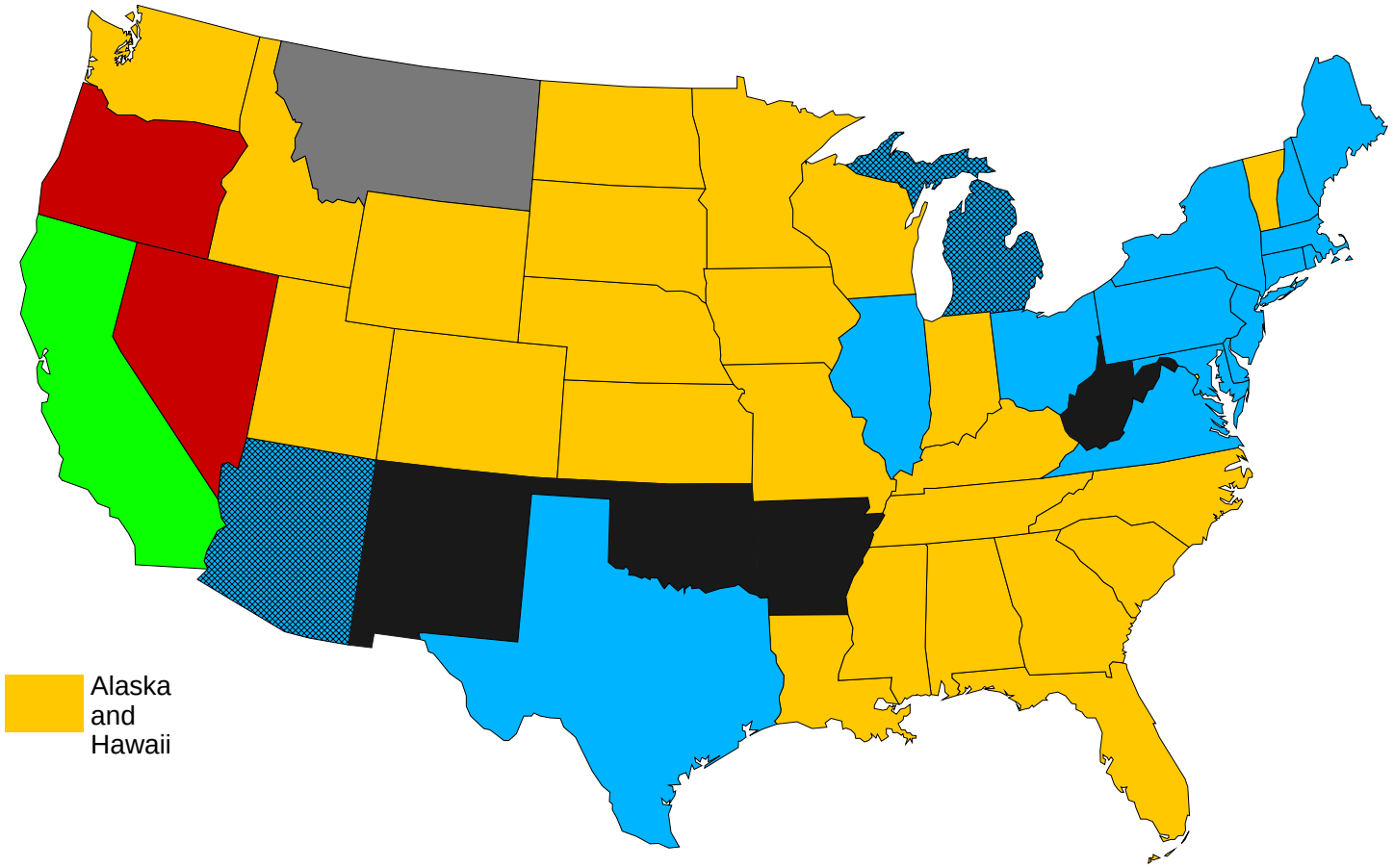
Presentation to the
COMMISSION ON ELECTRIC UTILITY RESTRUCTURING
Virginia General Assembly

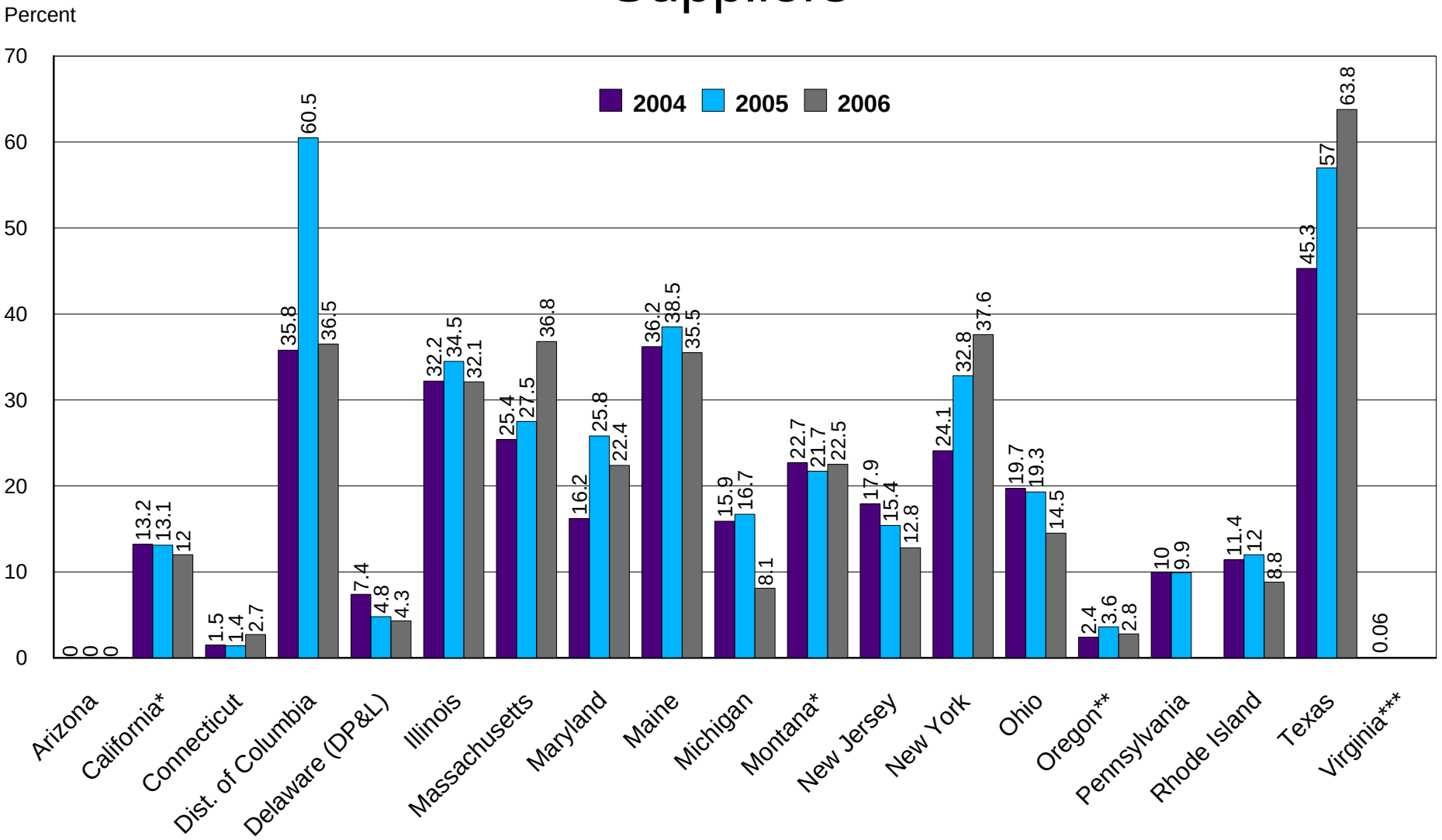
Richmond, Virginia
December 19, 2006

by
Kenneth Rose, Ph.D.

Status of State Restructuring

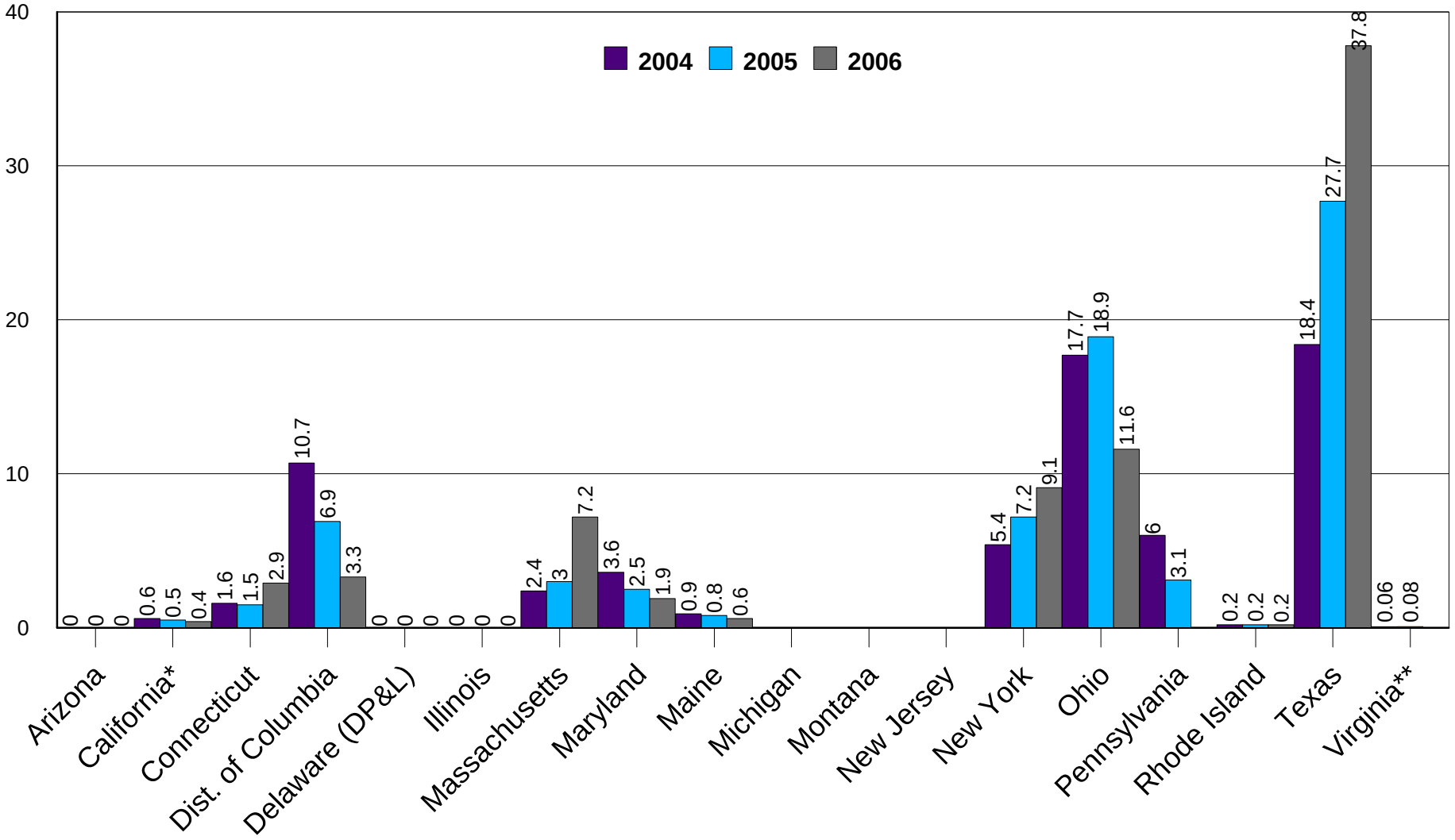


Percent of Total State Load Served by Competitive Suppliers



*California retail access was suspended, Montana delayed residential retail access.
**Oregon has retail access for large customers only.
***Virginia percentages are percent of customers, all others are percent of load.
Data Sources: KEMA, Inc., "Retail Energy Foresight," June/July 2004, May/June 2005, March/April 2006 and the Virginia State Corporation Commission.

Percent of Residential Load Served by Competitive Suppliers

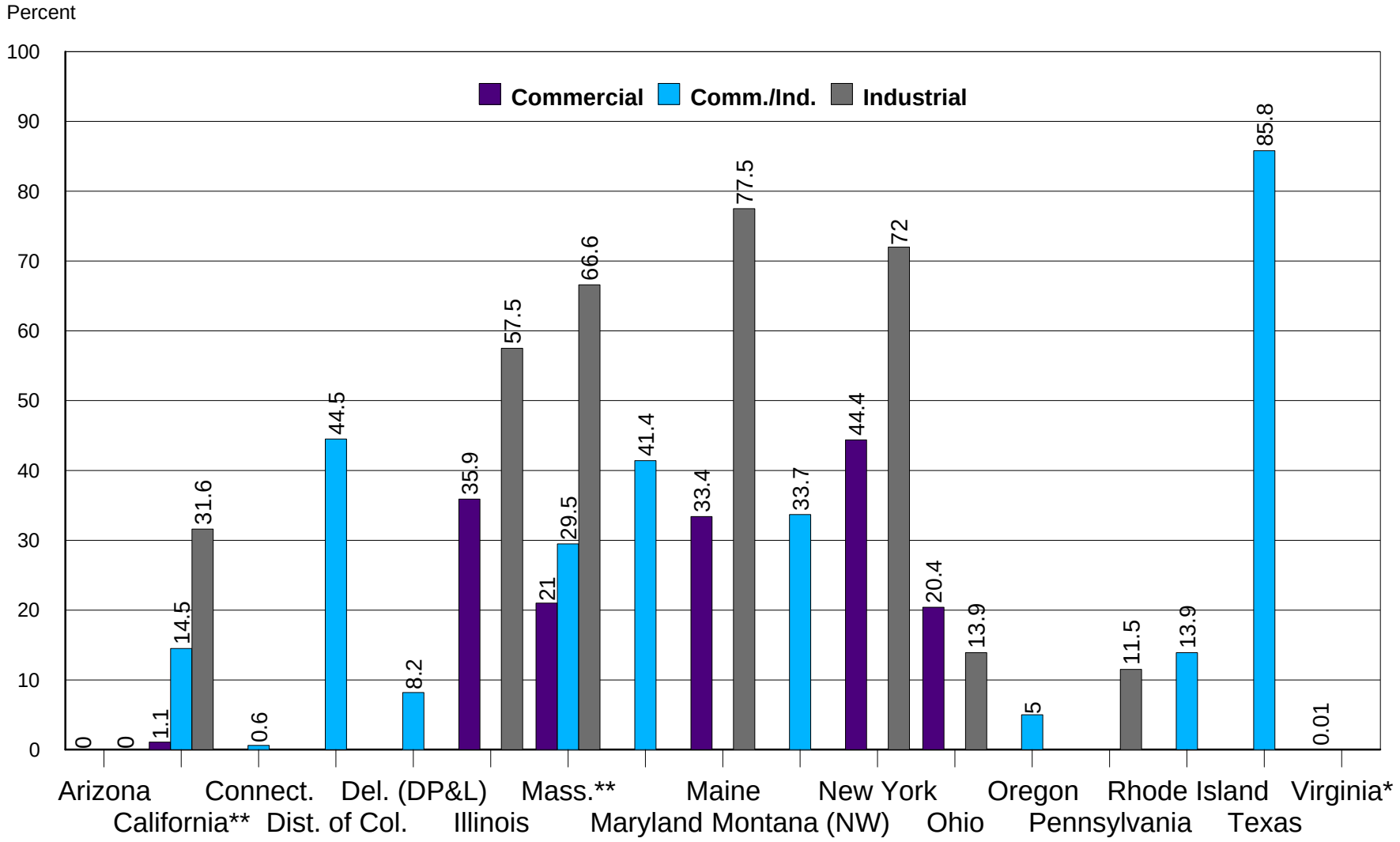


*California retail access was suspended, Montana delayed residential retail access.

**Virginia percentages are percent of customers, all others are percent of load.

Data Sources: KEMA, Inc., "Retail Energy Foresight," June/July 2004, May/June 2005, March/April 2006 and the Virginia State Corporation Commission.

Percent of Commercial and Industrial Load Served by Competitive Suppliers, 2006



*Virginia percentages are percent of customers, all others are percent of load.

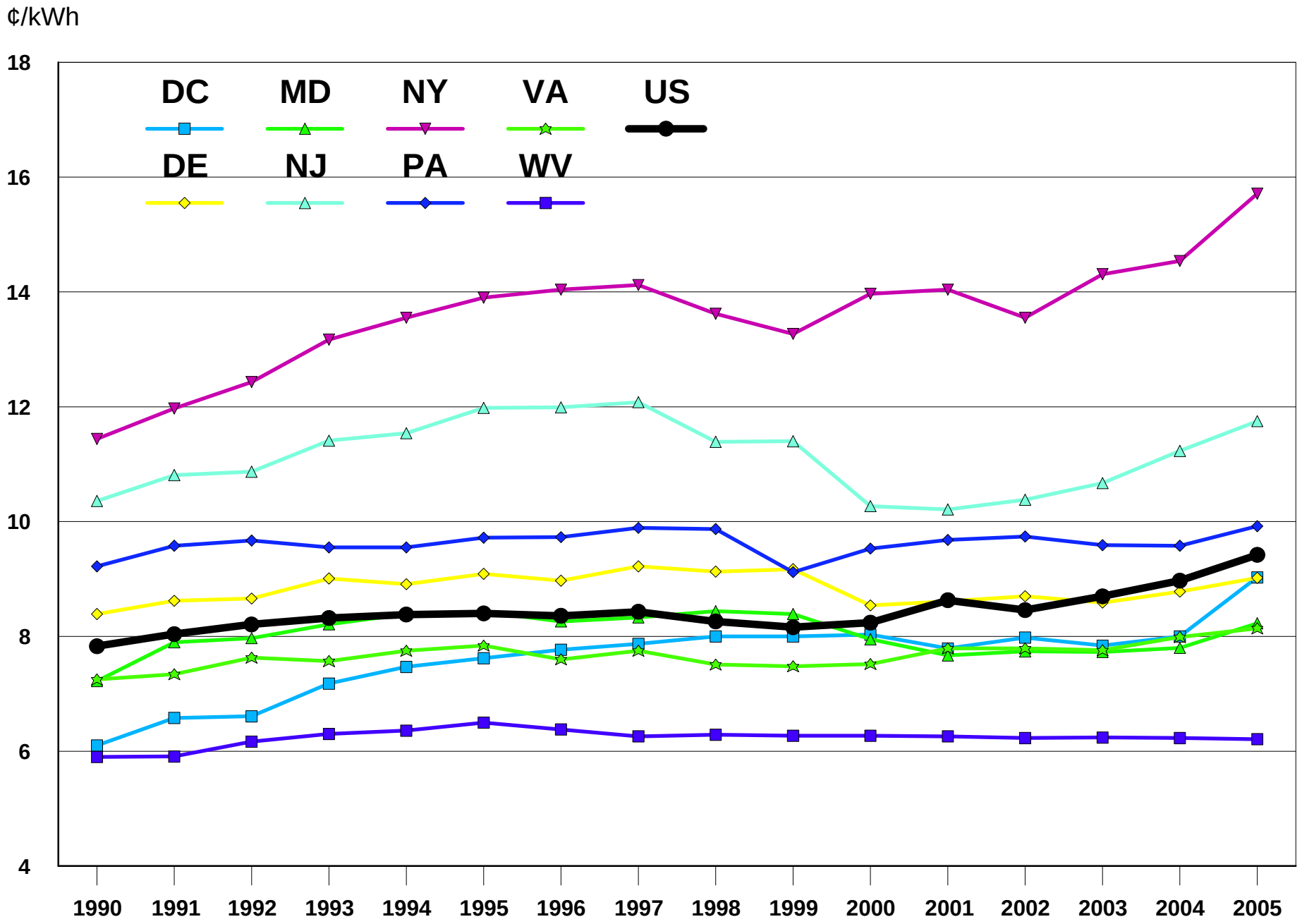
**For California and Massachusetts, the category shown as "Comm./Industrial" is large commercial.

Data Sources: KEMA, Inc., "Retail Energy Foresight," March/April 2006 and the Virginia State Corporation Commission, 2005.

Announced Price Increases

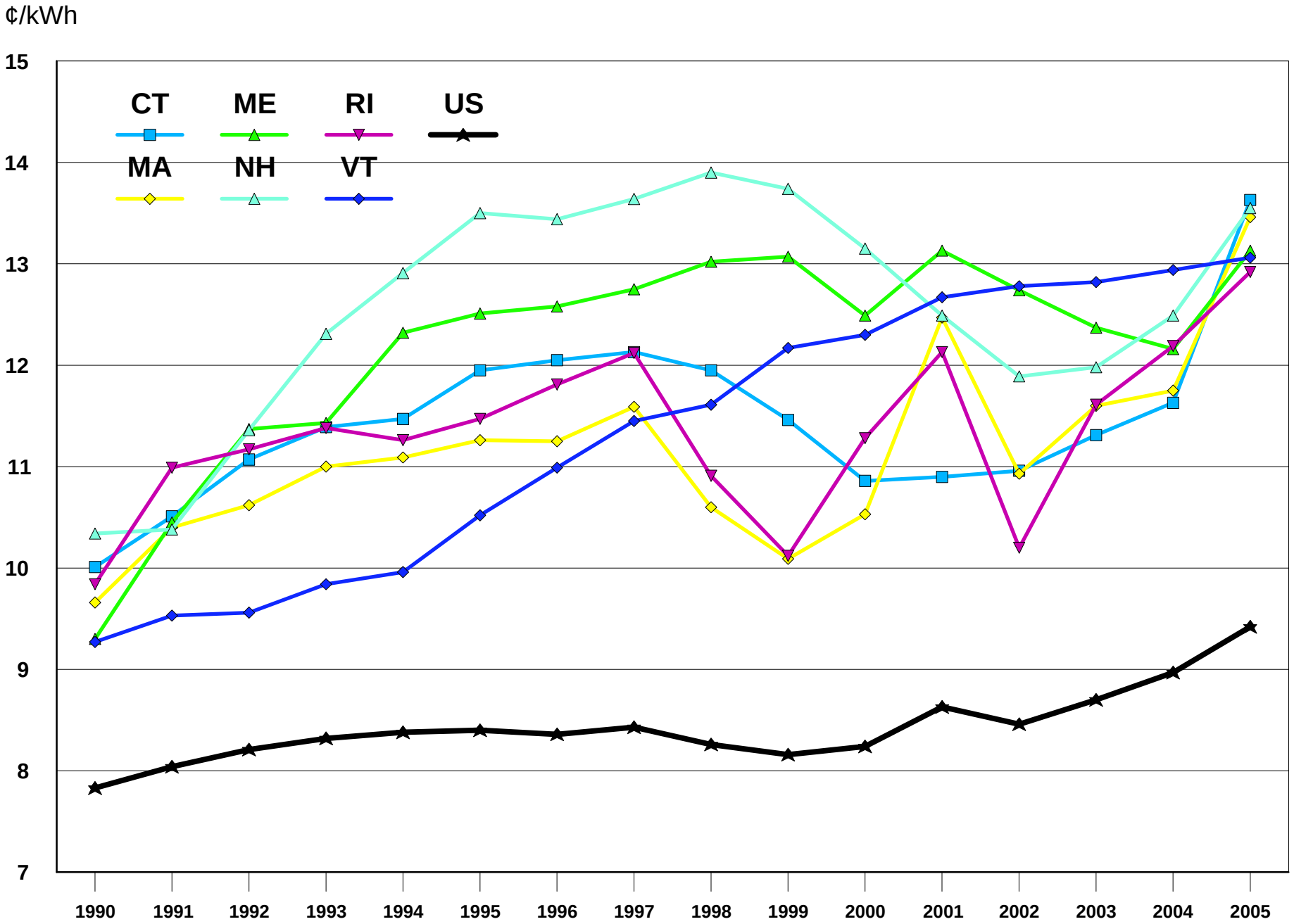
- Maryland (BGE): 72% increase for residential customers beginning July 1, 2006 -- phased-in
- Pennsylvania (Pike County Light & Power): 70% increase
- Delaware (Delmarva): 59% increase for residential customers, 47% to 118% increase for business class customers beginning in May of 2006 -- to be phased-in
- D.C.: 12 percent increase for residential customers effective June 1, 2006
- New Jersey: 12% to 14% in June 2006
- Illinois: 22% for ComEd, 40% to 55% for the three Ameren companies

Mid-Atlantic Residential Average Retail Price



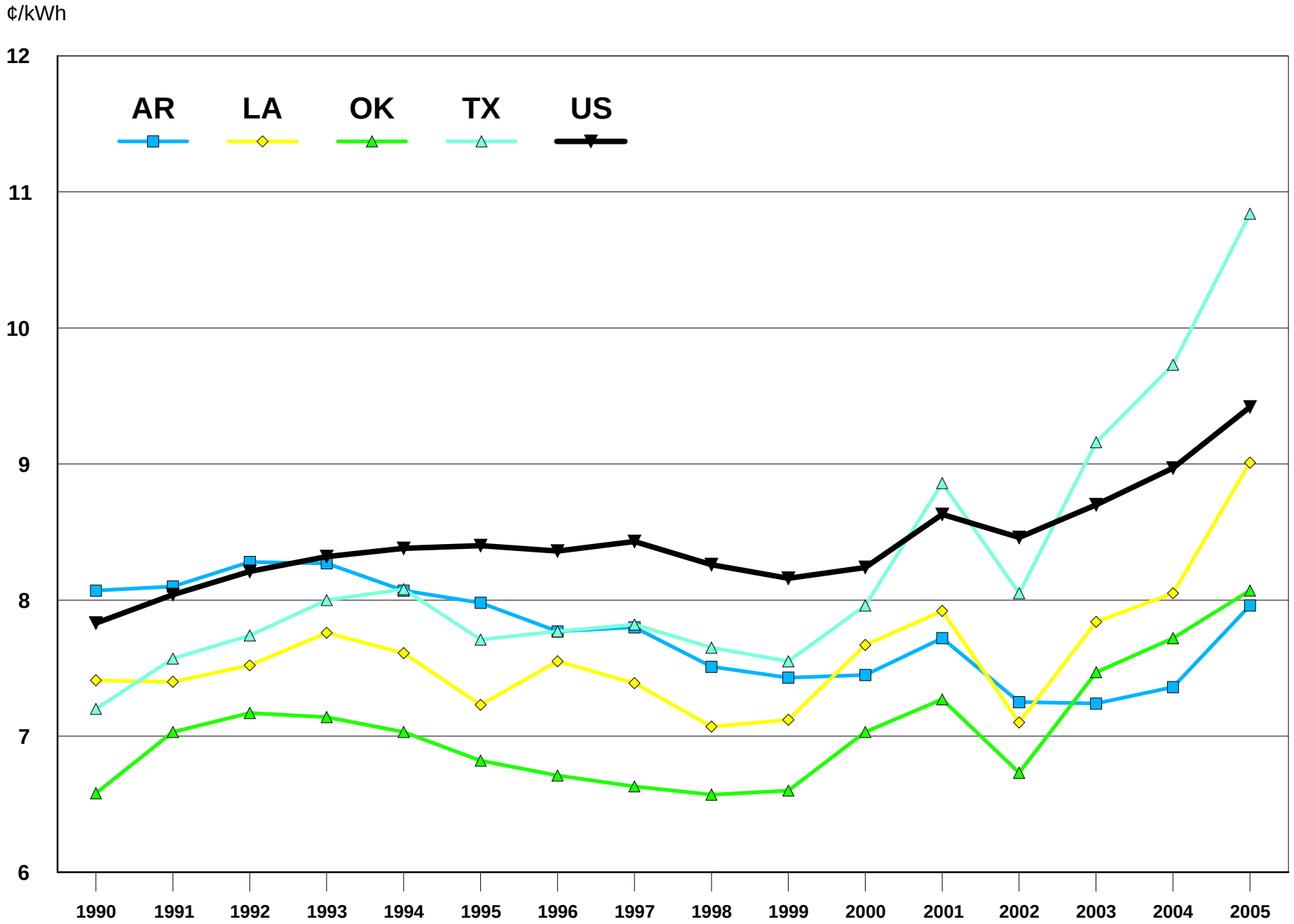
Data Source: DOE/EIA

New England Residential Average Retail Price



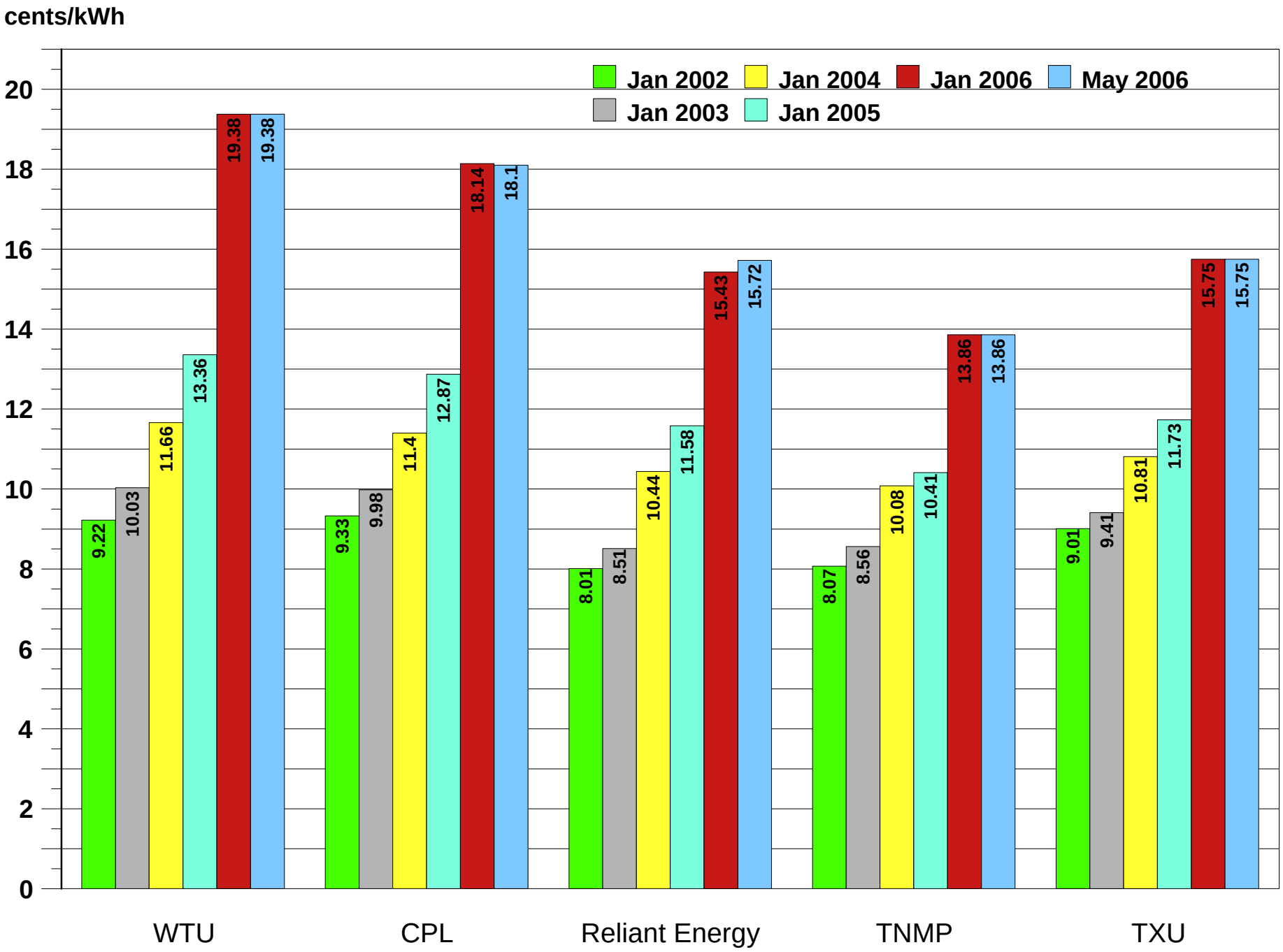
Data Source: DOE/EIA

Mid-South Residential Average Retail Price



Data Source: DOE/EIA

Texas Residential "Price-to-Beat"

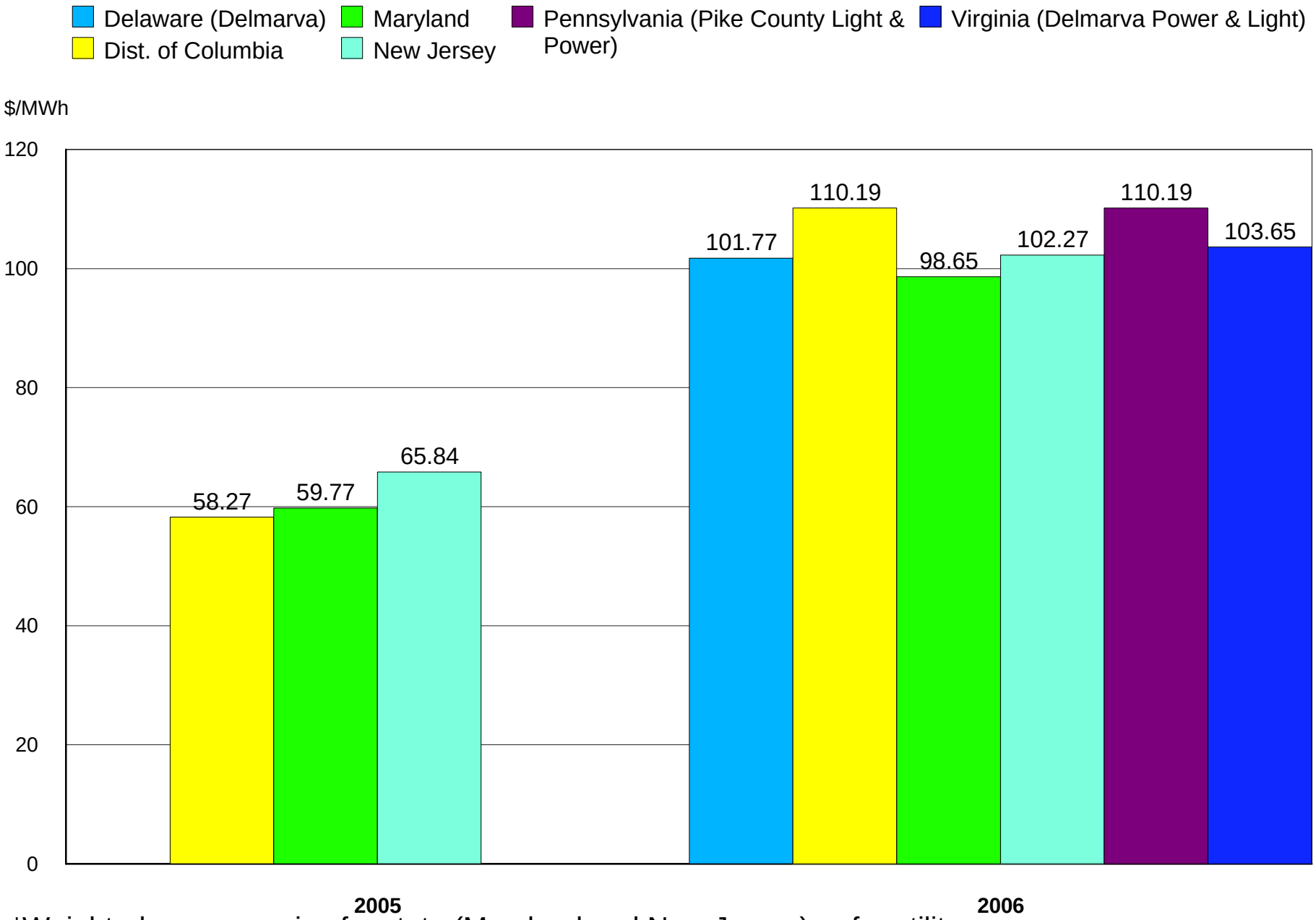


Data Source: Public Utility Commission of Texas

States Where the Residential Price is (Mostly) Determined in the Market

- Delaware
- District of Columbia
- Maine
- Maryland
- Massachusetts
- New Jersey
- New York

Auction/Bidding Price Results for Generation in Mid-Atlantic States*



*Weighted-average price for state (Maryland and New Jersey) or for utility.

Data Sources: various state sources.

Results of the "Fixed Price" New Jersey Auctions (cents/kWh)

	2002 Auction	2003 Auction		2004 Auction		2005 Auction	Percent Increase - 04 to 05	2006 Auction	Percent Increase - 05 to 06
	12 month	10 month	34 month	12 month	36 month	36 month		36 month	
Conectiv/ ACE	5.12	5.260	5.529	5.473	5.513	6.648	20.6%	10.399	56.4%
JCP&L	4.87	5.042	5.587	5.325	5.478	6.570	19.9%	10.044	52.9%
PSE&G	5.11	5.386	5.560	5.479	5.515	6.541	18.6%	10.251	56.7%
Rockland	5.82	5.557	5.601	5.566	5.597	7.179	28.3%	11.114	54.8%

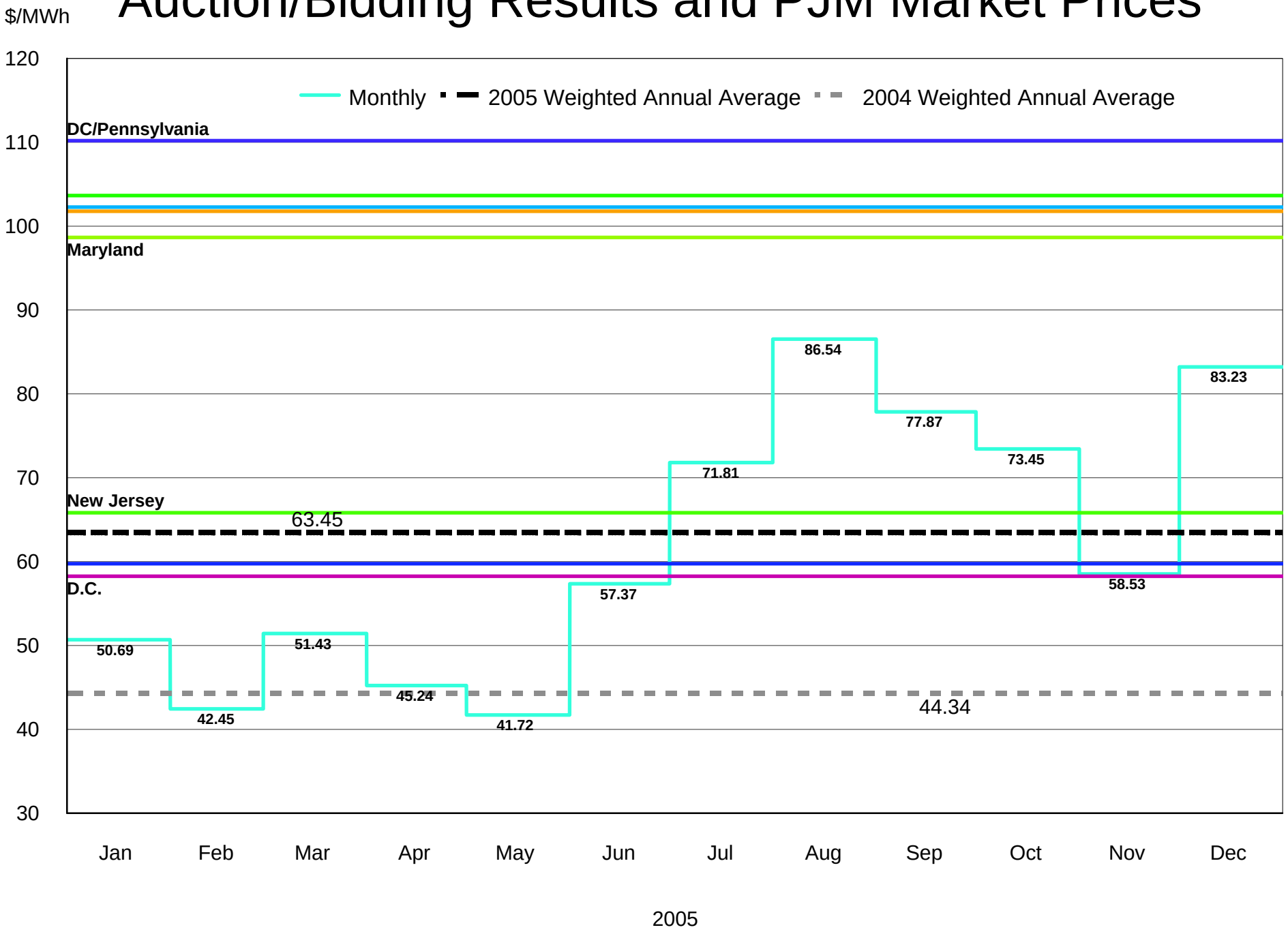
Data Source: New Jersey Board of Public Utilities

Utility Share of Generation in States Where the Residential Price is Determined in the Market

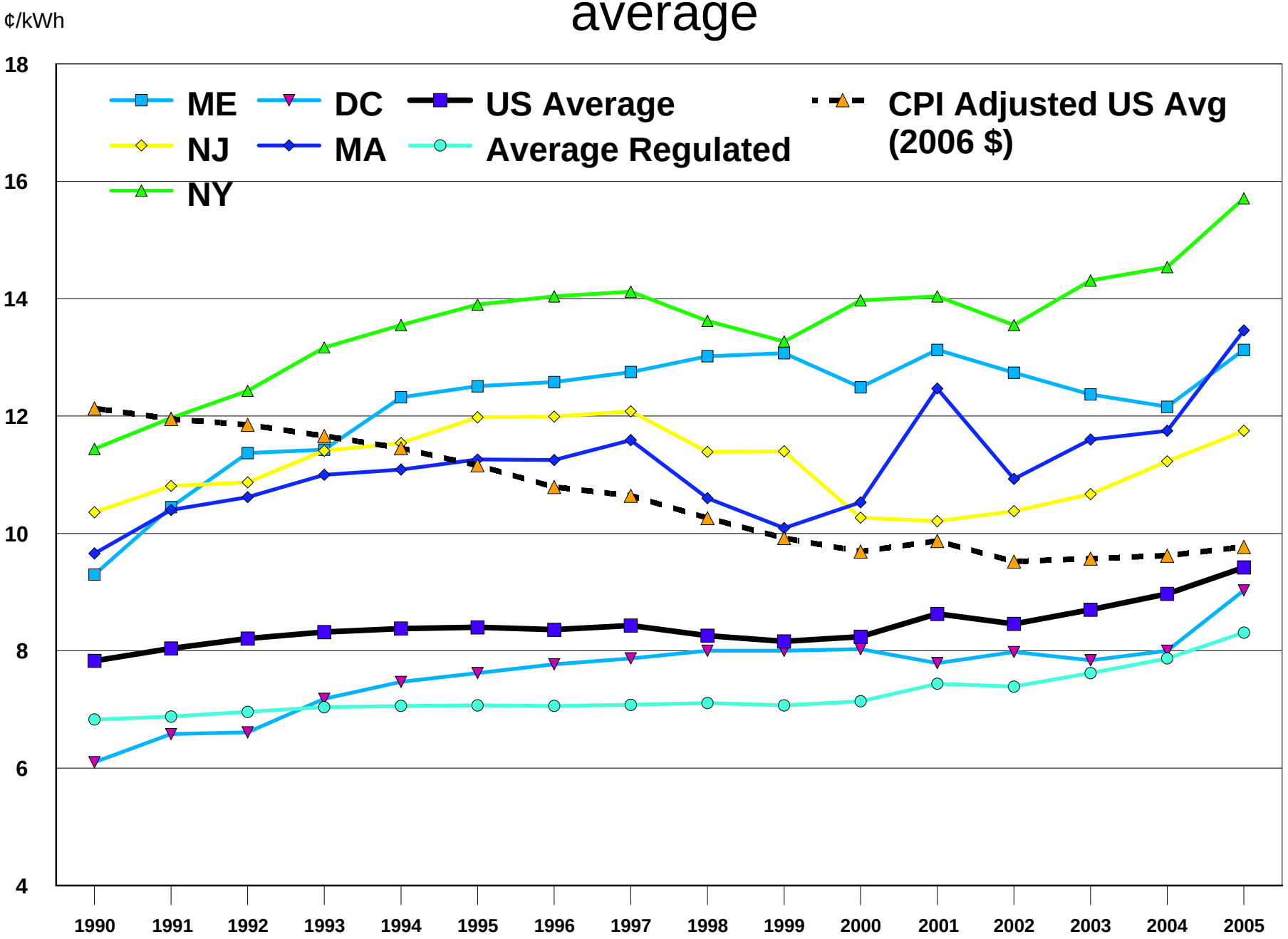
	Utility Share of Generation - 1993*	Utility Share of Generation - 2002*
Delaware	92.1	2.8
District of Columbia	100.0	0.0
Maine	51.7	0.0
Maryland	96.7	0.1
Massachusetts	76.0	2.8
New Jersey	70.9	2.5
New York	85.6	31.1

*Electric utility share of total electricity generation in the state (MWh). Source: DOE/EIA.

Auction/Bidding Results and PJM Market Prices

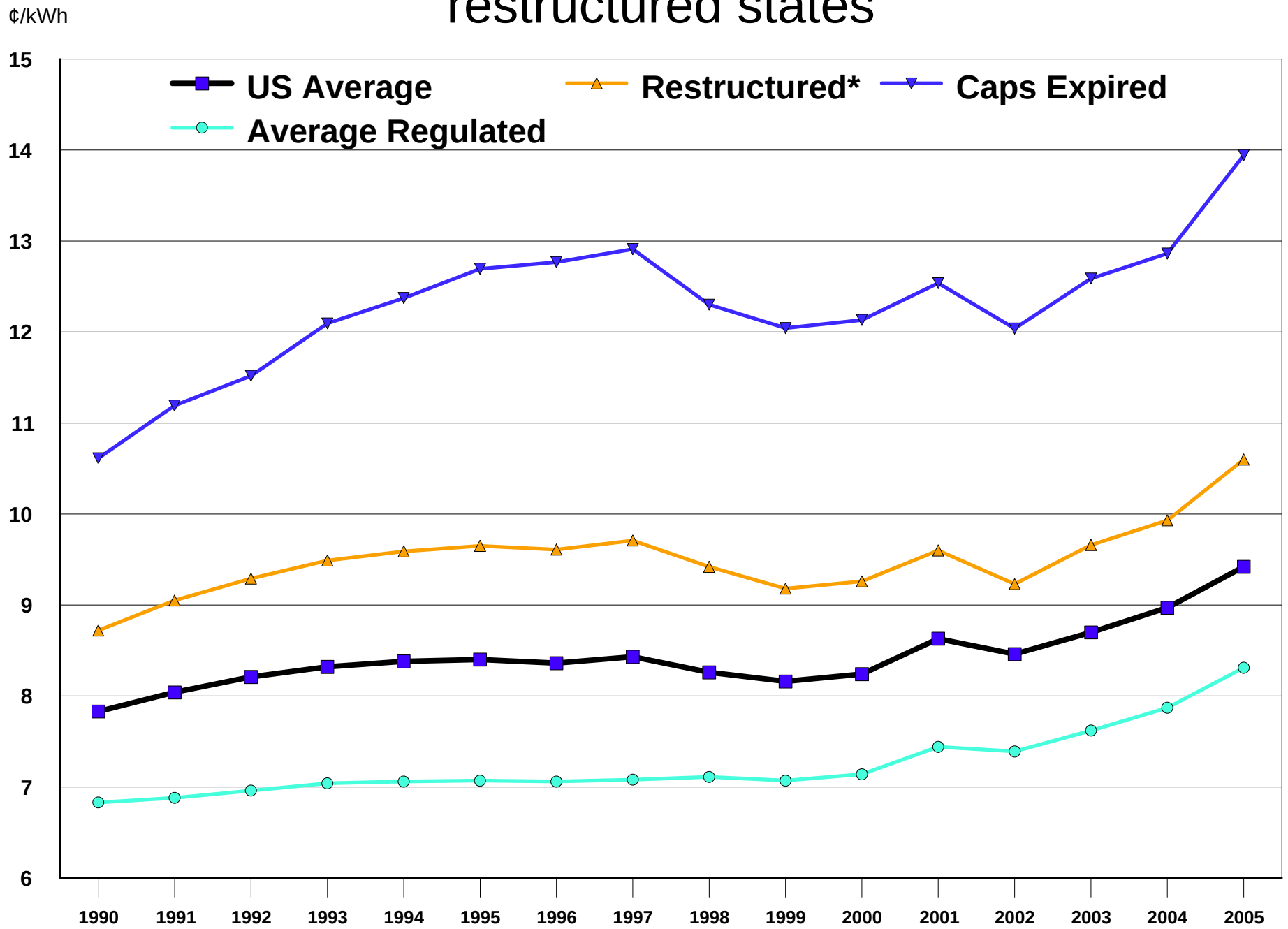


Caps expired and regulated states and US average



Averages are weighted by state residential sales. Data source: DOE/EIA.

Caps expired, regulated, US average and restructured states



*Does not include Arizona, California, and Michigan. Averages are weighted by state residential sales. Data source: DOE/EIA.

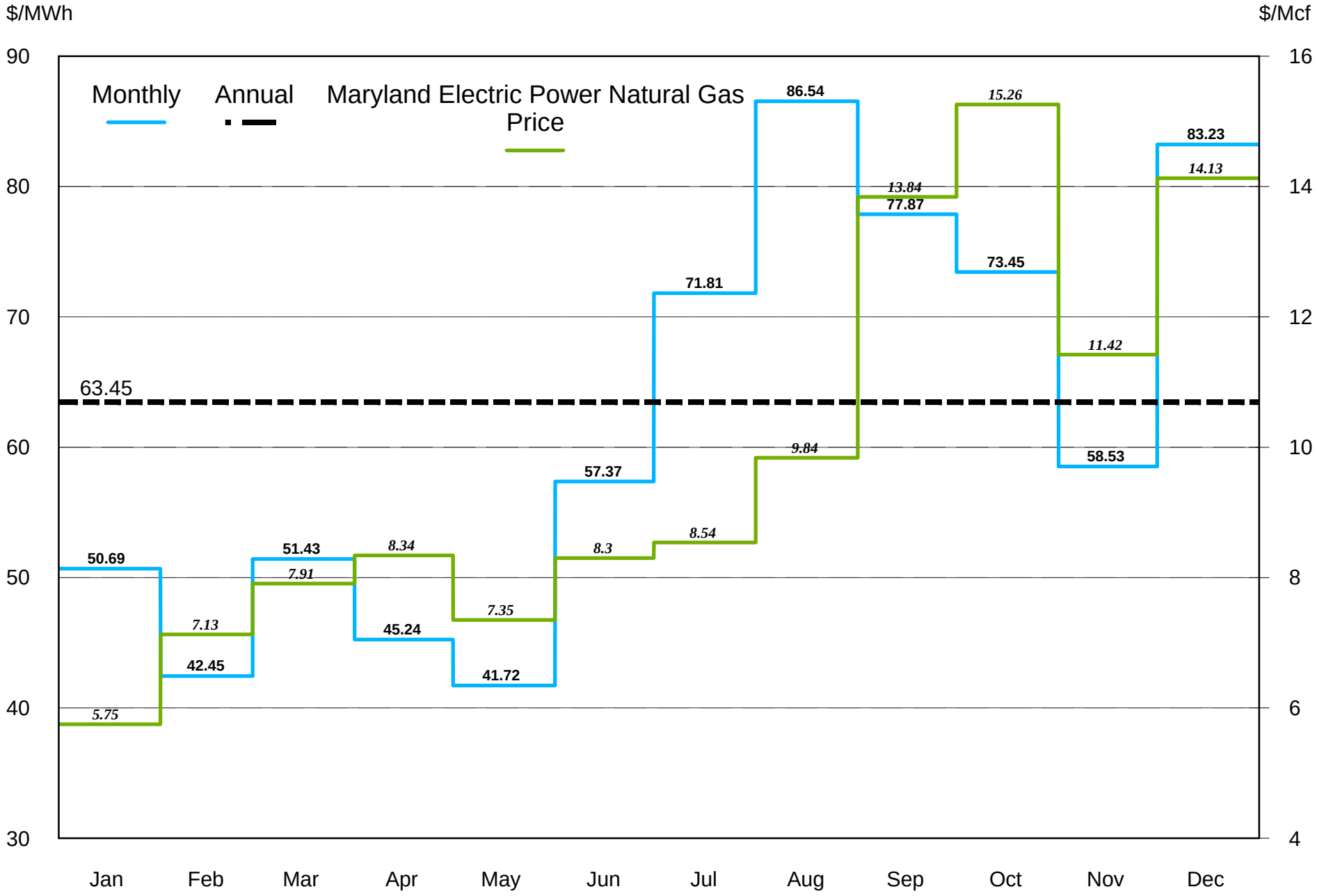
Data Source: DOE/EIA

K. Rose

State comparison of percentage change in prices and slope of the linear regression lines

	Percent change 2004 to 2005	Percent change 2002 to 2005	Slope of the linear regression line 2002 to 2005
U.S. Average	5.0%	11.3%	0.31
Regulated states	5.6%	12.3%	0.30
Restructured states	6.8%	14.9%	0.44
States with market determined prices (price caps expired)	8.4%	15.8%	0.60
District of Columbia	12.8%	13.1%	0.33
Maine	8.0%	3.0%	0.09
Massachusetts	14.5%	23.1%	0.77
New Jersey	4.5%	13.1%	0.47
New York	8.1%	16.0%	0.67

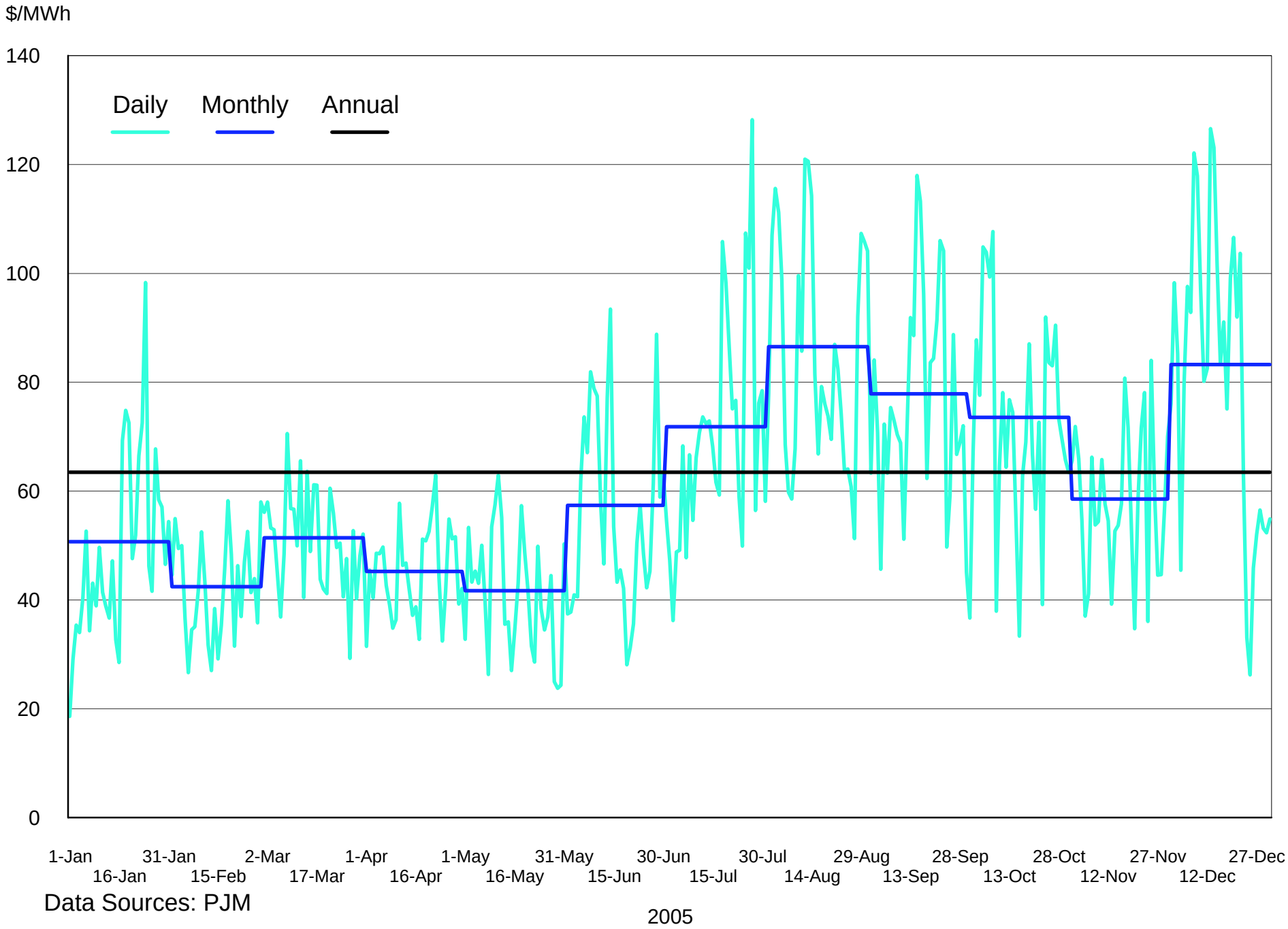
Weighted average PJM and natural gas prices



Data Sources: PJM and DOE/EIA

2005

Monthly and Daily PJM Prices



Data Sources: PJM

Market Structure Concerns

- Markets are concentrated regionally and highly concentrated locally
- Significant entry barriers still exist
  - for new generation capacity
  - from transmission constraints
- Inelastic demand
- Continuous interaction of suppliers and knowledge about other suppliers' cost
  - increases the likelihood of strategic bidding and tacit collusion

What we are learning from experience

- Cost of de-integration is higher than thought
  - higher ISO/RTO costs and taking longer than thought to develop
  - higher cost-of-capital for competitive services
  - higher T&D costs -- to maintain reliability and encourage investment
  - the exercise of and conditions for market power stronger than expected

Determining the Costs and Benefits of Restructuring

- Added costs of regulation
  - over capitalization
  - operational inefficiencies
  - regulatory compliance cost
  - resource allocation inefficiencies
- Added costs of restructuring
  - market power efficiency loss
  - de-integration costs, from loss of vertical economies
  - ISO/RTO formation and operation costs
  - ISO/RTO complexity
  - increased cost-of-capital required for investment
  - under investment in electric supply infrastructure