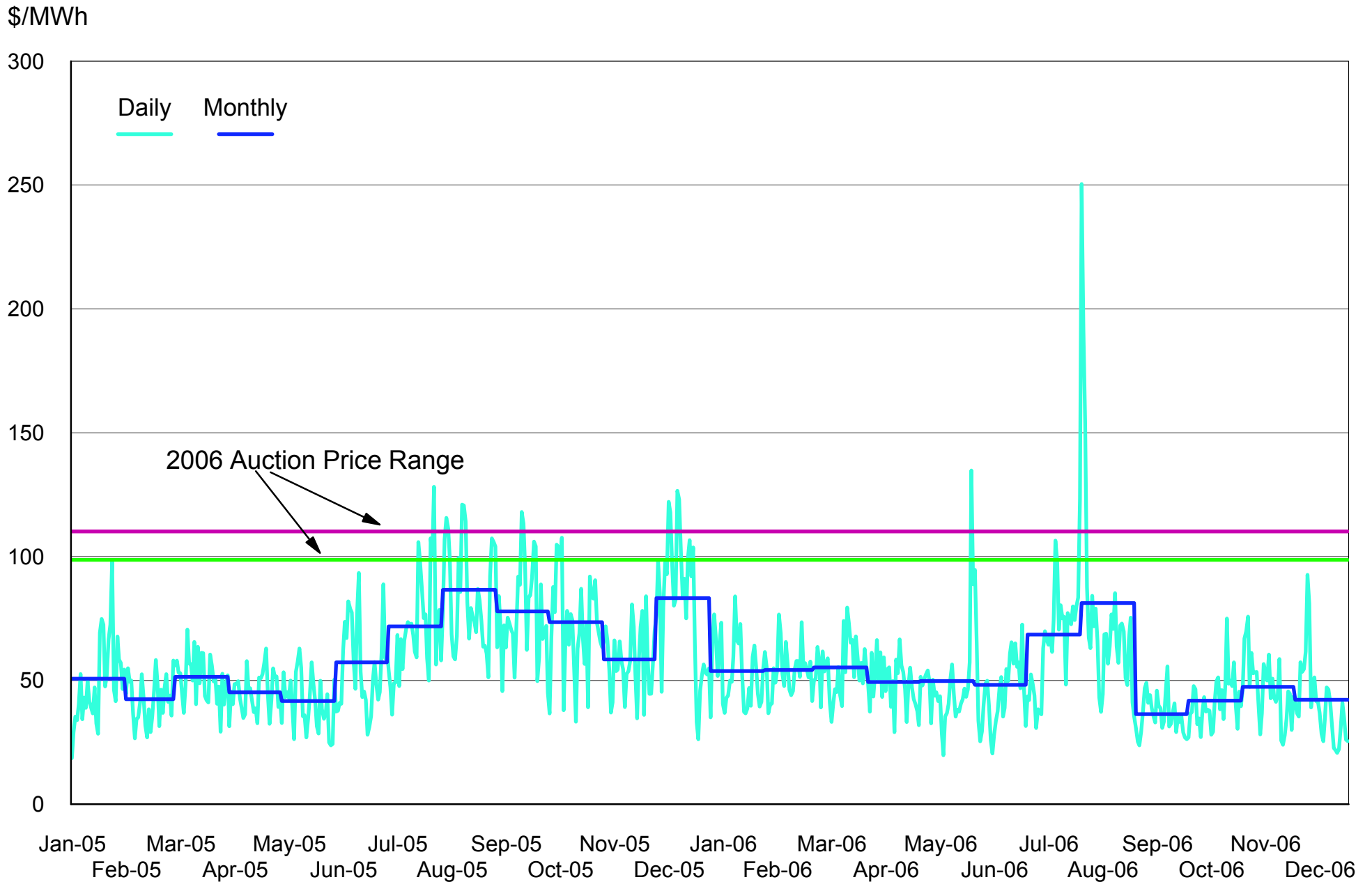
Limitations to this approach

- 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

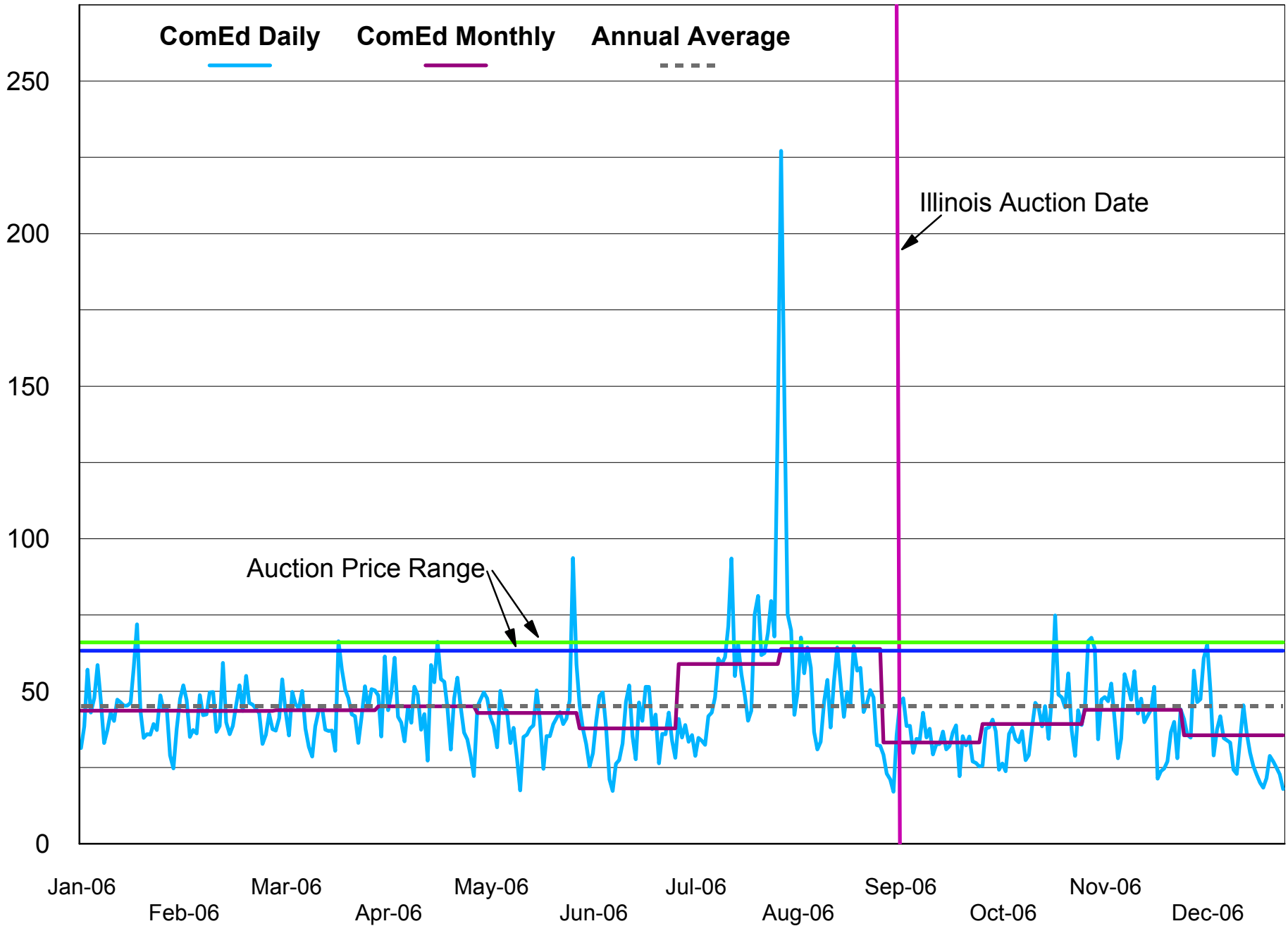
Daily and monthly PJM prices and 2006 auction prices in the mid-Atlantic area



Data Source: PJM and state auction results

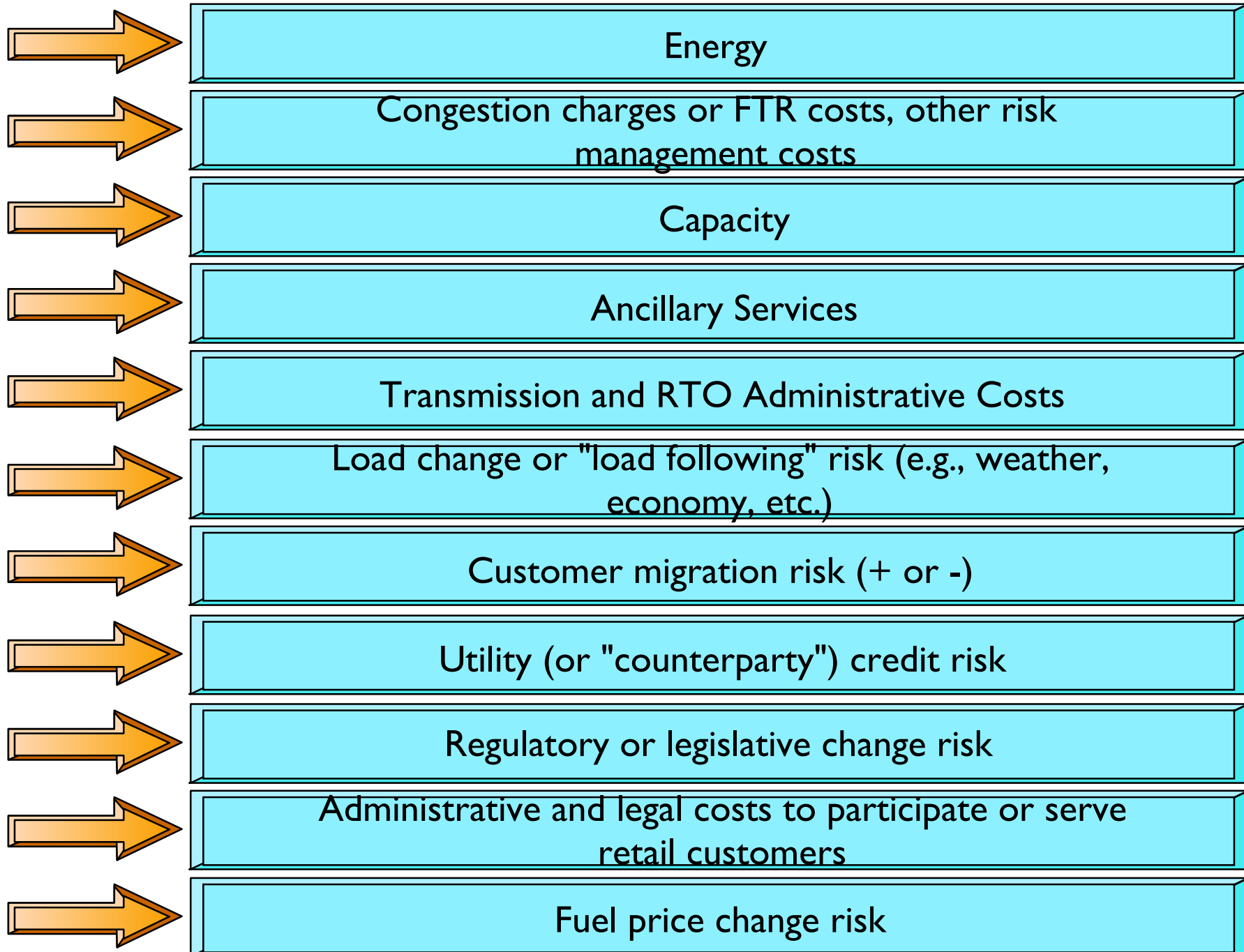
PJM prices and Illinois auction price range

\$/MWh



Data Source: PJM and Illinois auction results

■ Costs of "full requirements" service to retail customers*



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.