

# 2004 Performance Review of Electric Power Markets

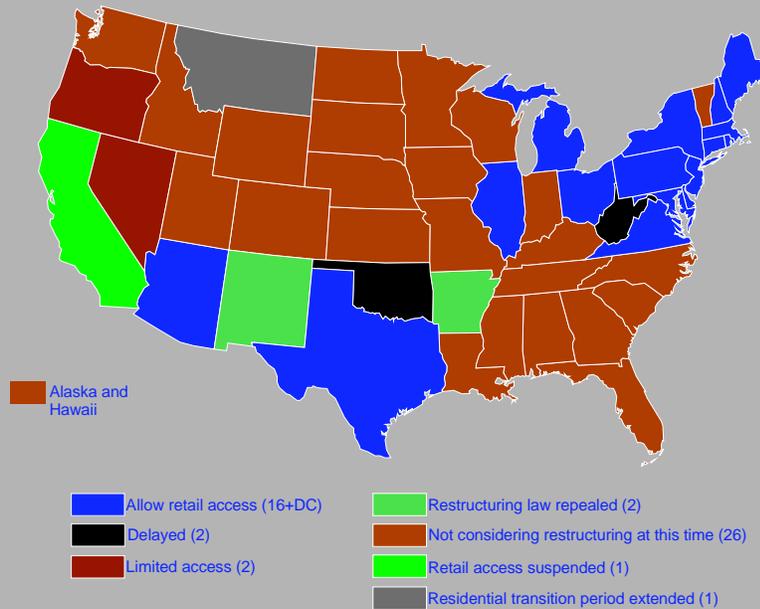
Virginia General Assembly  
Commission on Electric Utility Restructuring  
Richmond, Virginia  
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## Outline

- Restructuring national overview
- Summary of regional wholesale prices and retail activity in nine states

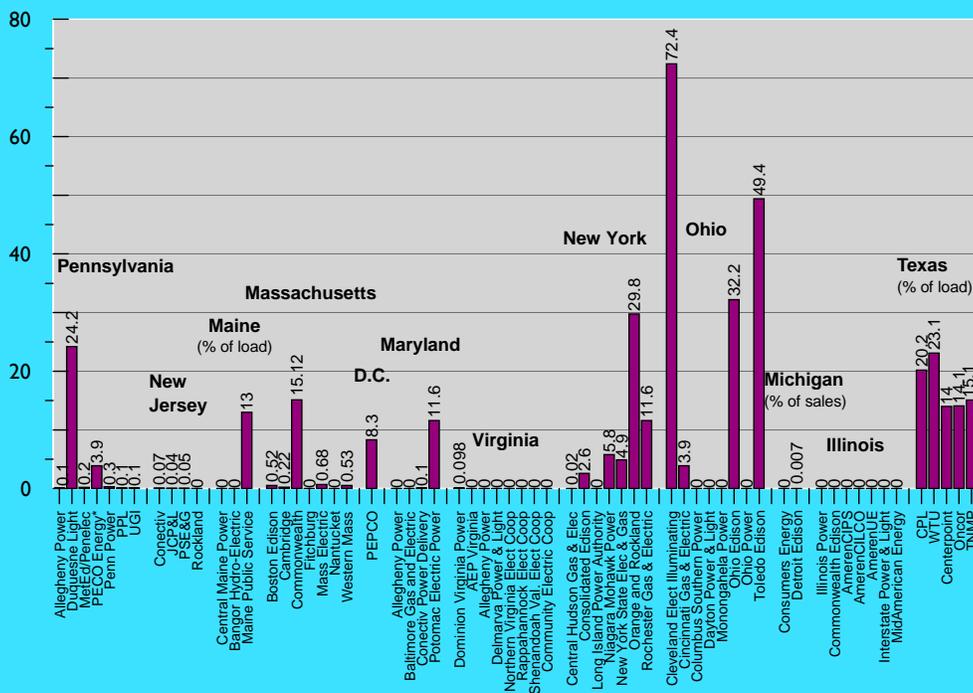
## Status of State Retail Access



## How Are We Doing Nationally?

- Figure (next slide) includes 11 states and D.C. and 63 distribution companies
- 43 or over two-thirds of the companies, had less than one percent of the customers choosing an alternative supplier
  - ▶ 27 of these were zero

## Percent of Residential Customer Migration

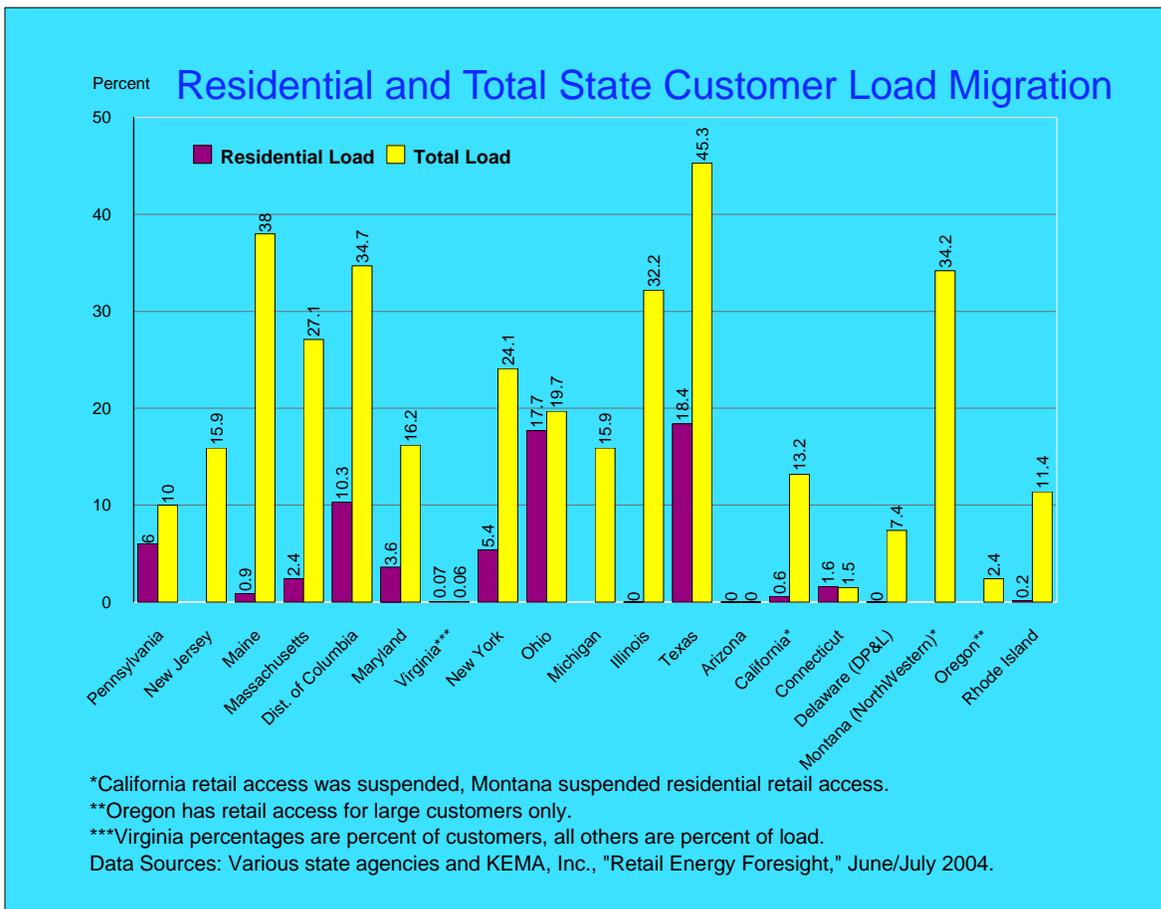


\*PECO Energy percentage excludes assigned customers.

Data Sources: Various state agencies; Texas data from KEMA, Inc., "Retail Energy Foresight," June/July 2004.

## How Are We Doing Nationally? (continued)

- Correlation between higher priced areas and shopping percentage
- Seven areas had greater than 20 percent
  - ▶ three of those seven distribution companies are in Ohio -- with nearly 95 percent of residential switching is from the state's aggregation program
  - ▶ the remaining four distribution companies were in relatively higher priced areas
- No low-cost areas with significant customer migration



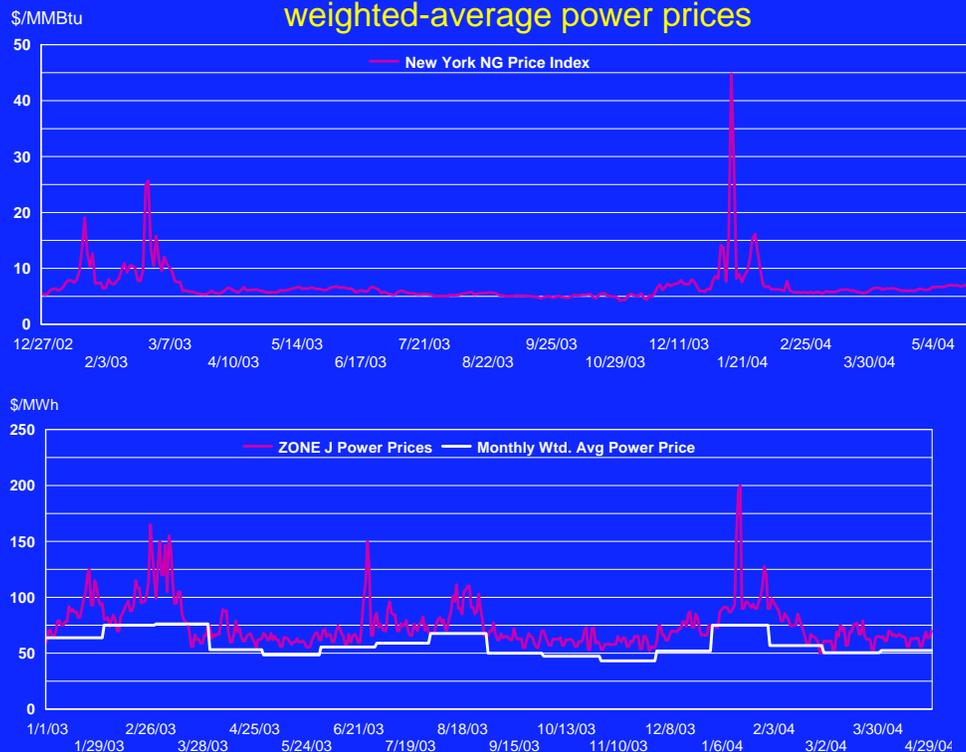
## How Are We Doing Nationally? (continued)

- Figure summarizes residential customer load and state total customer load that have switched to an alternative supplier for 19 states and D.C.
- Significant difference between residential customer migration to competitive suppliers and total state load, for some states
- Seven states with more than 20 percent of the total state load being served by competitive suppliers

## How Are We Doing Nationally? (continued)

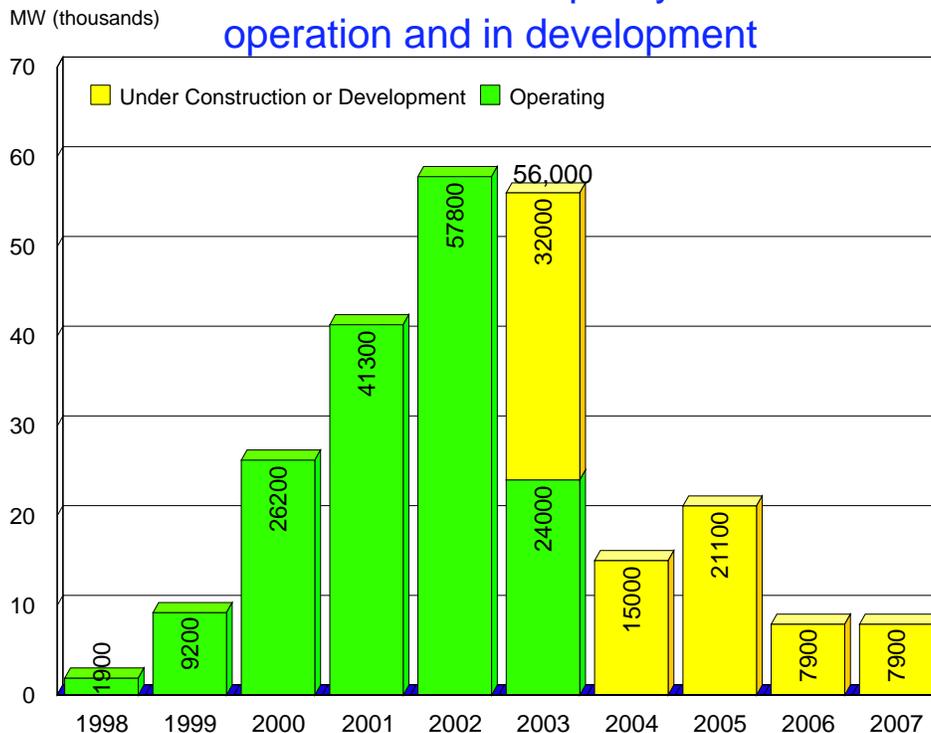
- Five of the seven states (including D.C.) where total load was greater than 20 percent were in relatively higher priced areas
- The two exceptions were Texas, where a large portion of the retail activity has been in the higher priced distribution companies of the state, and Montana -- where prices have increased considerably

New York natural gas price index and ISO daily and monthly weighted-average power prices



Data Sources: DOE/EIA, Platts Megawatt Daily, and New York ISO.

## Gas-fired turbine-based capacity additions in operation and in development



Data Source: NERC Reliability Assessment 2003–2012, December 2003 (Energy Ventures Analysis, Inc. data).

## Current Price Pressures (short to intermediate term)

- Higher natural gas prices
- Demand increasing from recovering economy
- Merchant power business boom turned to bust and has not recovered
- Higher capital costs for competitive services
- Long-term infrastructure investments (generation and transmission)
- Upward pressure on lower-cost supply prices in regions where higher-priced loads become available
- Market power during peak hours and seasons

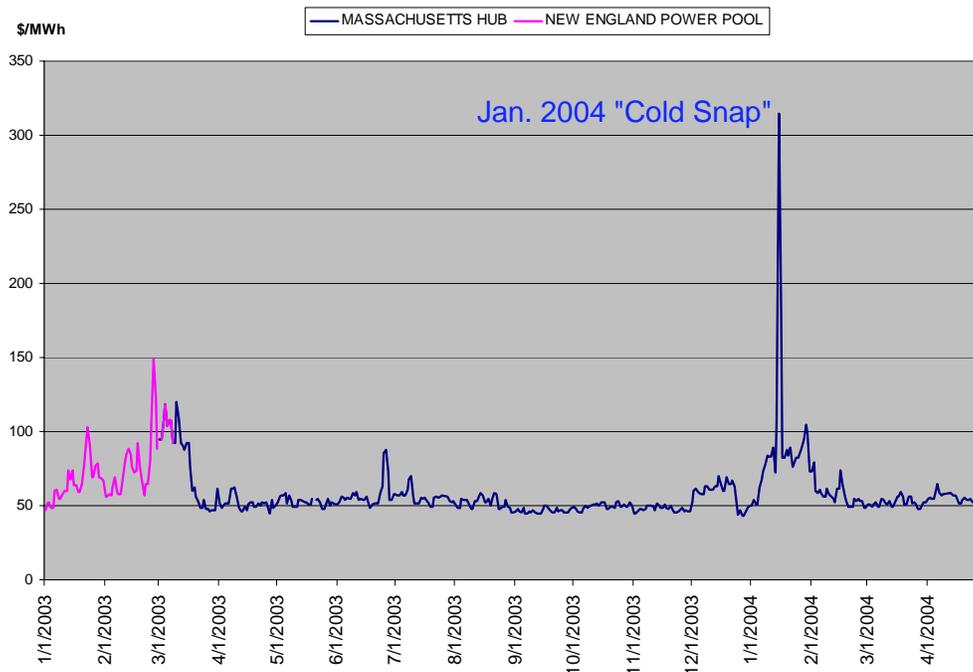
## Regions and States Summarized Here

- New England
  - ▶ Maine
  - ▶ Massachusetts
- New York
- Mid-Atlantic
  - ▶ Pennsylvania
  - ▶ New Jersey
  - ▶ Maryland
- Texas
- Midwest
  - ▶ Illinois
  - ▶ Ohio
- Southeast and West

## New England Regional Characteristics

- Divestiture of generation assets in most areas
- Developing wholesale market
- Reliance on markets for retail pricing in one state (Maine)
- Some retail active for larger customer groups

## New England wholesale volume weighted average index, January 2003 through April 2004 (\$/MWh)

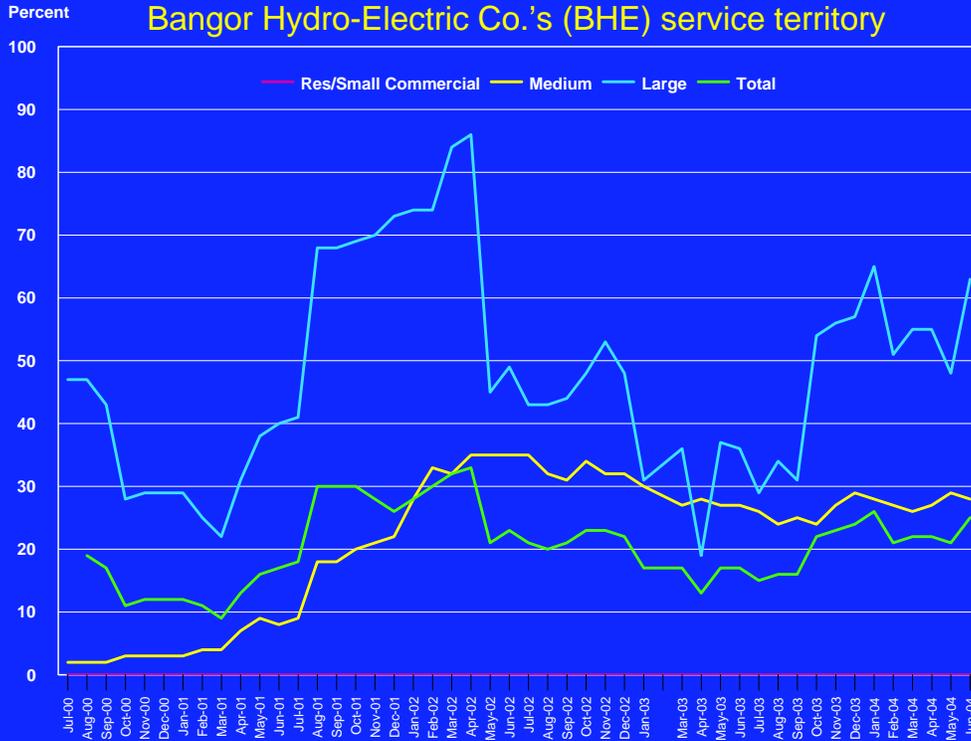


Source: Platts, Megawatt Daily, 2003 and 2004.

## Maine

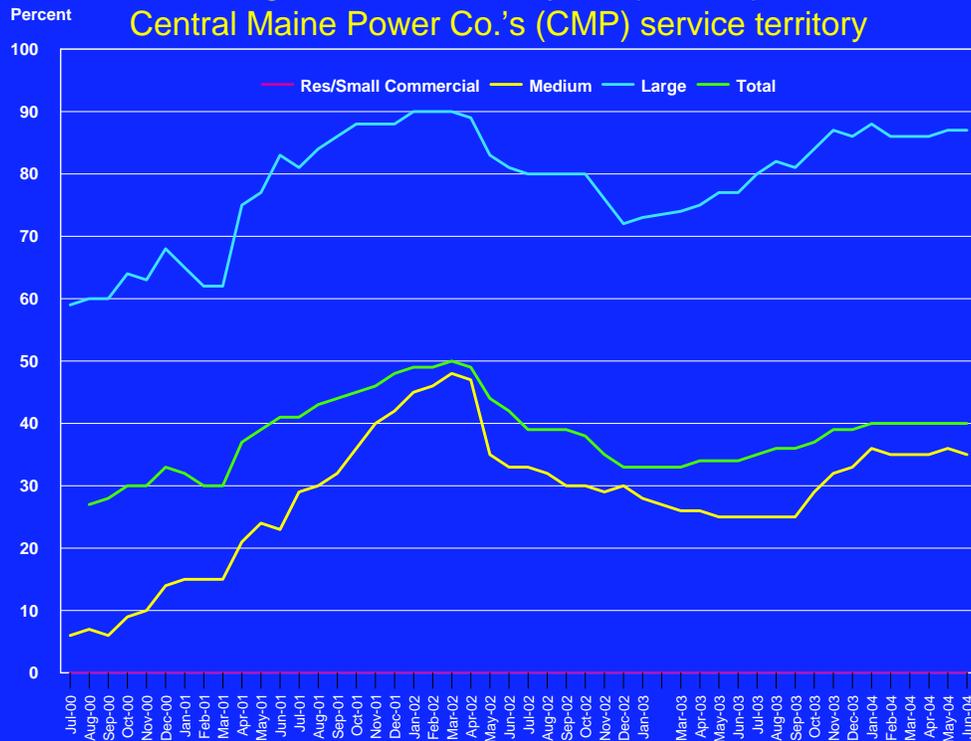
- Retail Access began March 1, 2000 for all customers
- Restructuring law required complete divestiture of utility generation assets
- Standard offer generation service for retail customers through competitive bidding
- Four bids so far (see page III-19)
- No rate cap on generation prices and no mandatory rate reduction
- Maine Public Service (MPS) in northern Maine has limited market activity

## Percentage of load served by competitive providers in Bangor Hydro-Electric Co.'s (BHE) service territory



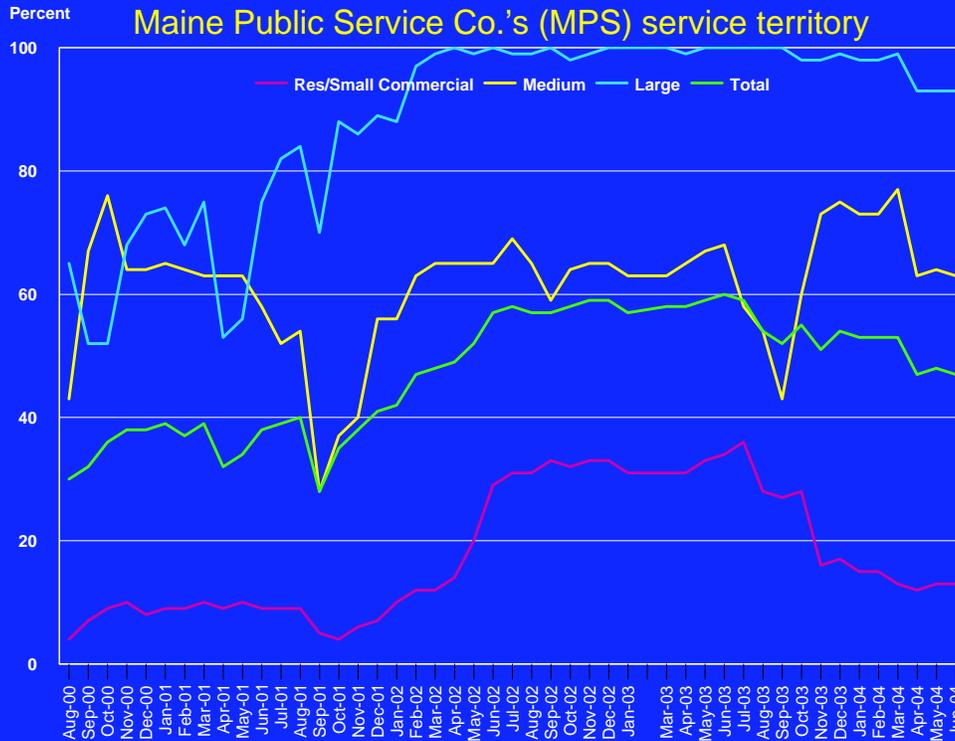
Source: Maine Public Utilities Commission, June 2004.

## Percentage of load served by competitive providers in Central Maine Power Co.'s (CMP) service territory



Source: Maine Public Utilities Commission, June 2004.

## Percentage of load served by competitive providers in Maine Public Service Co.'s (MPS) service territory

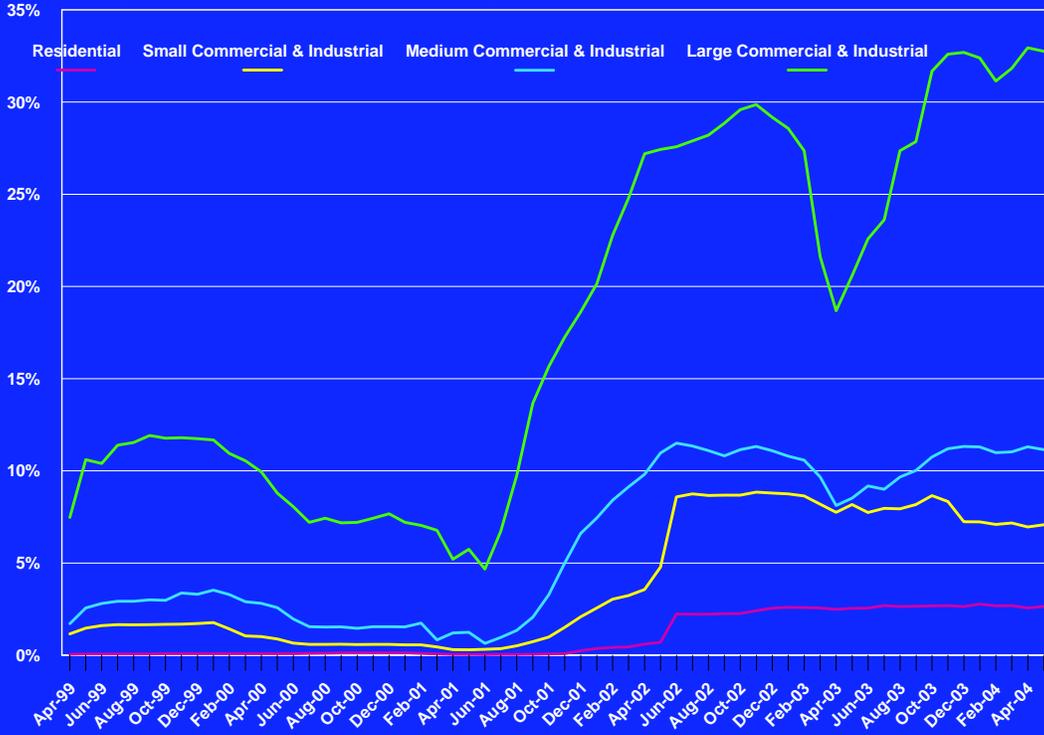


Source: Maine Public Utilities Commission, June 2004.

## Massachusetts

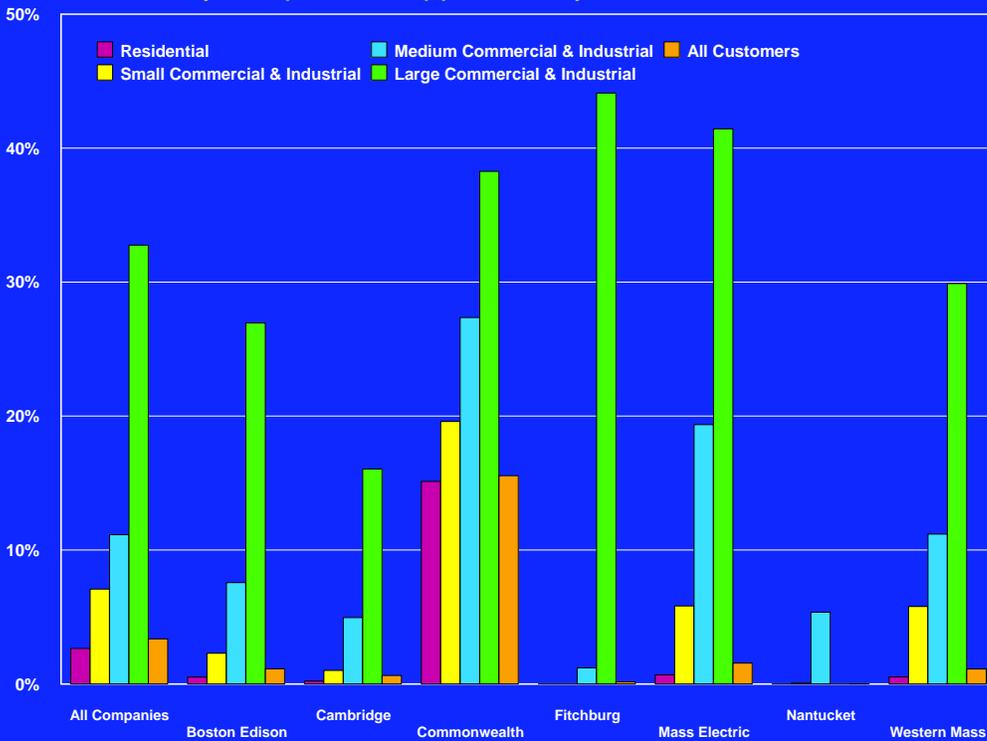
- Retail Access began March 1, 1998 for all customers
- Transition period generation service provided by utility through 2005, after which Standard Offer Service ends
- Standard Offer Service customers received a 10% discount in 1998, that increased to 15% in 1999 -- ends when SOS ends
- Split between standard offer service and default service

### Massachusetts percent of customers served by competitive generation, April 1999 to May 2004



Data Source: Massachusetts Division of Energy Resources,

### Massachusetts company comparison by percent of customers served by competitive suppliers, May 2004

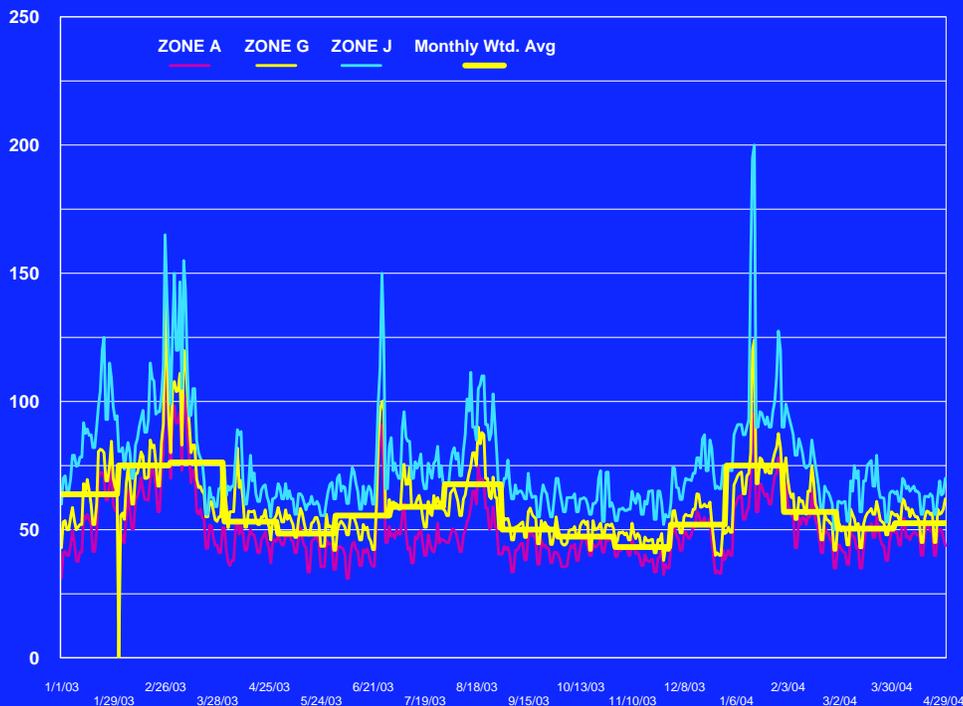


Data Source: Massachusetts Division of Energy Resources,

# New York Characteristics

- Centralized wholesale market
- Beginning alignment of wholesale and retail market pricing
- Some retail market activity in several areas

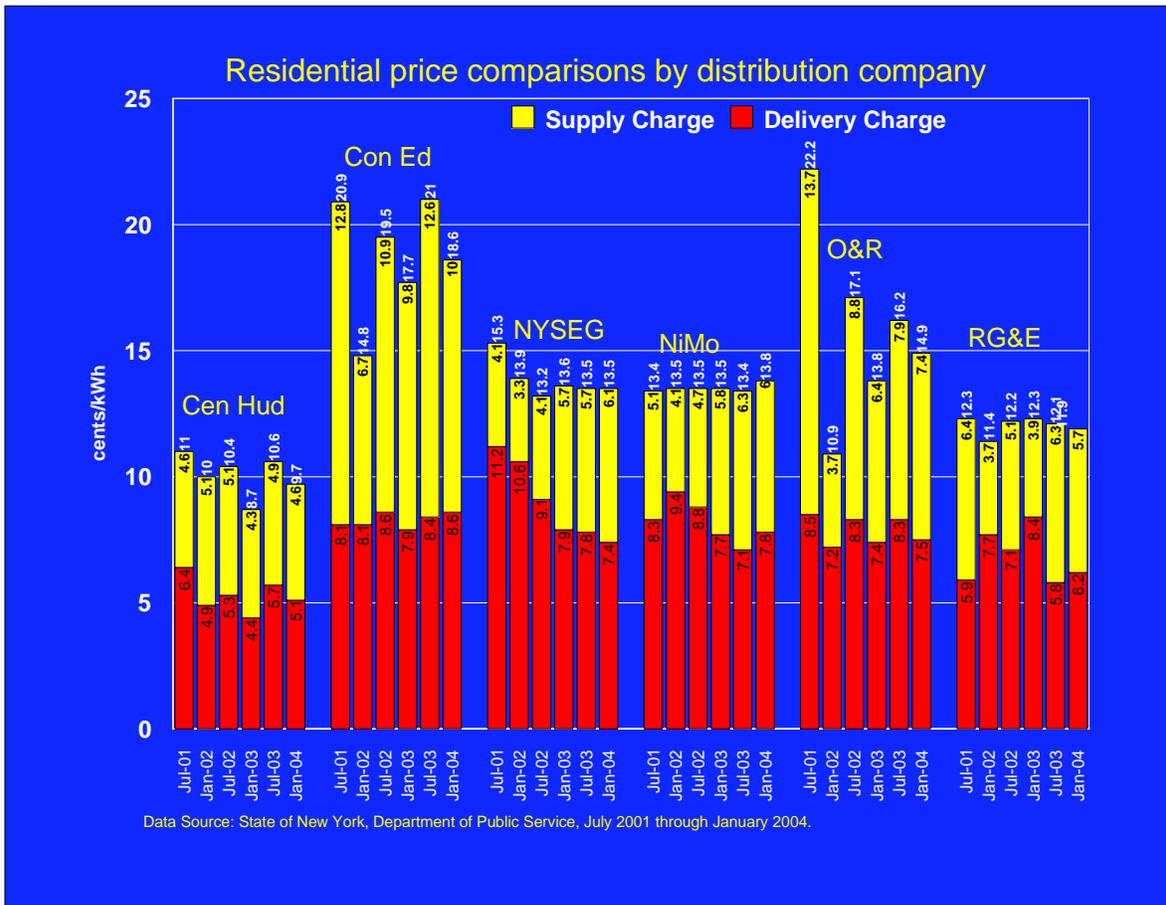
New York ISO Daily and Monthly Weighted-Average Prices



Data Sources: Platts *Megawatt Daily* and New York ISO, January 2003 through April 2004.

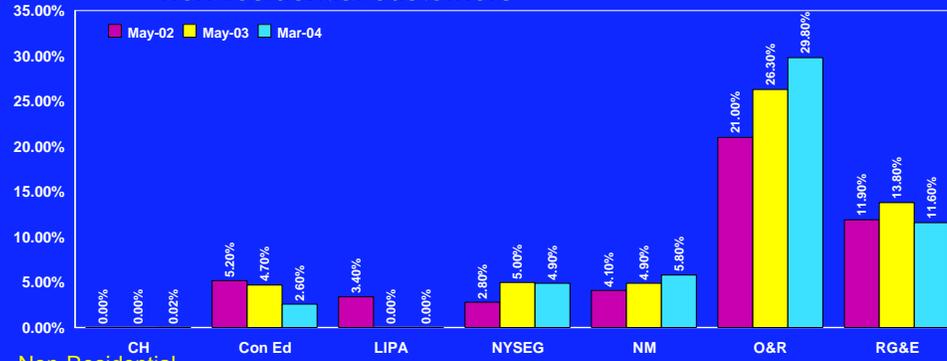
# New York

- Only restructuring state that did not pass restructuring legislation
  - ▶ PSC approved 6 restructuring orders between late 1997 and early 1998
- Retail access was phased-in between November 1997 and December 31, 2001 -- schedule varies by utility
- Rates reduced and capped during transition period -- also varied by utility
- Some rate caps and freezes have expired and the customers' generation prices are determined in market

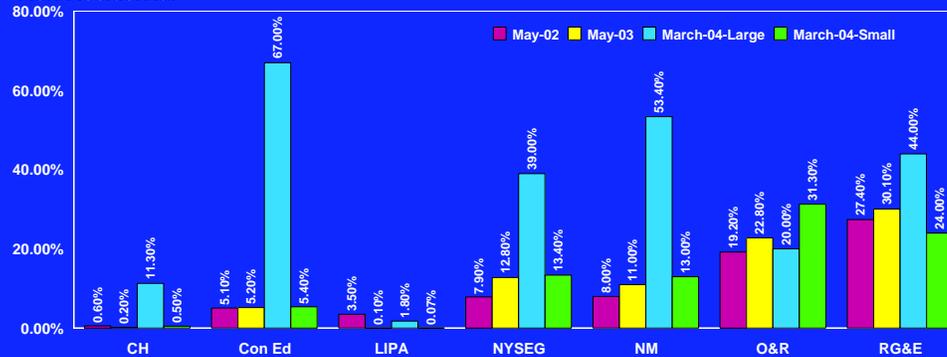


## Percent customer migration in New York, residential and non-residential customers

### Residential



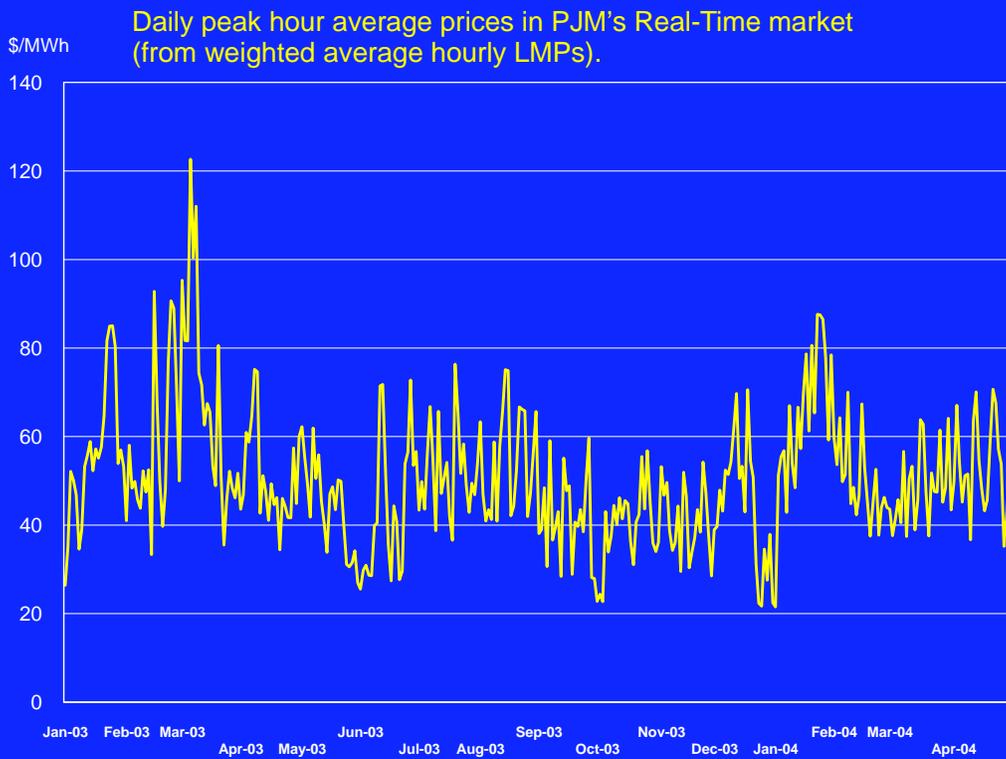
### Non-Residential



Source: New York State Department of Public Service.

## Mid-Atlantic Regional Characteristics

- Most developed centralized wholesale market
- Increasing reliance on markets for retail pricing (New Jersey, Maryland, DC)
- Sporadic retail market activity in some areas

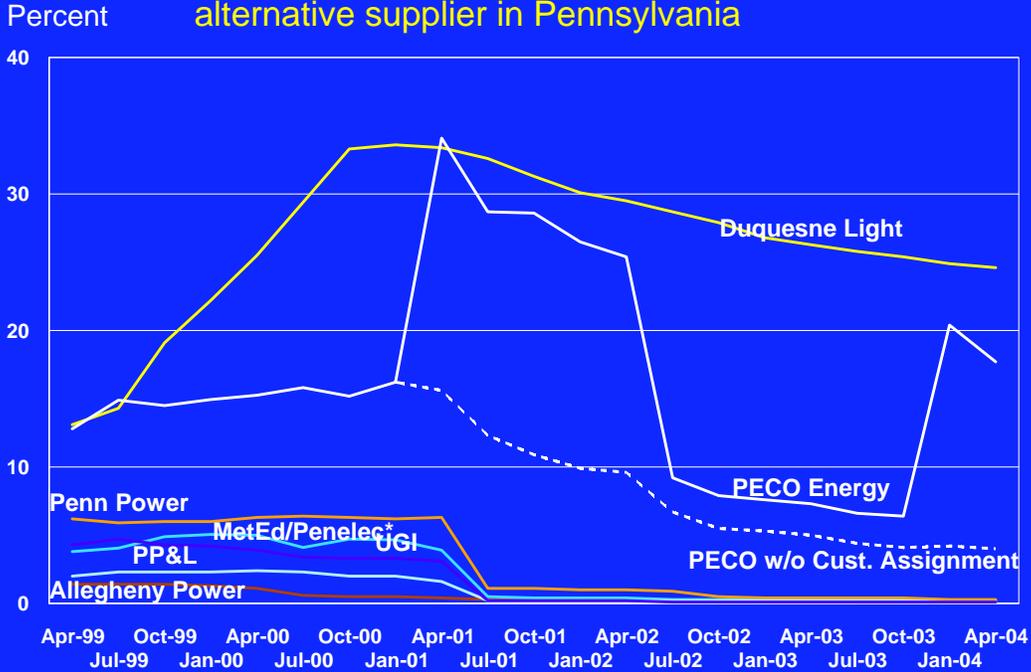


Data source: PJM Interconnection, June 2004.

## Pennsylvania

- Phase-in of retail access began January 1, 1999
- Transition period ranges from 2004 to 2010
- Rate reductions vary by utility (PECO Energy's was the highest at 8%) and were for only one or two years
- First state to deliberately create "headroom" for competitive suppliers -- reason why transition periods are so long for several utilities
- Early customer shopping activity made it the "poster child" of retail access -- until mid-2001

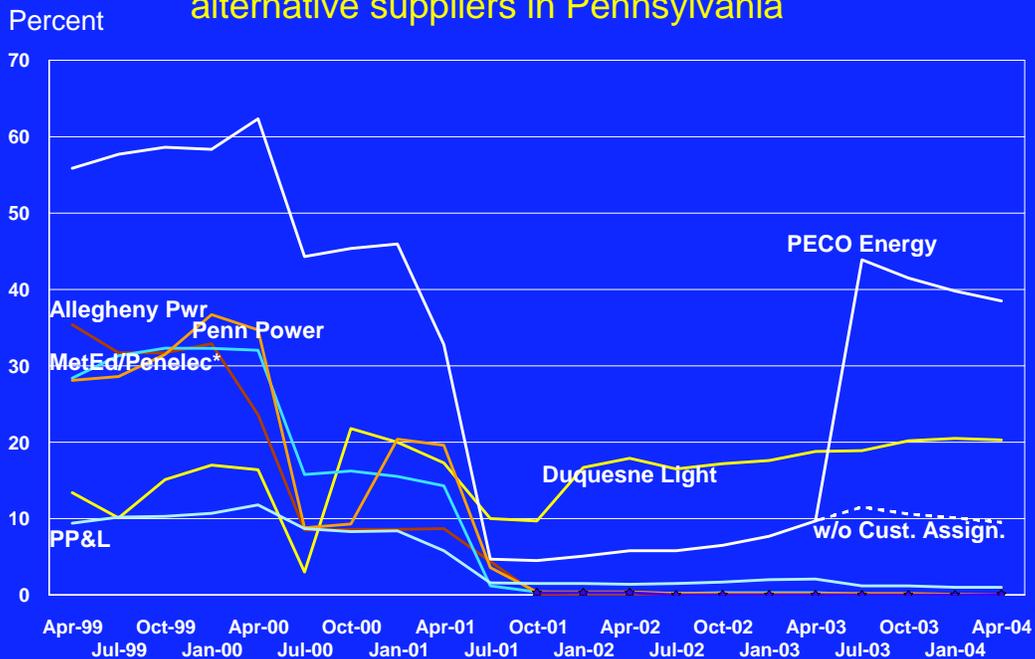
## Percent of residential customers served by an alternative supplier in Pennsylvania



\*MetEd and Penelec were formerly part of GPU.

Data Source: Pennsylvania Office of Consumer Advocate

## Percent of commercial customers served by alternative suppliers in Pennsylvania

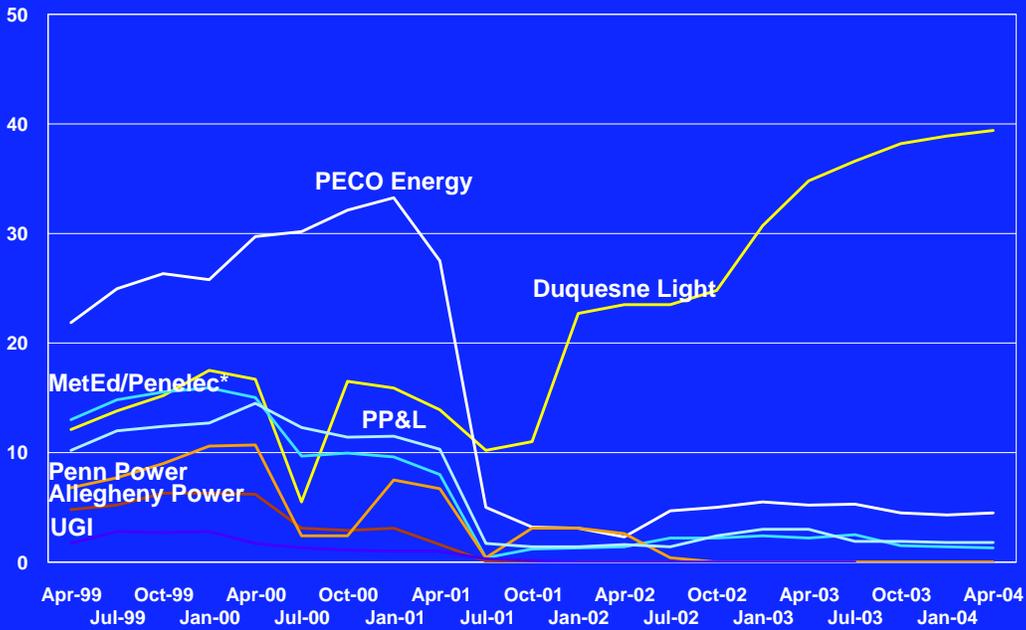


\*MetEd and Penelec were formerly part of GPU.

Data Source: Pennsylvania Office of Consumer Advocate

## Percent of industrial customers served by alternative suppliers in Pennsylvania

Percent

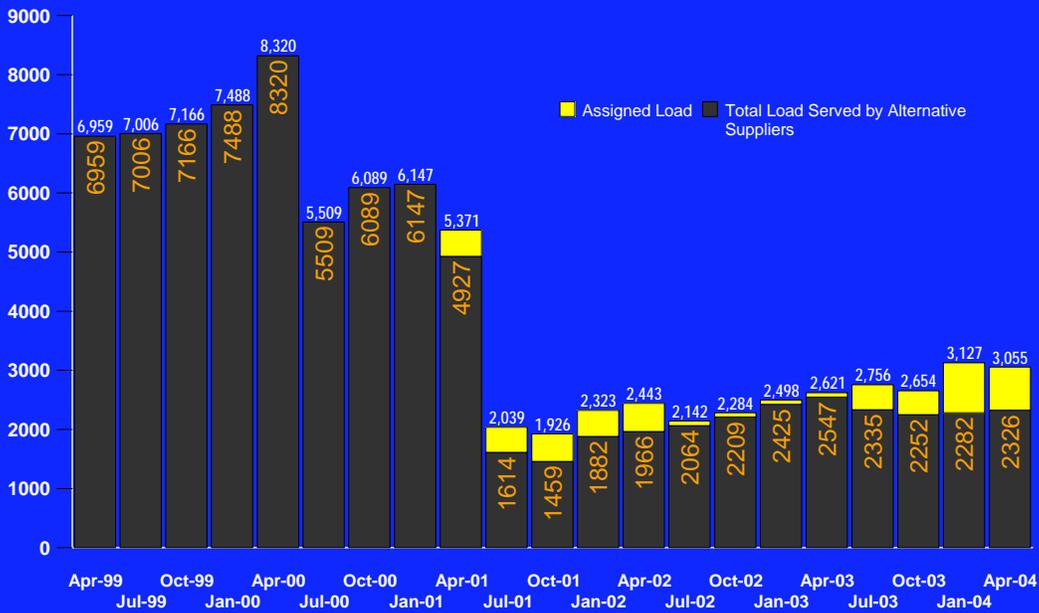


\*MetEd and Penelec were formerly part of GPU.

Data Source: Pennsylvania Office of Consumer Advocate

## Total customer load served by alternative suppliers in Pennsylvania

Load (MW)



Data Source: Pennsylvania Office of Consumer Advocate

## New Jersey

- Retail access began for all customers in November 1999
- Transition period of 4 years after beginning of competition -- initial 5% rate reduction and an additional 5% over the next 3 years
- Key features:
  - ▶ Basic Generation Service (BGS) auction for small and medium sized customers -- 3 annual auctions held to date
  - ▶ action is often cited as a model for other states
  - ▶ rate increases (as high as 15% in 2003) due to deferred balances accrued during transition period

## Percent of New Jersey customers served by alternative suppliers

Utility	Residential			Non-Residential			Total		
	July 2003	June 2004	Aug. 2004	July 2003	June 2004	Aug. 2004	July 2003	June 2004	Aug. 2004
Conectiv	0.08	0.07	0.07	0.31	1.43	1.43	0.11	0.24	0.24
JCP&L	0.04	11.52	0.04	0.04	2.16	1.88	0.04	10.46	0.24
PSE&G	0.05	0.05	0.05	0.04	1.64	1.83	0.05	0.27	0.29
Rockland	0	0	0	0	0.26	0.26	0	0.03	0.03
Total	0.05	3.39	0.05	0.08	1.72	1.76	0.06	3.18	0.27

Source: New Jersey Board of Public Utilities, July 29, 2003, June 17, 2004, and August 13, 2004.

## Maryland

- Retail access phase-in began July 1, 2000
  - ▶ all customers were eligible by July 1, 2002
- Rate discounts of 3% to 7.5% and rate cap for four years after beginning of retail access
- Standard Offer Service end dates differ by customer class and company -- starting July 1, 2002 and last group on July 1, 2008
- After fixed price standard offer service expires, default rates for non-choosing customers will be based on competitive bidding process -- which began in 2004

## Maryland percentage of customers enrolled with an electric supplier

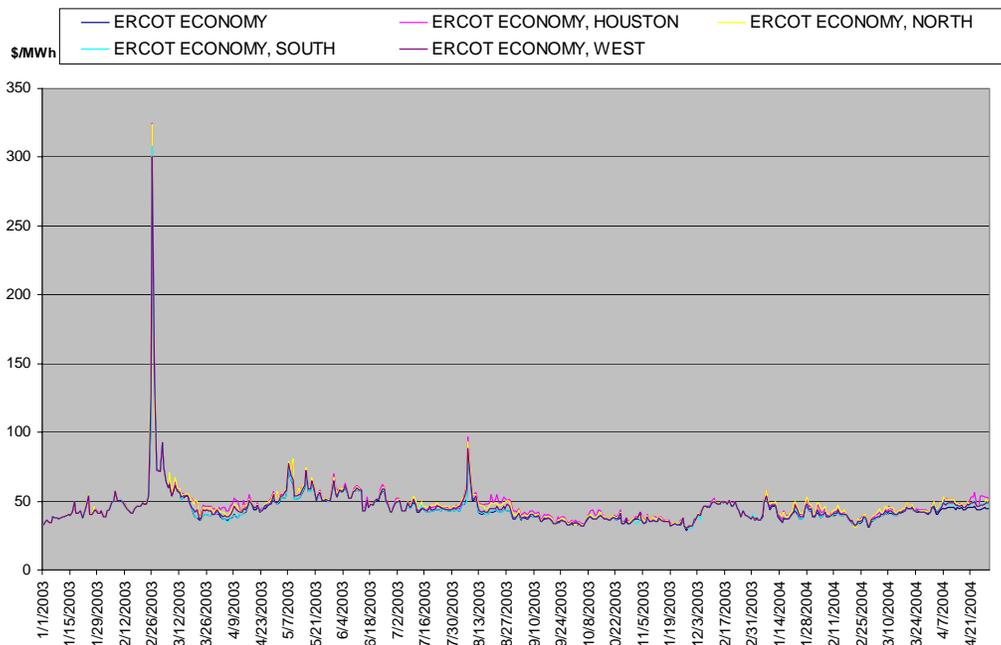
Utility	Residential		Non-Residential		Total	
	April 2003	April 2004	April 2003	April 2004	April 2003	April 2004
Allegheny Power	0	0	0	0	0	0
Baltimore Gas & Electric	0	0	0.5	0.7	0.1	0.1
Conectiv Power Delivery	0	0.1	1.6	9.4	0.2	1.3
Potomac Electric Power	15.7	11.6	21.4	17.5	16.2	12.2
<b>Total</b>	<b>3.8</b>	<b>2.8</b>	<b>5.1</b>	<b>5.4</b>	<b>3.9</b>	<b>3.1</b>

Source: Maryland Public Service Commission, for months ending April 25, 2003 and April 30, 2004.

# Texas Characteristics

- Single jurisdictional/regulatory control of both wholesale and retail (within ERCOT)
- Frequent adjustment to "price-to-beat" to maintain alternative supplier competitiveness
- Separation of utility functions
- Larger customers in the market with no price guarantee

## Daily volume weighted average price indices (\$/MWh) for ERCOT trading zones



Data source: Platts, Megawatt Daily, January 2003 through April 2004.

## Texas

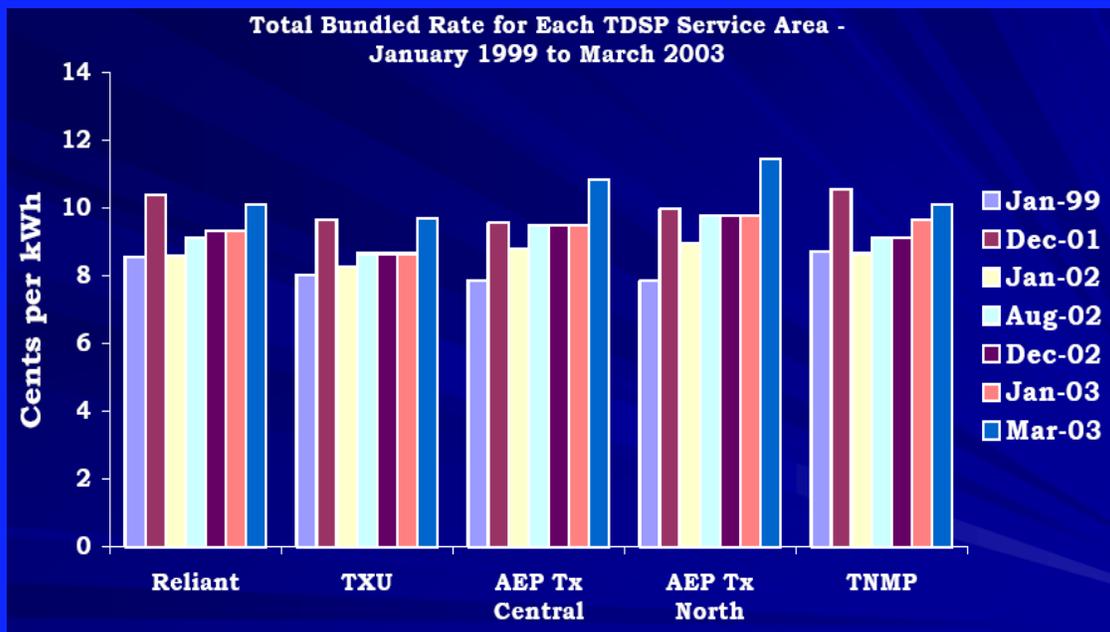
- Retail access for all customers in ERCOT region began January 1, 2002
  - ▶ delayed in non-ERCOT regions
- Utilities required to separate business functions into three companies -- power generation company (PGC), T&D utility (TDU), and retail electric provider (REP)
  - ▶ January 1, 2002 standard offer customers were transferred to the retail affiliate of the distribution utility and receive standard offer service at the fixed "price-to-beat" rate (for the ERCOT portion of Texas)

## Texas (*continued*)

- Mandatory decrease of at least 6% on 1999 rates (frozen through January 1, 2002) charged in each service territory (actual discount for two companies reached 18%)
- "Price-to-beat" service available to residential and small commercial customers -- other customers are subject to market based rates
- Price-to-beat rates can be adjusted up to twice a year for changes in natural gas prices and power costs subject to PUC approval
- The utilities must offer the established price-to-beat until January 1, 2007, and can offer different rates beginning January 1, 2005, or earlier if at least 40% of their residential and small customers switch to competitors

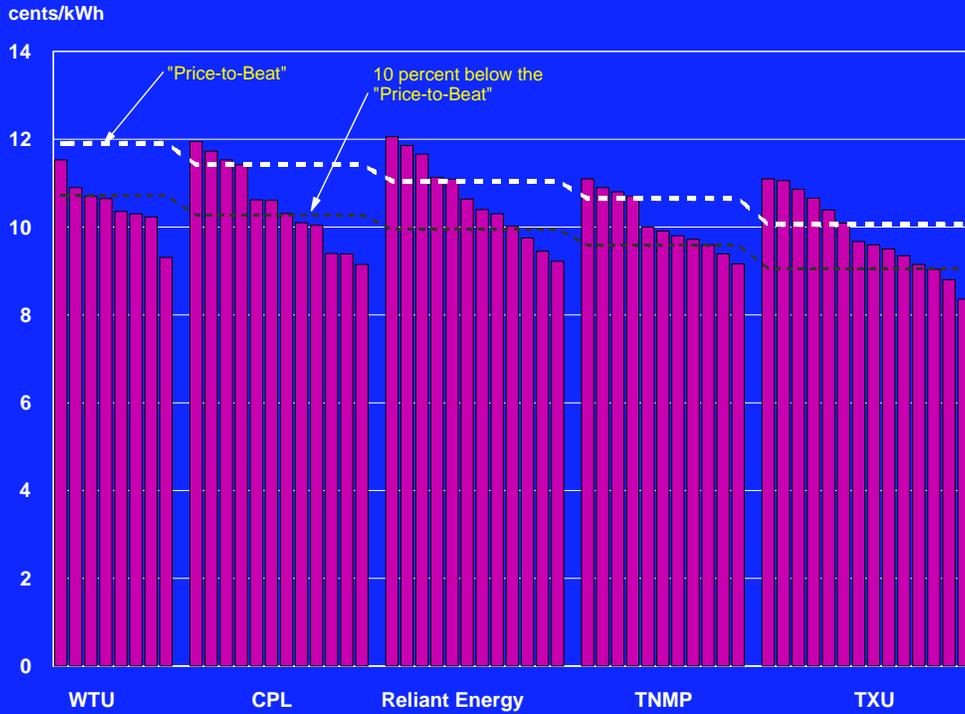
## Texas (continued)

- Both retail affiliates and independent retail suppliers are known as "retail electric providers" (REPs)
- No REP affiliate of T&D utility can offer competitive rates to residential and small commercial customers in the service territory of T&D utility, except as the standard offer service
- POLR provides service to customers whose suppliers go out of business or whose service is terminated by the supplier
  - ▶ competitive bidding process used for determining POLR service provider -- "has yet to perform adequately"



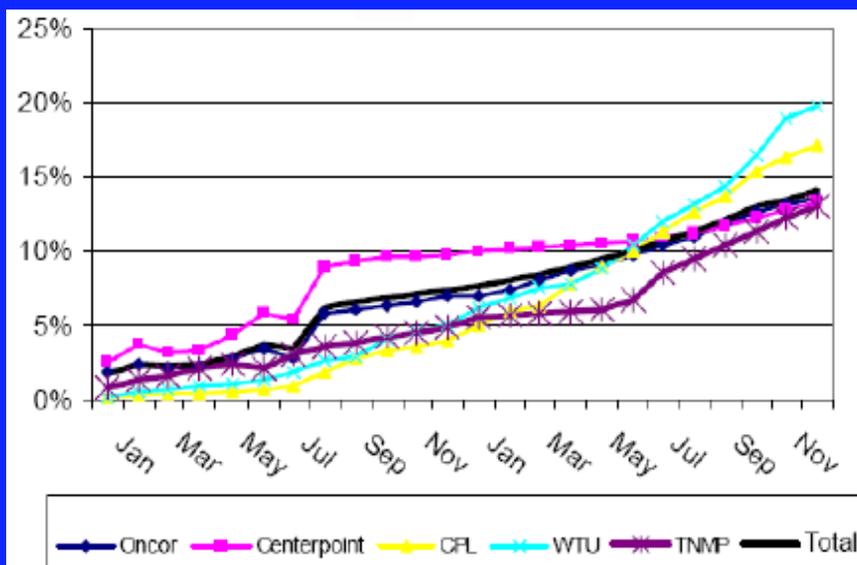
Source: Slide from presentation of Chairman Rebecca Klein, Public Utility Commission of Texas, Competitive Retail Markets in Texas and Market Design," Electric Power Supply Association, State Issues Meeting, May 6, 2003.

## Residential offers in five Texas service territories, May 2004



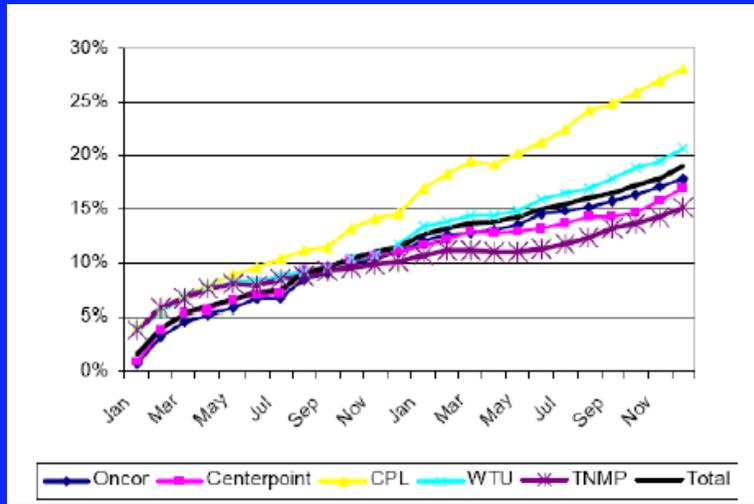
Data Source: Public Utility Commission of Texas

## Texas residential customers with competitive REP



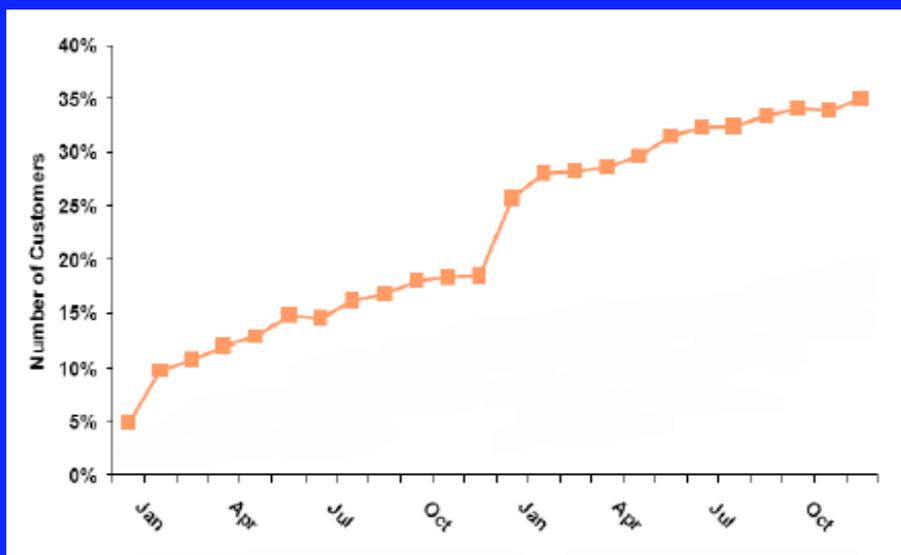
Source: Public Utility Commission of Texas,

## Texas secondary voltage customers with competitive REP



Source: Public Utility Commission of Texas,

## Texas primary or transmission voltage customers served by nonaffiliated REPs

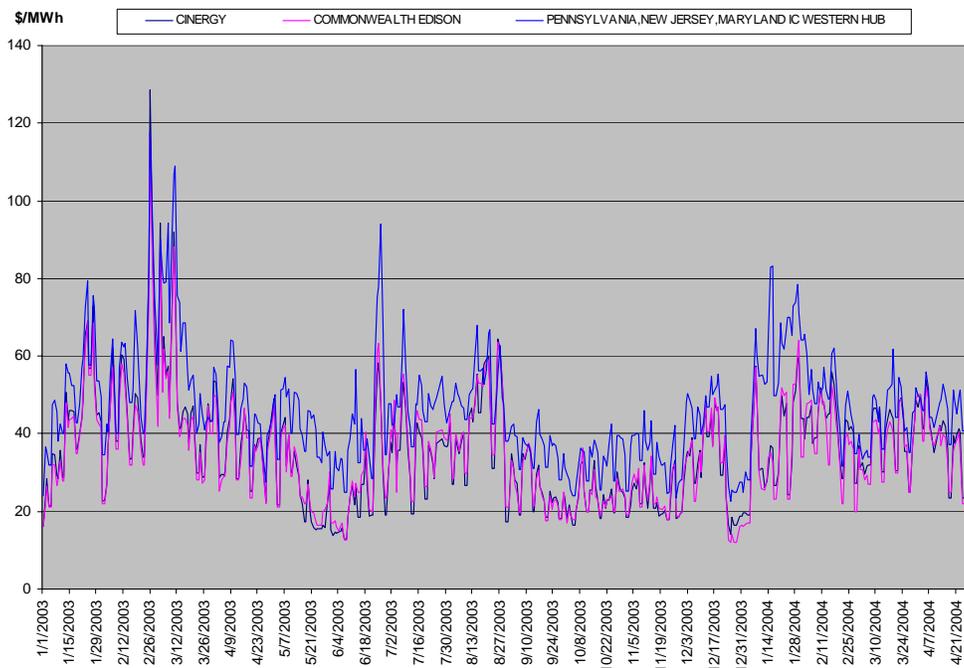


Source: Public Utility Commission of Texas,

# Midwest Regional Characteristics

- Nascent regional wholesale market development (MISO and SPP)
- Modest retail activity of larger customer groups in some areas
- Sporadic retail activity for residential customers
- Beginning use of auction for retail load (FE in Ohio and possibly Illinois?)

Weighted average daily prices for three Midwestern trading hubs, January 2003 through April 2004



Data Source: Platts, Megawatt Daily.

## Illinois

- Retail phased-in periods began October 1, 1999 (for nonresidential customers)
  - ▶ all customers were eligible by May 1, 2002
- Transition period ends December 31, 2006
- After transition, rates still will be determined by the ICC
  - ▶ generation will not be regulated
  - ▶ could use a New Jersey-style auction for Ameren and Commonwealth Edison
- Rates not unbundled
- No residential shopping in the state and no supplier has filed to serve residential customers

## Illinois (*continued*)

- Many larger customers on the "Power Purchase Option"
  - ▶ option ends at the end of 2006
- "Post 2006 Initiative" for stakeholders to participate in workshops and identify issues, concerns, and options for after the end of the transition period
- ICC staff report to the commission on the agenda for October 28th has been rescheduled for mid to late November

## Percentage of customers receiving delivery services, May 2004

	Residential	Commercial	Industrial	Total		
AmerenCIPS Company	0.0	1.0	28.2	0.2		
	Residential	Small C&I	Large C&I	Governmental	Other	Total
Commonwealth Edison Company	0.0	5.4	74.6	2.9	1.0	0.6
	Residential	Demand < 1 MW	Demand > 1 MW	Total		
Illinois Power Company	0.0	1.5	40.3	0.2		

Source: Illinois Commerce Commission, May 2004.

## Ohio

- Retail access began for all customers January 1, 2001
- Originally, for most utilities, the “market development period” was to end December 31, 2005
- Utilities provide standard offer service during the market development period at prices approved by the PUCO and include a 5% reduction on the generation rate component
- Considerable customer aggregation in northern Ohio (FirstEnergy - FE's territory)
- Market development period for FE companies and DP&L have been extended to December 31, 2008

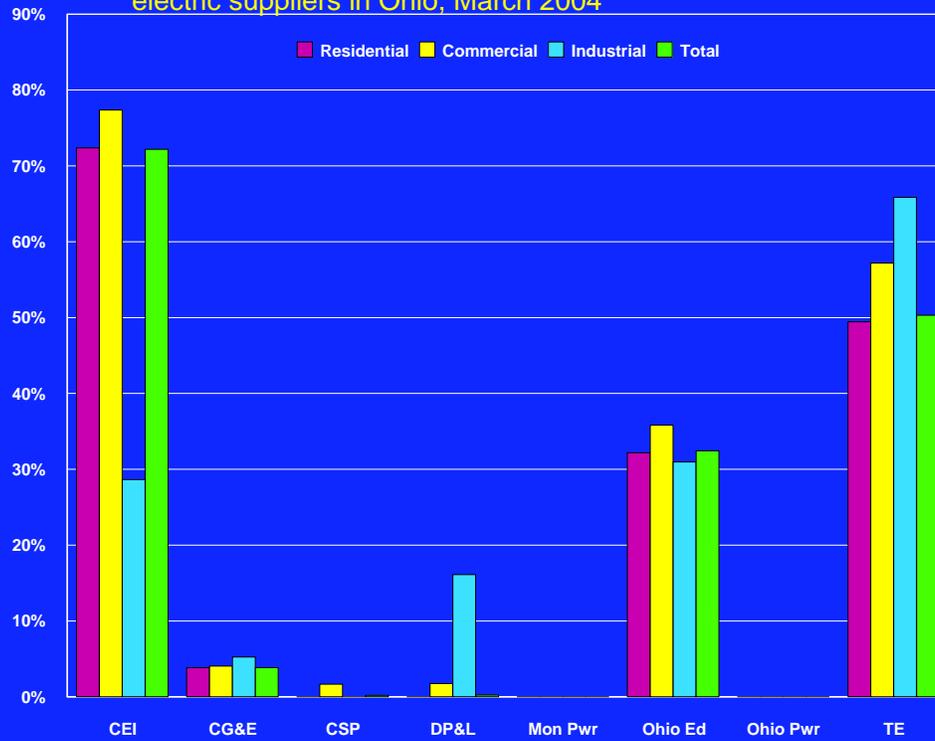
## Ohio (*continued*)

- The FE "Rate Stabilization Plan" includes an auction to determine the market price for standard offer generation service for January 1, 2006 through December 31, 2008
  - ▶ using a descending clock auction
  - ▶ begins in November 2004 and results provided to the PUCO by December 1, 2004
  - ▶ the Commission will either accept or reject the results of the auction by January 1, 2005
  - ▶ if the results are not accepted by the PUCO, FE will implement the Rate Stabilization Plan pricing approved by the Commission

## Ohio (*continued*)

- Cincinnati Gas & Electric (Cinergy Corp.) filed a request for rehearing after the Commission's September 2004 ruling on CG&E's rate stability plan settlement
- The PUCO has expressed concern that the wholesale market has not developed sufficiently to end rate caps as planned at the end of 2005
  - ▶ want to avoid "sticker shock"
- Will other companies have the market development period extended as well?
  - ▶ "everything is on hold"

Percent of customers that switched to alternative electric suppliers in Ohio, March 2004



Data Source: Public Utilities Commission of Ohio, Division of Market Monitoring & Assessment.

Aggregation activity in Ohio, March 2004

	Customer Switching through Aggregation	Total Customer Switching	Percent Switching through Aggregation
Residential	853,229	899,527	94.85%
Commercial	104,737	119,523	87.63%
Industrial	119	1,731	6.87%
Total	958,085	1,020,781	93.9%

Source: Source: Public Utilities Commission of Ohio, Division of Market Monitoring & Assessment.

## **Southeast and West Regional Characteristics**

- Southeast
  - ▶ no state with retail access
  - ▶ two RTO plans discontinued
  - ▶ GridFlorida received provisional approval from FERC to become a RTO
- West
  - ▶ continued wholesale market and RTO development
  - ▶ moribund retail markets