Updates and Summary of "2003 Performance Review of Electric Power Markets"

A Review of Electric Power Markets in the U.S.

Presentation to the
Commission on Electric Utility Restructuring
Virginia General Assembly
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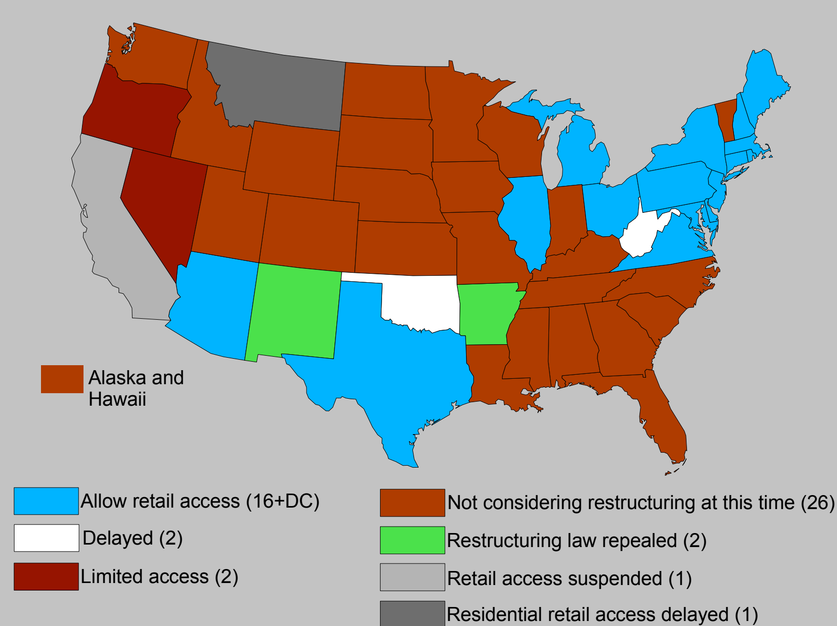
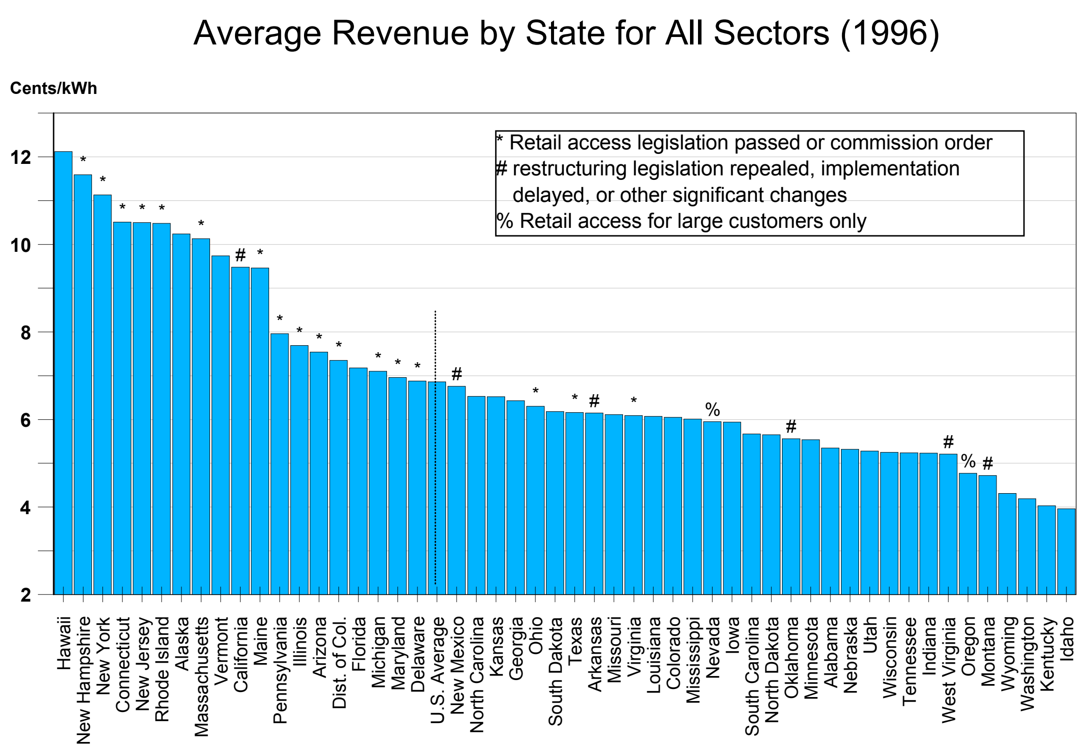
Summary of State Retail Access



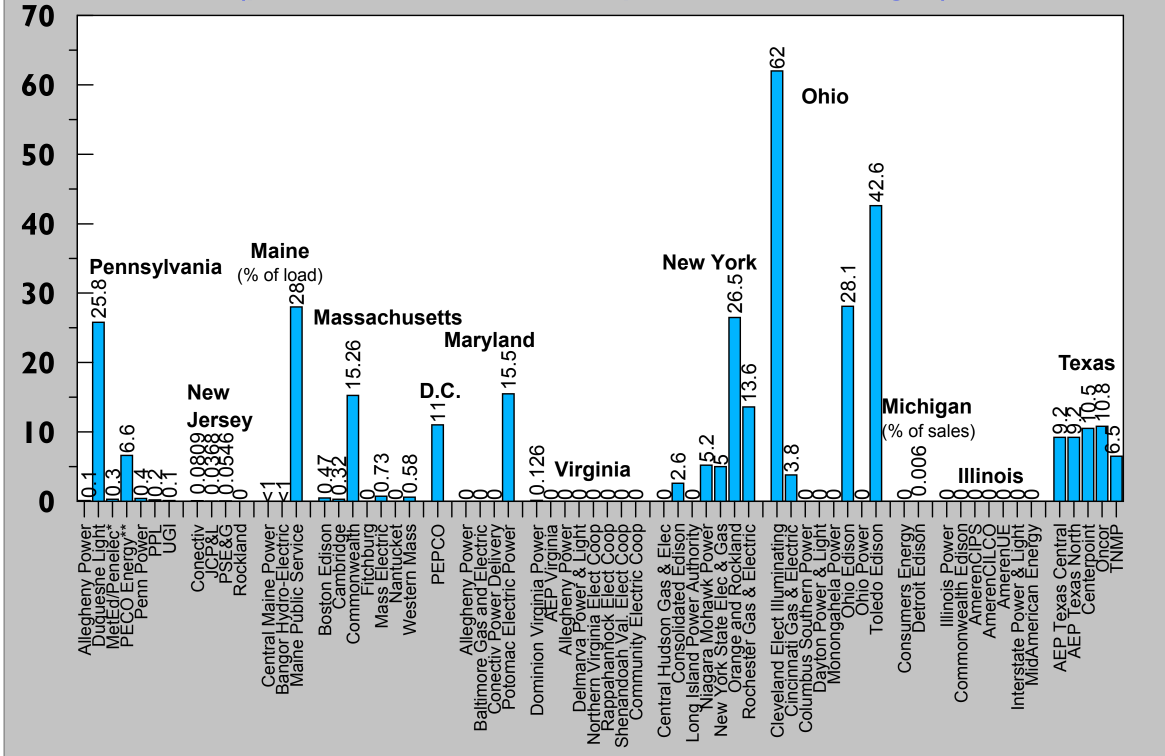
Retail Overview

- Most retail activity (switching) has been in the larger customer categories
- More retail activity also correlated with relatively higher priced utilities
  - however, there are some higher cost utilities with little or no retail activity, but, in general, no low-priced utilities with high retail switching
- Continued development of alternative approaches to determine the standard offer:
  - Maine's competitive bidding process
  - New Jersey's Internet auction for "Basic Generation Service"
- Ohio's municipal "opt-out" aggregation program
- Texas' "Price-to-Beat" or their "Price-to-Compare"



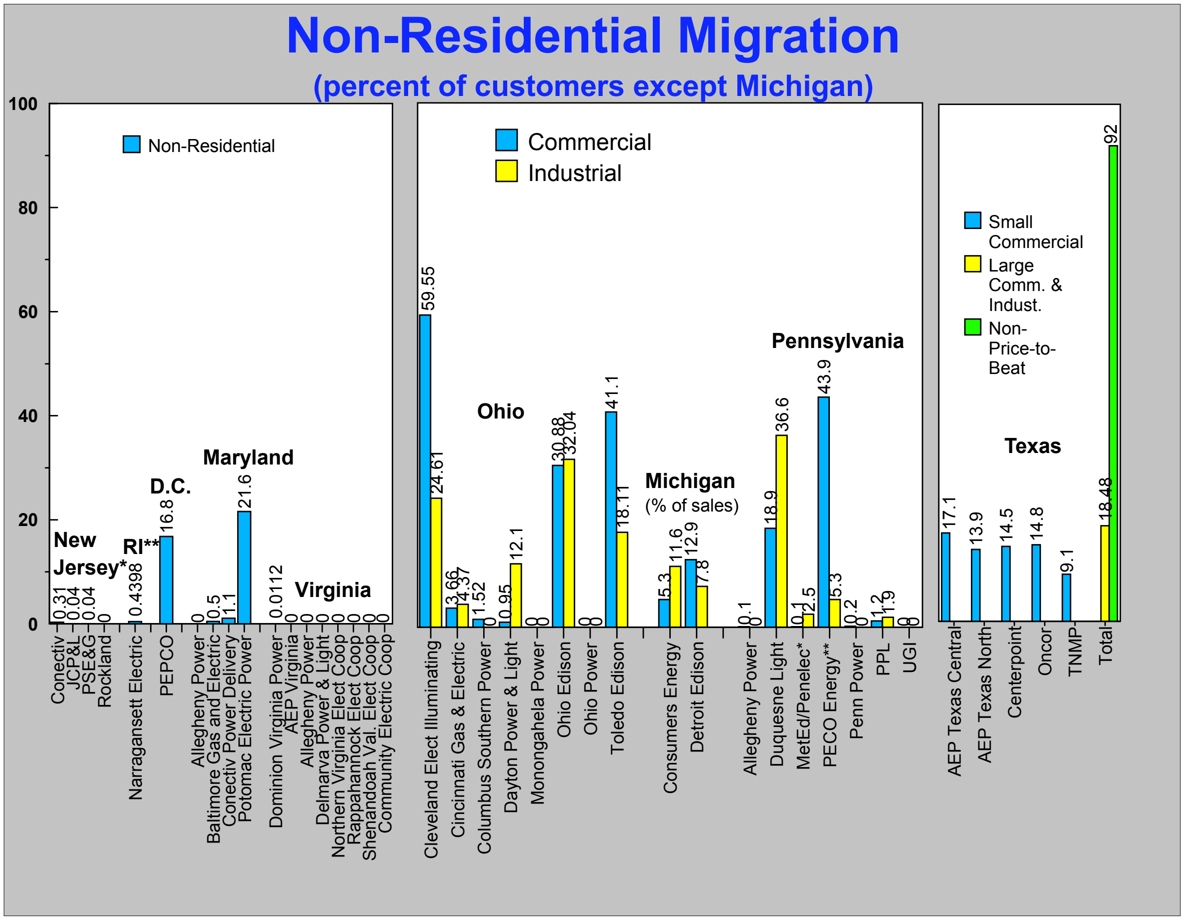
Source: Energy Information Administration, "Electric Sales and Revenue 1996."

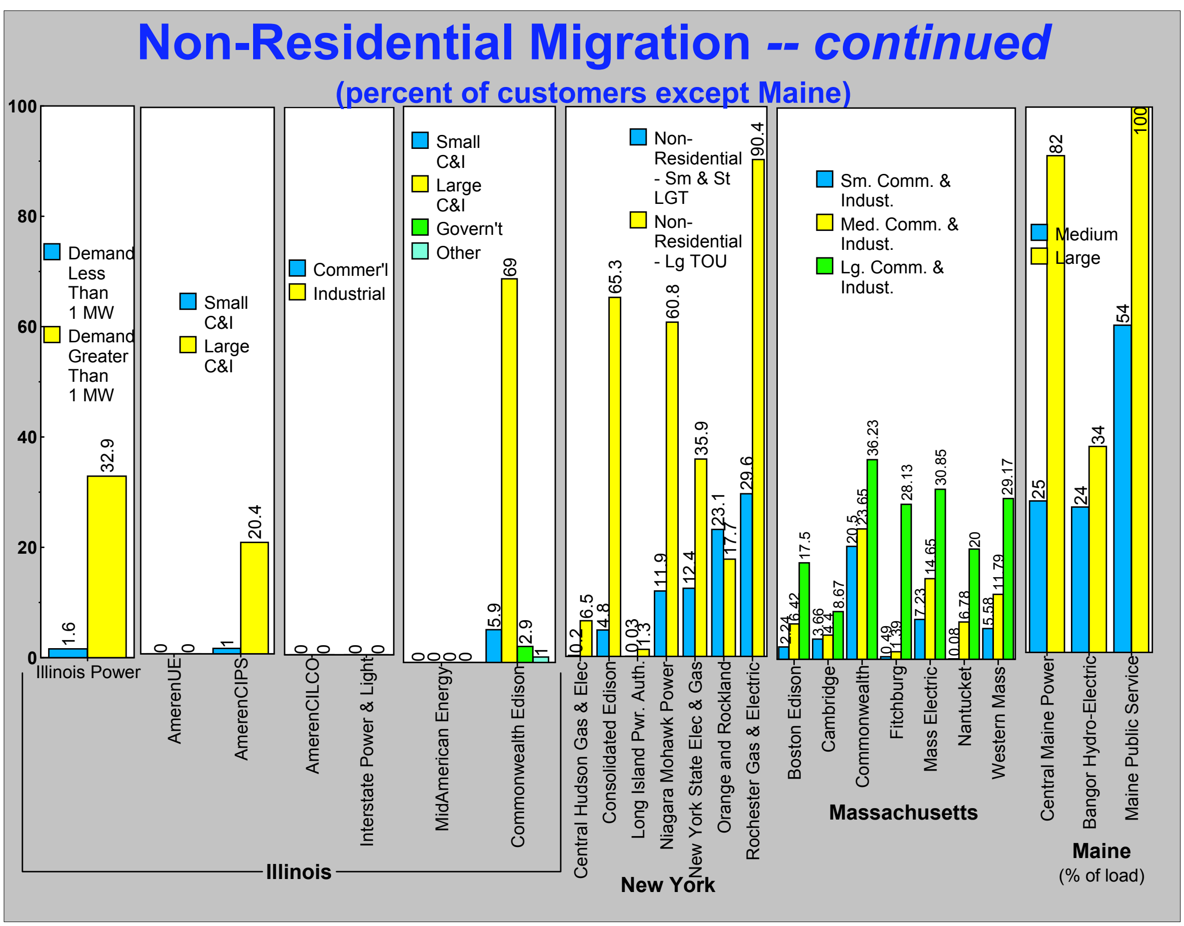
Residential Customer Migration
(percent of customers except Maine and Michigan)



Residential Summary

- 4 of 12 jurisdictions had at least one distribution company that had greater than 20 percent migration
- 6 of 63 distribution companies were greater than 20 percent
- 8 of 12 jurisdictions had at least one distribution company greater than 10 percent
- 12 of 63 distribution companies were greater than 10 percent
- *42 of 63 distribution companies were less than one percent*


Non-Residential Migration
(percent of customers except Michigan)
Non-Residential
Commercial
Industrial
Small Commercial
Large Comm. & Indust.
Non-Price-to-Beat
New Jersey*
RI**
D.C.
Maryland
Virginia
Ohio
Michigan
(% of sales)
Pennsylvania
Texas
Conectiv 0.31
JCP&L 0.04
PSE&G 0.04
Rockland 0
Narragansett Electric 0.4398
PEPCO 16.8
Allegheny Power 0
Baltimore Gas and Electric 0.5
Conectiv Power Delivery 1.1
Potomac Electric Power 21.6
Dominion Virginia Power 0.0112
AEP Virginia 0
Allegheny Power 0
Delmarva Power & Light 0
Northern Virginia Elect Coop 0
Rappahannock Elect Coop 0
Shenandoah Val. Elect Coop 0
Community Electric Coop 0
Cleveland Elect Illuminating 59.55 24.61
Cincinnati Gas & Electric 3.66 4.37
Columbus Southern Power 1.52
Dayton Power & Light 0.95 12.1
Monongahela Power 0 0
Ohio Edison 30.88 32.04
Ohio Power 0 0
Toledo Edison 41.1 18.11
Consumers Energy 5.3 11.6
Detroit Edison 12.9 7.8
Allegheny Power 0.1 0
Duquesne Light 18.9 36.6
MetEd/Penelec* 0.1 2.5
PECO Energy** 43.9 5.3
Penn Power 0.2 0
PPL 1.2 1.9
UGI 0 0
AEP Texas Central 17.1
AEP Texas North 13.9
Centerpoint 14.5
Oncor 14.8
TNMP 9.1
Total 18.48 92
0
20
40
60
80
100


Non-Residential Migration -- continued
(percent of customers except Maine)
Demand Less Than 1 MW
Demand Greater Than 1 MW
Small C&I
Large C&I
Commer'l
Industrial
Small C&I
Large C&I
Govern't
Other
Non-Residential - Sm & St LGT
Non-Residential - Lg TOU
Sm. Comm. & Indust.
Med. Comm. & Indust.
Lg. Comm. & Indust.
Medium
Large
Illinois Power 1.6 32.9
AmerenUE 0 0
AmerenCIPS 1 20.4
AmerenCILCO 0 0
Interstate Power & Light 0 0
MidAmerican Energy 0 0 0 0
Commonwealth Edison 5.9 69 2.9 1
Illinois
Central Hudson Gas & Elec 0.2 6.5
Consolidated Edison 4.8 65.3
Long Island Pwr. Auth. 0.03 1.3
Niagara Mohawk Power 11.9 60.8
New York State Elec & Gas 12.4 35.9
Orange and Rockland 23.1 17.7
Rochester Gas & Electric 29.6 90.4
New York
Boston Edison 2.24 6.42 17.5
Cambridge 3.66 4.4 8.67
Commonwealth 20.5 23.65 36.23
Fitchburg 0.49 1.39 28.13
Mass Electric 7.23 14.65 30.85
Nantucket 0.08 6.78 20
Western Mass 5.58 11.79 29.17
Massachusetts
Central Maine Power 25 82
Bangor Hydro-Electric 24 34
Maine Public Service 54 100
Maine
(% of load)
0
20
40
60
80
100

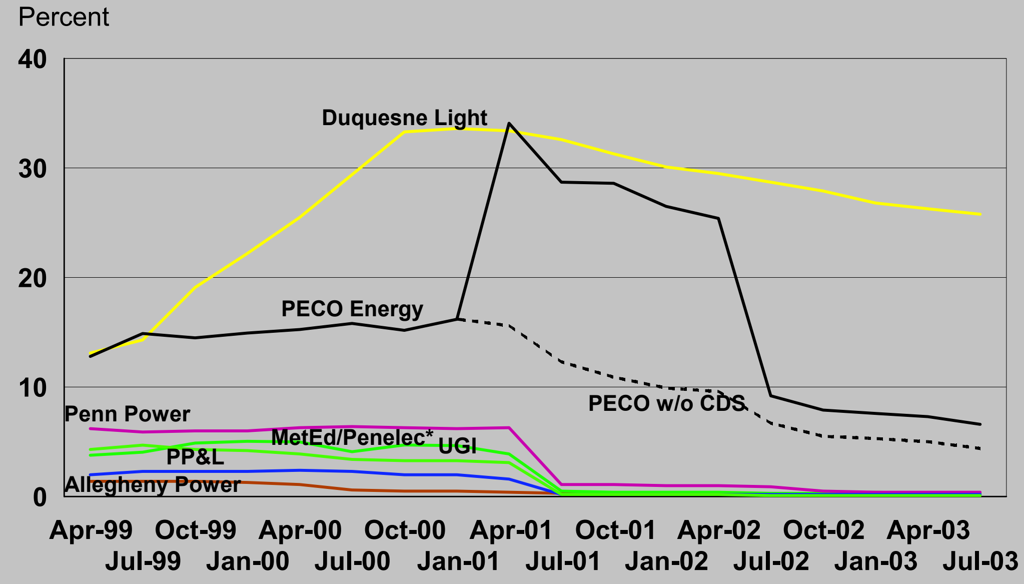
Non-Residential Summary

- Eight states out of 13 jurisdictions have at least one distribution company with at least one category greater than 20 percent
- 23 distribution companies out of 64 have at least one category above 20 percent
- Generally, activity increases as the customer size increases
- States not reporting migration figures (Arizona, Connecticut, Delaware, and New Hampshire) have little or no retail market activity

Notes and Sources for charts

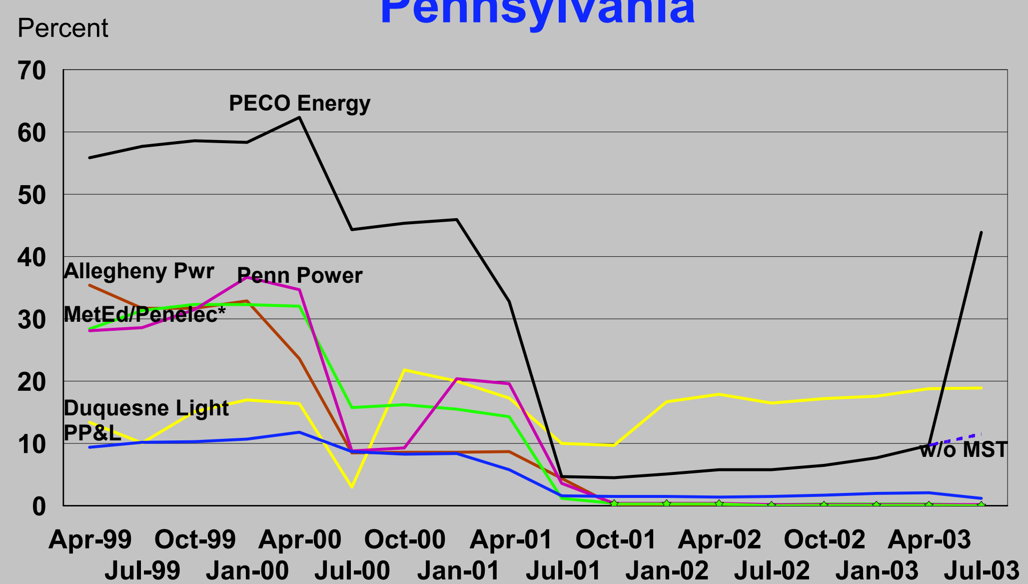
State	Notes and Sources
District of Columbia	Competitive electricity suppliers' share, July 2003. Source: District of Columbia Public Service Commission
Illinois	Percentage of customers receiving delivery services, as of July 31, 2003. Source: Illinois Commerce Commission
Maine	Percentage of load served by competitive providers -- Residential and small commercial, Medium, and Large customers, August 1, 2003. Source: Maine Public Utilities Commission
Maryland	Electric choice enrollment monthly report, month ending July 25, 2003. Source: Maryland Public Service Commission
Massachusetts	Percentage competitive generation customers; residential includes residential non low income, residential low income, and residential time-of-use customers, July 2003. Source: Massachusetts Division of Energy Resources
Michigan	Percentage sales in MWh, first quarter end 2003. Source: Michigan Public Service Commission staff
New York	New York State Electric Retail Access Migration, June 2003. Source: New York State Public Service Commission
New Jersey	Percentage of customer accounts served by competitive suppliers, July 29, 2003. *Figures reported before the end of the transition period, preliminary indications are that 57% of the largest customers, those not on BGS, have chosen a supplier. Source: New Jersey Board of Public Utilities
Ohio	Electric choice customer switch rates for the month ending March 31, 2003. Note: 89.85 percent of residential customers switched through aggregation. Source: Public Utilities Commission of Ohio, Division of Market Monitoring & Assessment
Pennsylvania	Percentage of customers served by an alternative supplier, July 1, 2003. * FirstEnergy companies formerly part of GPU. ** Includes 2.2% of PECO's residential customers assigned to Competitive Discount Service (CDS) and 32.4% commercial customers assigned. Source: Pennsylvania Office of Consumer Advocate
Rhode Island	Percentage of competitive supply customers, from data in "State of Rhode Island Quarterly Report" filed by The Narragansett Electric Company, Monthly Historical Data by Type of Generation Service, June 2003. **Rhode Island percentage is for the state overall, figures are not given by customer category. Source: Rhode Island Public Utilities Commission
Texas	Percentage of customers served by nonaffiliated Retail Electric Providers. Residential and small commercial customers, June 2, 2003. Large Commercial and Industrial and non-price-to-beat customers, December 2002. Source: Public Utility Commission of Texas
Virginia	Percentage of electricity customers in Virginia LDC territories enrolled with a CSP, July 7, 2003. Source: Commonwealth of Virginia State Corporation Commission

Residential Switching in Pennsylvania

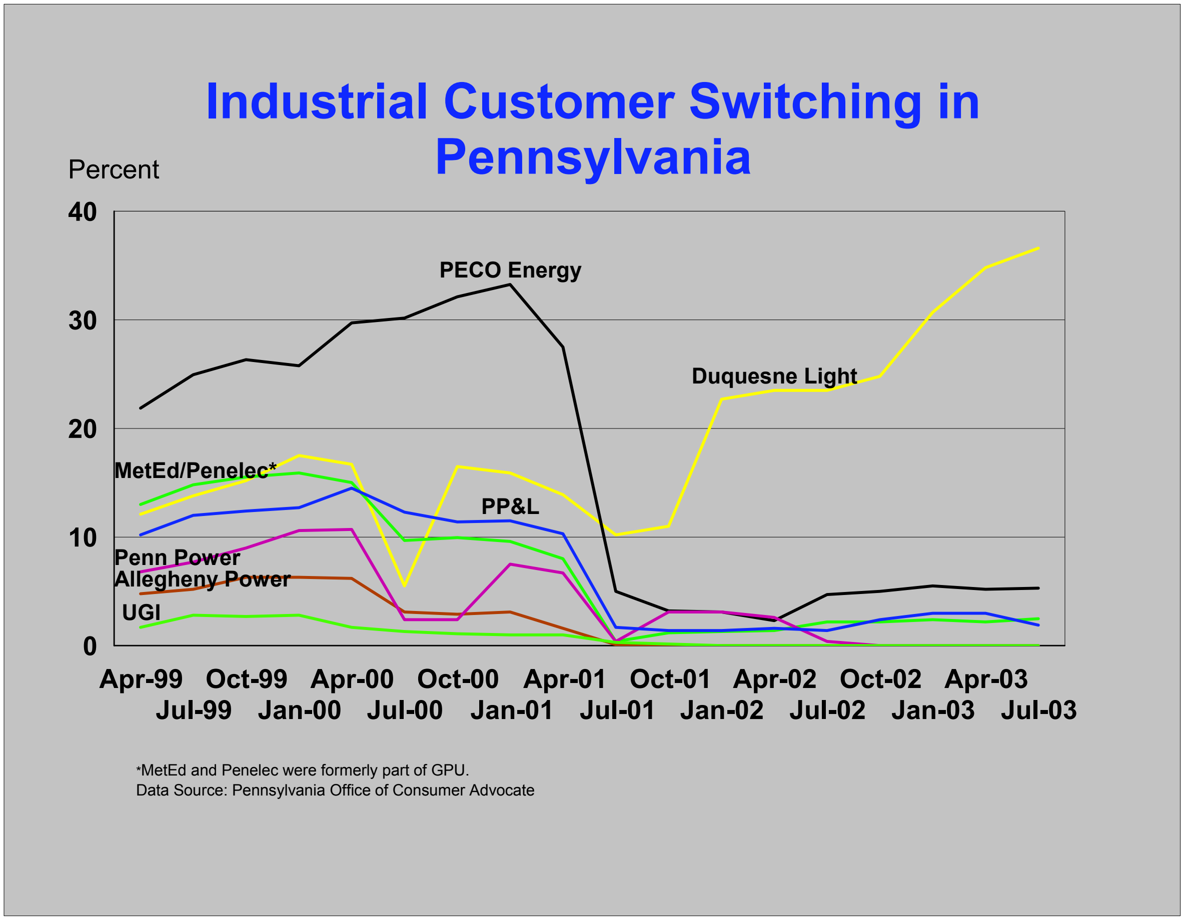


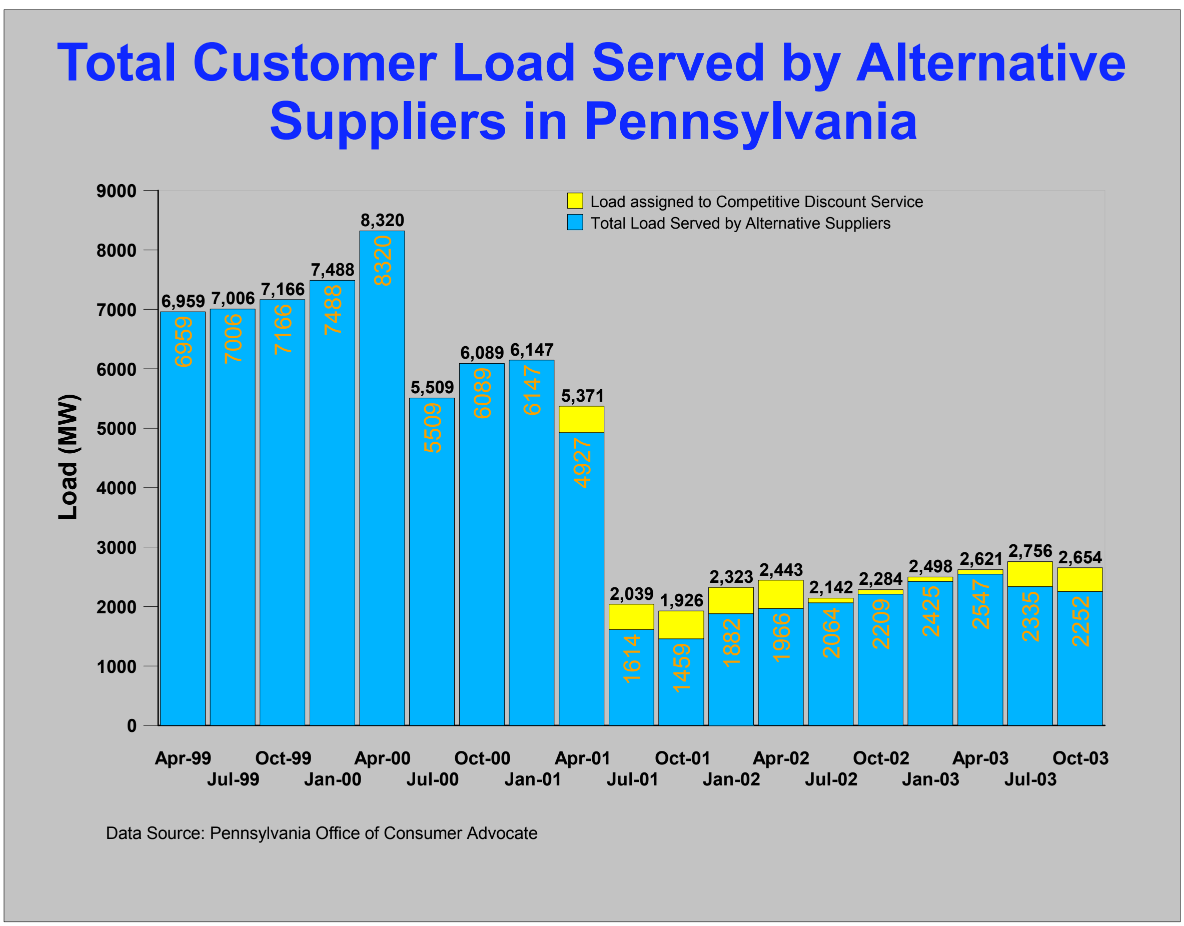
*MetEd and Penelec were formerly part of GPU.
Data Source: Pennsylvania Office of Consumer Advocate

Commercial Customer Switching in Pennsylvania

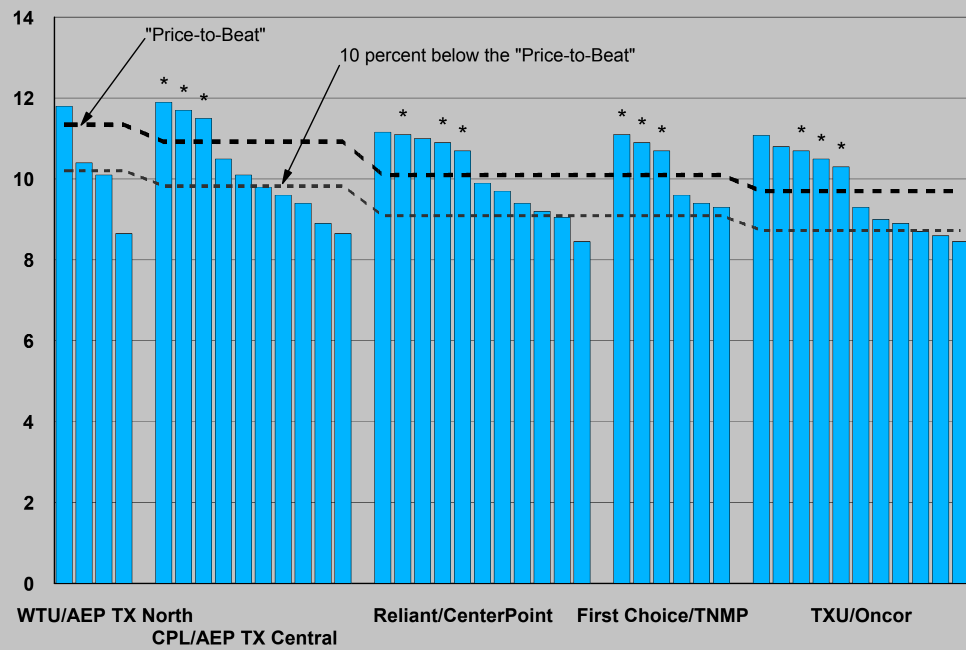


*MetEd and Penelec were formerly part of GPU.
Data Source: Pennsylvania Office of Consumer Advocate


Industrial Customer Switching in Pennsylvania
Percent
40
30
20
10
0
PECO Energy
Duquesne Light
MetEd/Penelec*
PP&L
Penn Power
Allegheny Power
UGI
Apr-99 Oct-99 Apr-00 Oct-00 Apr-01 Oct-01 Apr-02 Oct-02 Apr-03
Jul-99 Jan-00 Jul-00 Jan-01 Jul-01 Jan-02 Jul-02 Jan-03 Jul-03
*MetEd and Penelec were formerly part of GPU.
Data Source: Pennsylvania Office of Consumer Advocate

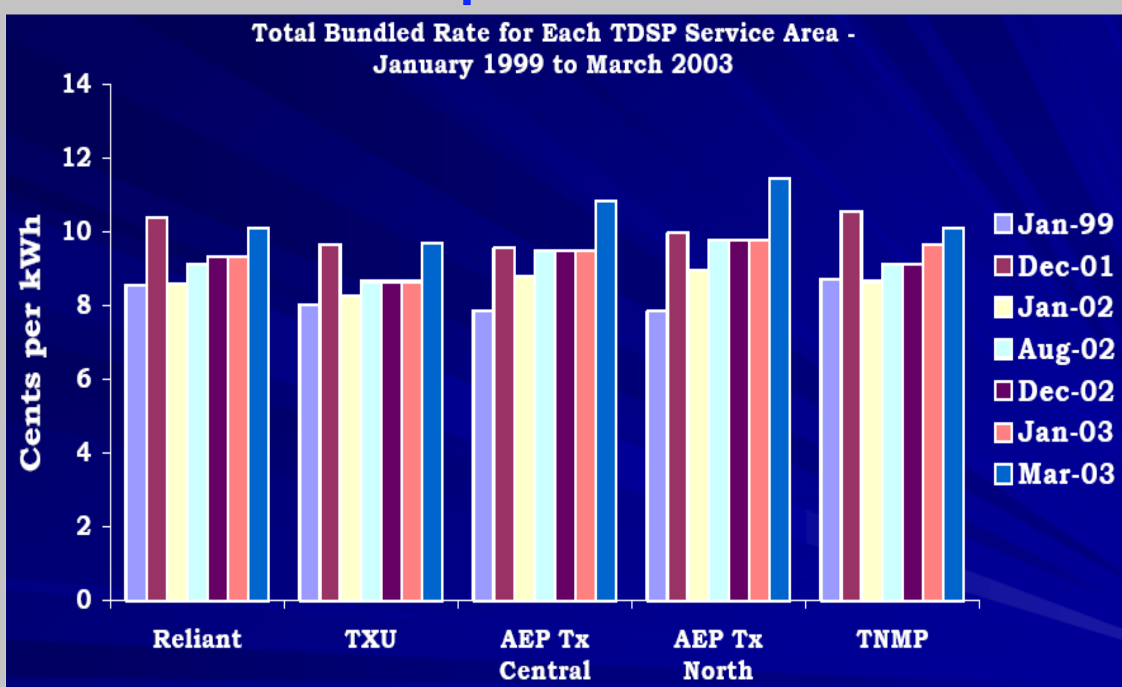

Total Customer Load Served by Alternative Suppliers in Pennsylvania
Load (MW)
Load assigned to Competitive Discount Service
Total Load Served by Alternative Suppliers
6,959 7,006 7,166 7,488 8,320 5,509 6,089 6,147 5,371 2,039 1,926 2,323 2,443 2,142 2,284 2,498 2,621 2,756 2,654
6959 7006 7166 7488 8320 5509 6089 6147 4927 1614 1459 1882 1966 2064 2209 2425 2547 2335 2252
Apr-99 Oct-99 Apr-00 Oct-00 Apr-01 Oct-01 Apr-02 Oct-02 Apr-03 Oct-03
Jul-99 Jan-00 Jul-00 Jan-01 Jul-01 Jan-02 Jul-02 Jan-03 Jul-03
Data Source: Pennsylvania Office of Consumer Advocate

Residential offers in Texas Retail Markets - June 2003

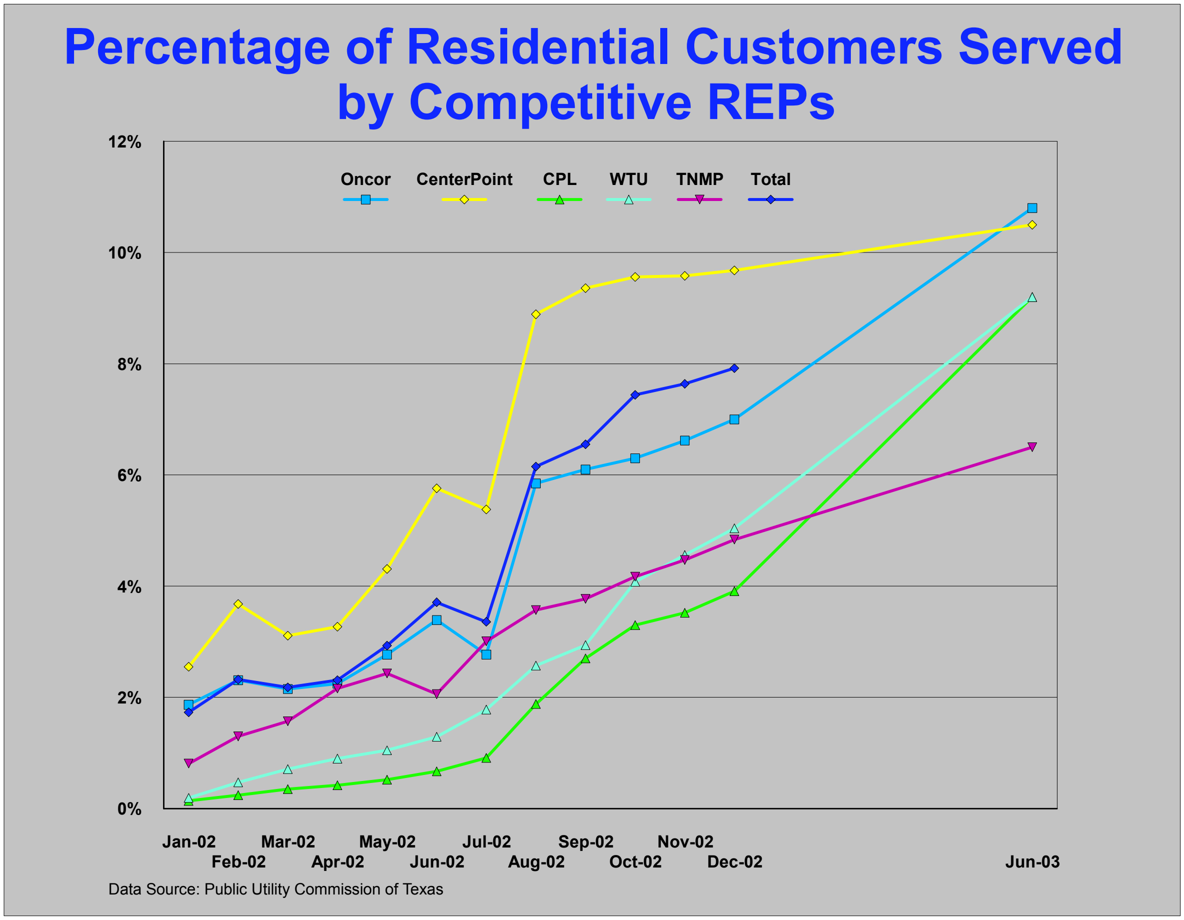


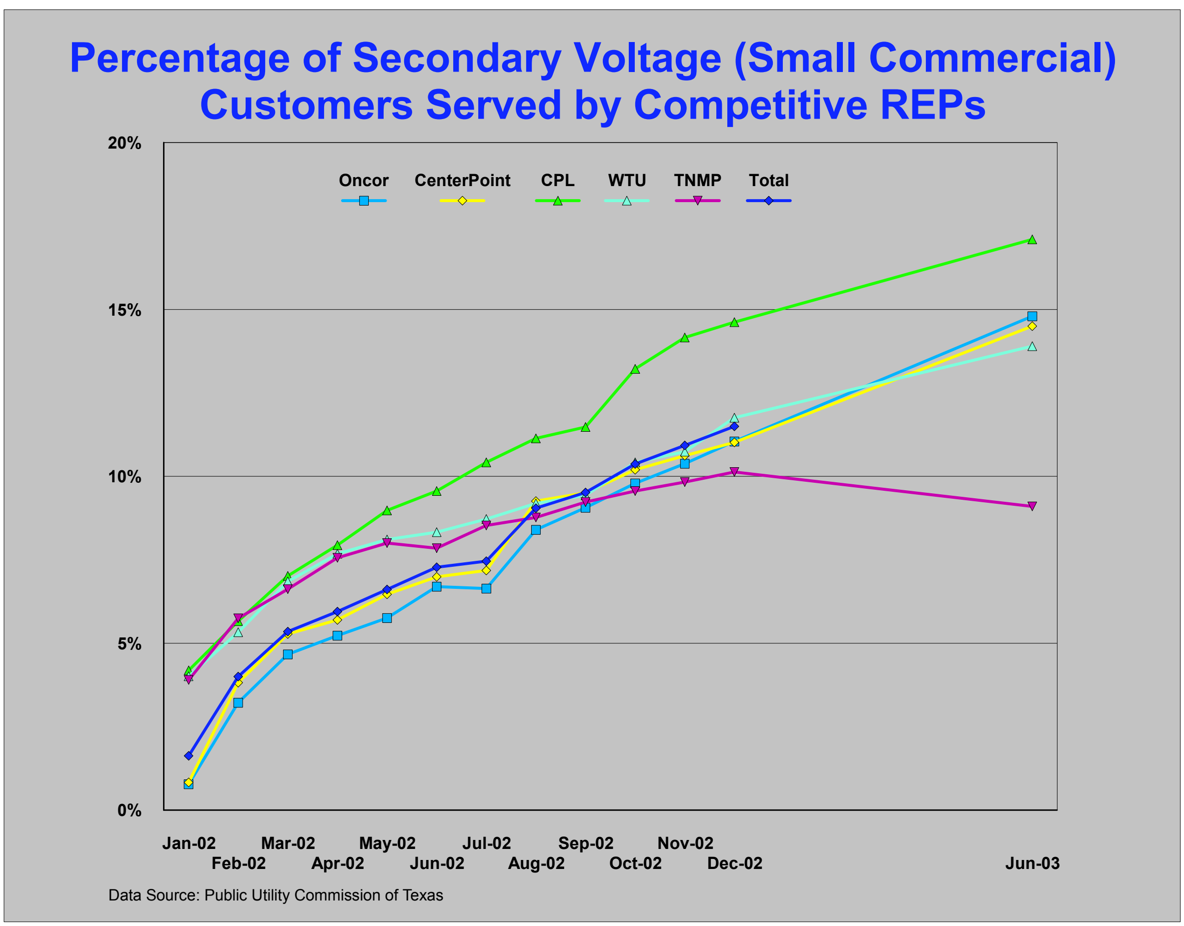
*Indicates an offer that is in part or entirely from renewable resources.
Data Source: Based on offers from ENERGYguide.com

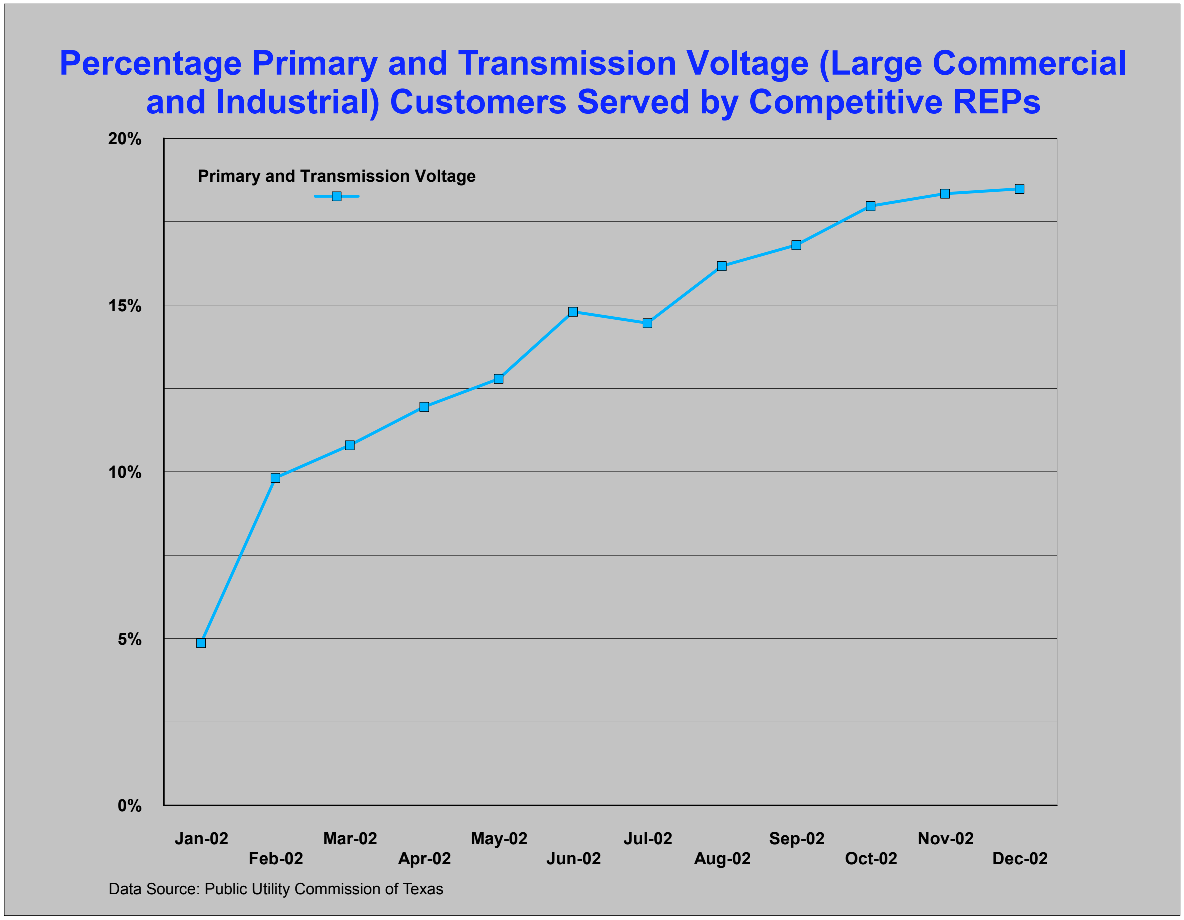
Texas pre-retail access bundled rates and the "price-to-beat"

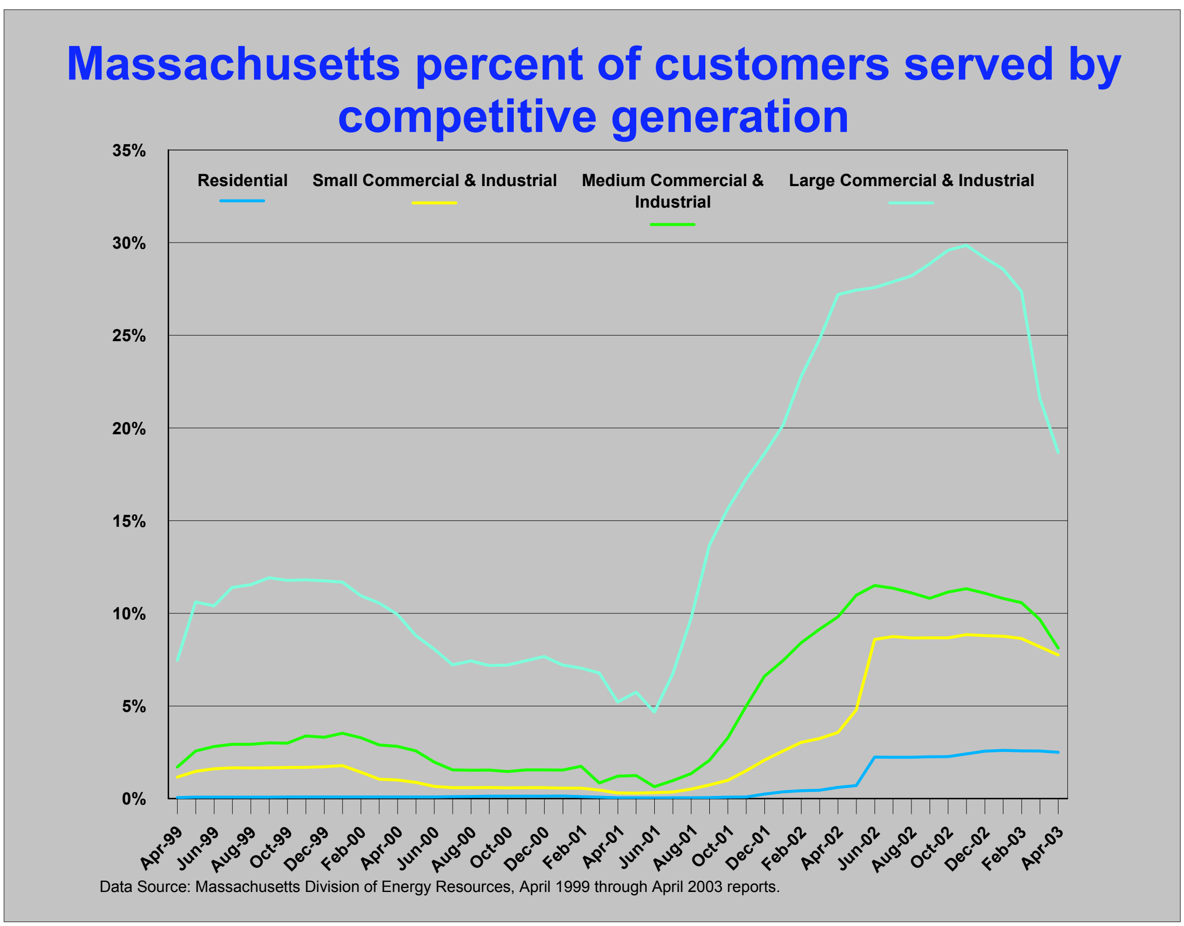


Source: Slide from presentation of Chairman Rebecca Klein, Public Utility Commission of Texas, Competitive Retail Markets in Texas and Market Design," Electric Power Supply Association, State Issues Meeting, May 6, 2003.

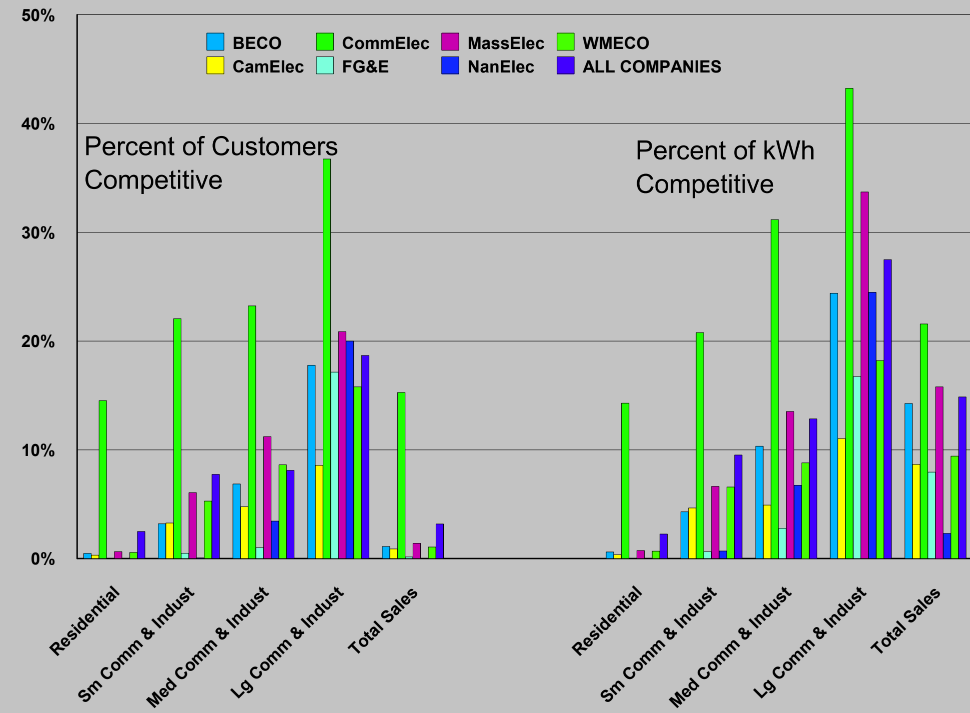

Percentage of Residential Customers Served by Competitive REPs
12%
10%
8%
6%
4%
2%
0%
Oncor
CenterPoint
CPL
WTU
TNMP
Total
Jan-02
Feb-02
Mar-02
Apr-02
May-02
Jun-02
Jul-02
Aug-02
Sep-02
Oct-02
Nov-02
Dec-02
Jun-03
Data Source: Public Utility Commission of Texas


Percentage of Secondary Voltage (Small Commercial) Customers Served by Competitive REPs
20%
15%
10%
5%
0%
Oncor
CenterPoint
CPL
WTU
TNMP
Total
Jan-02
Feb-02
Mar-02
Apr-02
May-02
Jun-02
Jul-02
Aug-02
Sep-02
Oct-02
Nov-02
Dec-02
Jun-03
Data Source: Public Utility Commission of Texas


Percentage Primary and Transmission Voltage (Large Commercial and Industrial) Customers Served by Competitive REPs
Primary and Transmission Voltage
20%
15%
10%
5%
0%
Jan-02
Feb-02
Mar-02
Apr-02
May-02
Jun-02
Jul-02
Aug-02
Sep-02
Oct-02
Nov-02
Dec-02
Data Source: Public Utility Commission of Texas

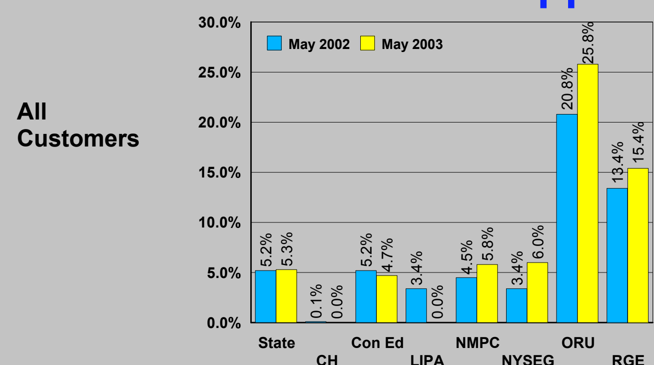

Massachusetts percent of customers served by competitive generation
Residential
Small Commercial & Industrial
Medium Commercial & Industrial
Large Commercial & Industrial
35%
30%
25%
20%
15%
10%
5%
0%
Apr-99
Jun-99
Aug-99
Oct-99
Dec-99
Feb-00
Apr-00
Jun-00
Aug-00
Oct-00
Dec-00
Feb-01
Apr-01
Jun-01
Aug-01
Oct-01
Dec-01
Feb-02
Apr-02
Jun-02
Aug-02
Oct-02
Dec-02
Feb-03
Apr-03
Data Source: Massachusetts Division of Energy Resources, April 1999 through April 2003 reports.

Massachusetts distribution company comparison

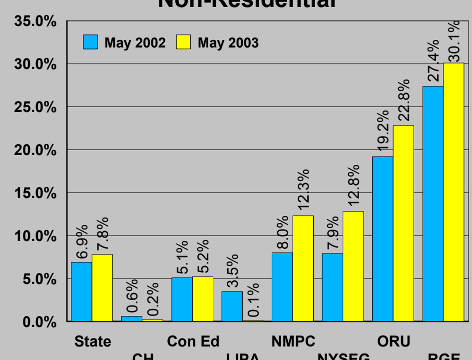


Data Source: Massachusetts Division of Energy Resources, April 2003.

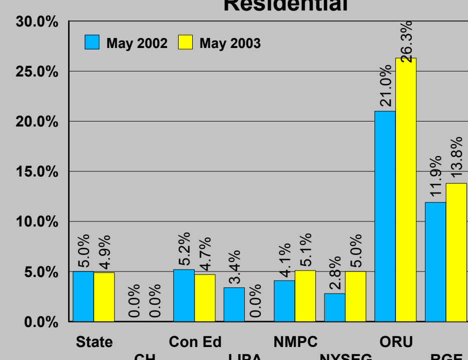
New York percent of customer accounts migrated to alternative suppliers



Non-Residential

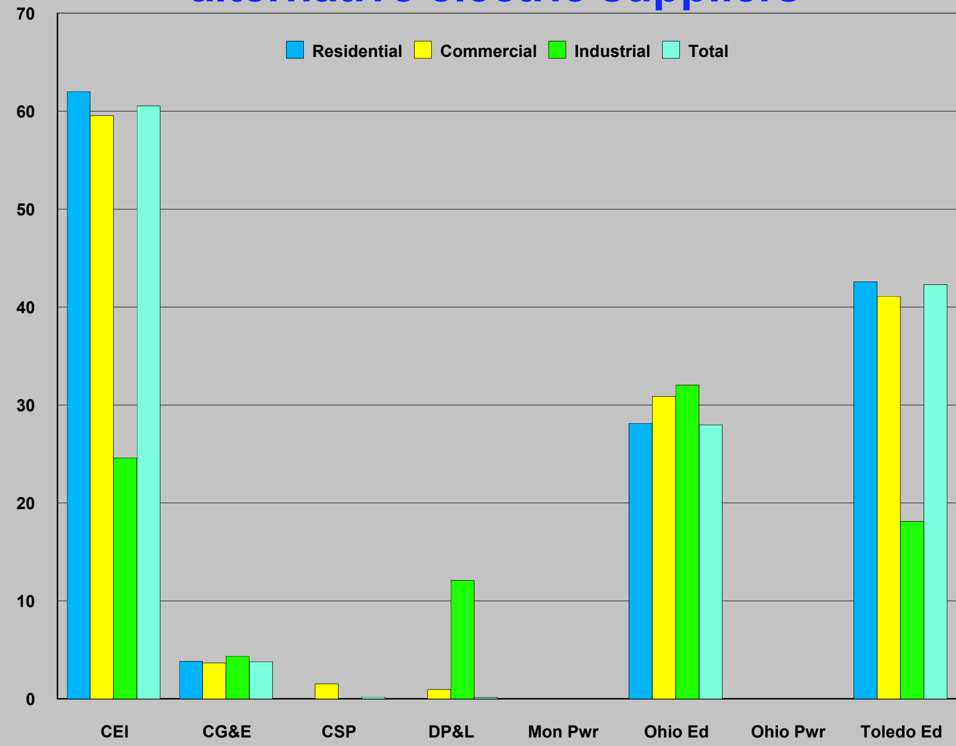


Residential



Data Source: New York State Public Service Commission.

Ohio percent of customers that switched to alternative electric suppliers



Data Source: Public Utilities Commission of Ohio, Division of Market Monitoring & Assessment, for the month ending March 31, 2003.

Montana Update

- Montana's restructuring law passed in 1997
- Some retail market activity early on for larger customers after retail access began
- These larger customers paid much higher prices as a result of the western power crisis of 2000 - 2001 -- most are still in the market
- Montana Power sold all its energy assets:
  - Dec. 1999 most of its generation assets were purchased by PPL Corp.
  - Jan. 2001 sold electric and gas distribution system to NorthWestern Corp.
  - Montana Power became a telecom company, "Touch America" -- which is now in bankruptcy

Montana Update *(continued)*

- The generation assets of Montana Power became wholesale facilities that are no longer price regulated and no longer under the jurisdiction of the Montana PSC (divestiture was not required by the restructuring law)
- NorthWestern has no power plants in Montana -- so it purchases power in the wholesale market for its customers
- NorthWestern filed for bankruptcy protection on Sept. 14 -- driven by NW's non-utility affiliates, not the gas and electric distribution systems
- The PSC adopted guidelines in March 2003 for default supply, resource planning and procurement, and portfolio management after a roundtable process
- The planning and procurement goals include having adequate, stable, reliable, and reasonably priced electric service

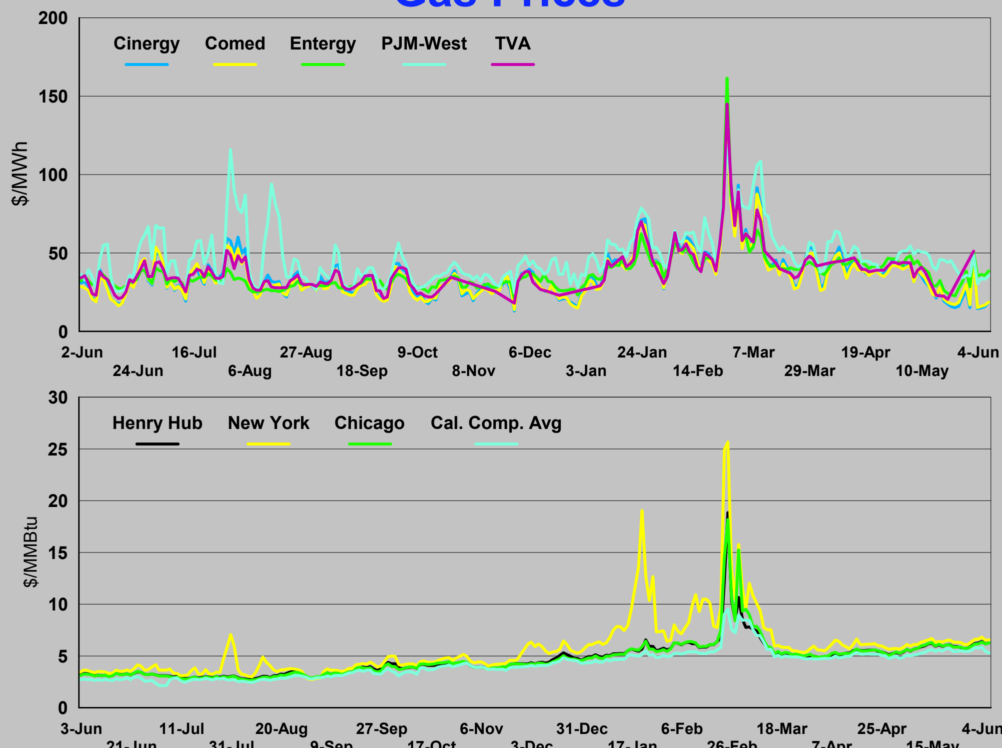
Montana Update *(continued)*

- Proposed legislation would (among other things):
  - create a transition period that would run through 2027
  - phase in small and medium customer choice
  - have a one time permanent choice for large customers
  - have the PSC adopt rules, rates, and fees that protect small customers
  - have the PSC monitor retail market competitiveness after 2007
  - have the PSC adopt rules governing resource planning and procurement

Wholesale Overview

- Wholesale spot market prices in all regions are highly correlated with natural gas prices
- Based on independent analysis, there is evidence that significant market power is being exercised in wholesale markets
  - outside of California, very little recent *independent* analysis of wholesale markets
- The continuing "credit crunch" and other factors have slowed new generating capacity additions
- Continuing development of regional wholesale power markets and RTOs

Comparison of Spot Power Prices and Natural Gas Prices



Data Source: IntercontinentalExchange, Inc., various trading hubs and U.S. Department of Energy, Energy Information Administration.

Continuing "Bleak Credit Picture"

- S&P notes that the constrained capital access is due to investor skepticism of:
  - accounting practices and disclosures
  - a "plethora" of federal and state investigations
  - questions on future financial performance
  - investments outside traditional regulated utility business -- merchant generation, trading activities, and international investments

Continuing "Bleak Credit Picture" *(continued)*

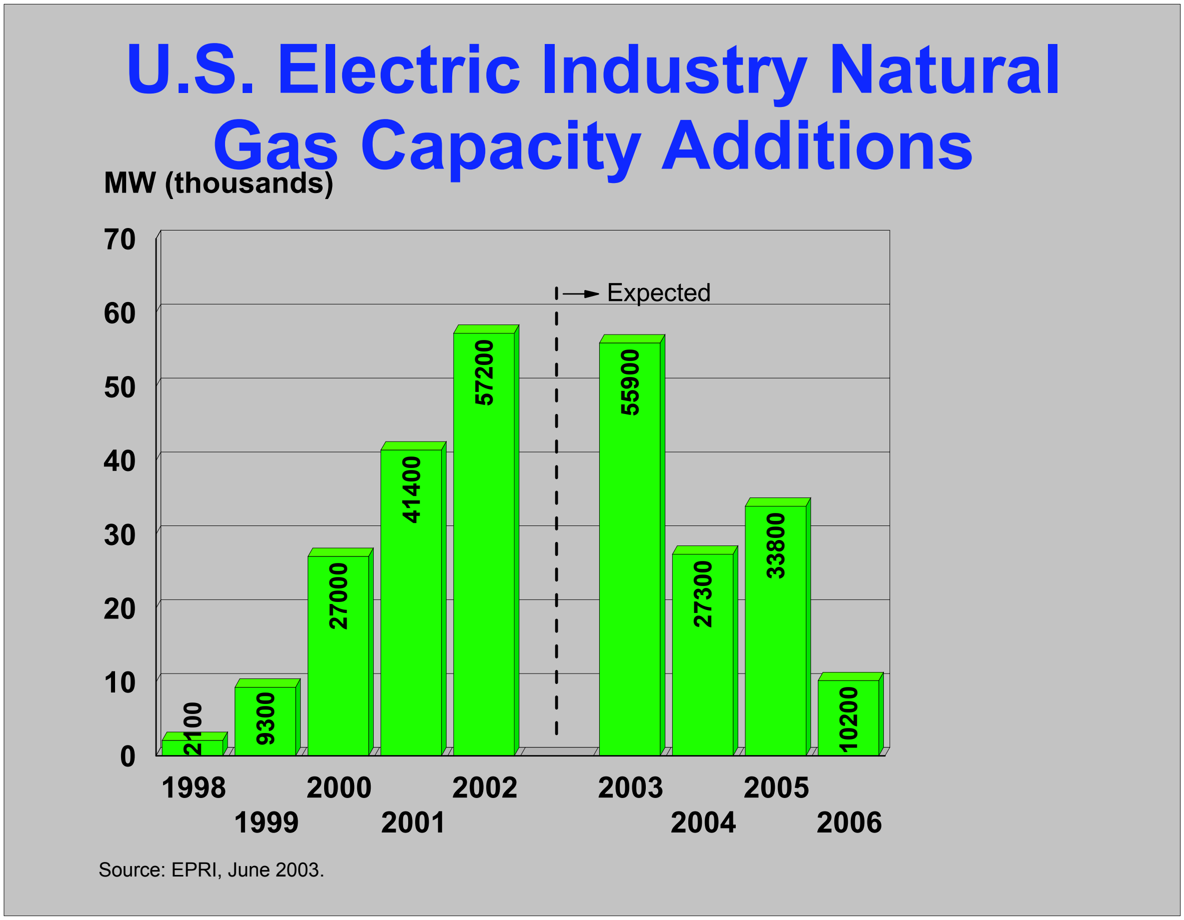
- Average rating for the U.S. power sector dropped to mid-'BBB' (meaning "adequate capacity to meet financial commitments")
- "companies that continue to emphasize a vertically integrated structure should hang onto an 'A-' average." ("strong capacity to meet financial commitments")
- From a more recent S&P publication (S&P, Nov. 2003):
  - "Bottom of the credit cycle for the power and energy sector has yet to be reached"
  - due to debt and overcapacity in the industry
  - "the industry has habitually sought to grow through investment in business enterprises beyond its core competency" yielding "lackluster results and in many cases damaged overall credit quality" -- S&P, Nov. 2003

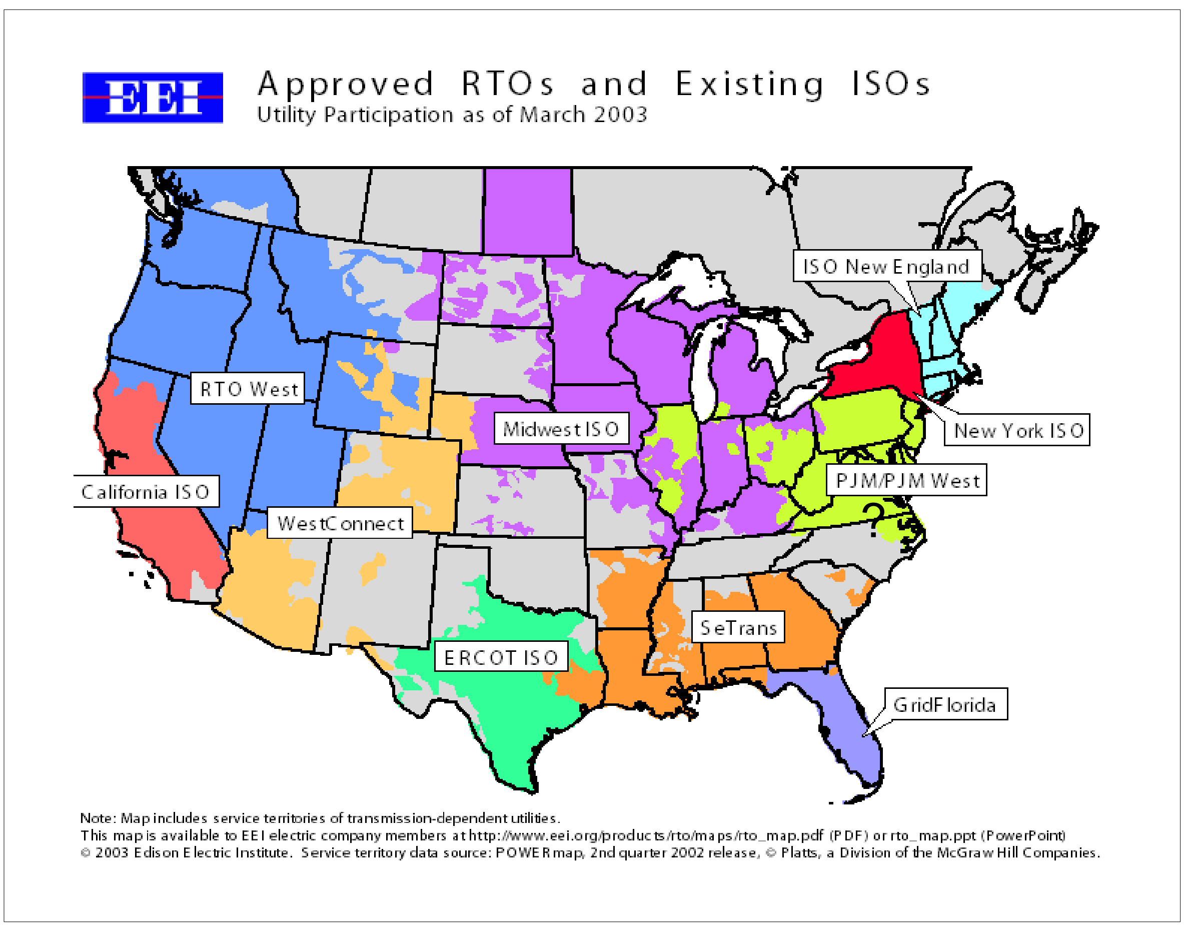
Continuing "Bleak Credit Picture" *(continued)*

- S&P continued:
  - "... credit quality in the power and energy sector has deteriorated considerably over [the] past three years with downgrades far outpacing the number of upgrades. In 2003, the downgrade to upgrade ratio still exceeds 10:1"
  - "prospects for credit quality remain challenging, as indicated by ratings outlooks, 40% of which are negative"
  - "The recovery outlook for energy merchants is rather bleak" . . . "*A key to recovery in the sector will be the extent to which reserve margins persist about 20%*" (emphasis added)

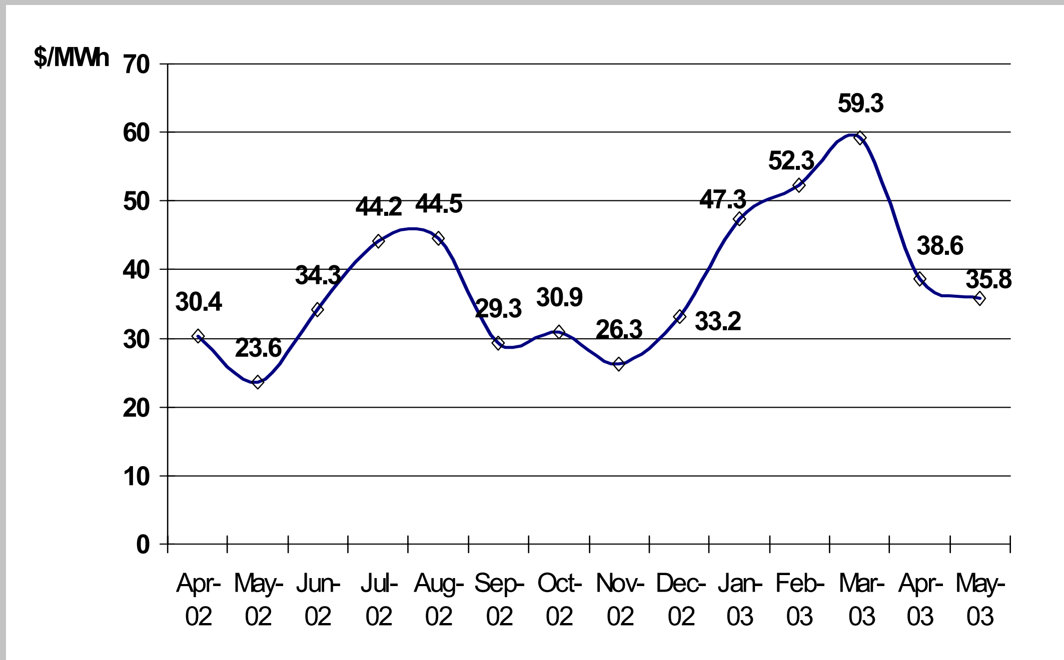
Continuing "Bleak Credit Picture" *(continued)*

- Fitch Ratings notes that
  - In the utility sector, there have been four significant bankruptcies and restructurings involving five companies during the period from the Great Depression through 2000
    - El Paso Electric Co., Public Service Co. of New Hampshire, Columbia Gas System/Columbia Gas Transmission, and Tucson Electric Co. (Tucson Electric reorganized outside of bankruptcy; the others were Chapter 11 filings)
    - all occurred in the four year period 1988 through 1992
  - Post 2000 bankruptcies and restructurings -- 8 in the last three years (8 of 12 since the 1930s were after 2000)
    - Pacific Gas & Electric Co., Enron, NRG, National Energy Group, Mirant/Mirant Americas Generating Inc./MIRMA, NorthWestern Corp., Southern California Edison, Covanta
  - They also cite "excess capacity" as part of the cause


U.S. Electric Industry Natural Gas Capacity Additions
MW (thousands)
70
60
50
40
30
20
10
0
Expected
2100
9300
27000
41400
57200
55900
27300
33800
10200
1998
1999
2000
2001
2002
2003
2004
2005
2006
Source: EPRI, June 2003.

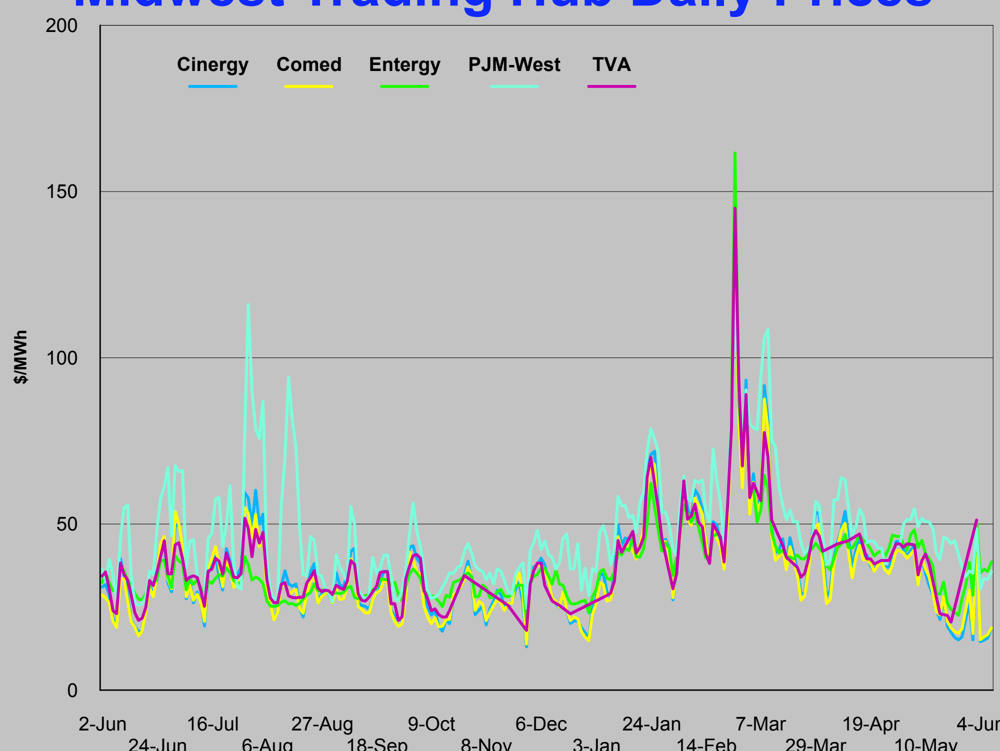

EEI
Approved RTOs and Existing ISOs
Utility Participation as of March 2003
ISO New England
RTO West
Midwest ISO
New York ISO
California ISO
PJM/PJM West
WestConnect
SeTrans
ERCOT ISO
GridFlorida
Note: Map includes service territories of transmission-dependent utilities.
This map is available to EEI electric company members at http://www.eei.org/products/rto/maps/rto_map.pdf (PDF) or rto_map.ppt (PowerPoint)
© 2003 Edison Electric Institute. Service territory data source: POWERmap, 2nd quarter 2002 release, © Platts, a Division of the McGraw Hill Companies.

PJM Monthly Weighted Average LMPs



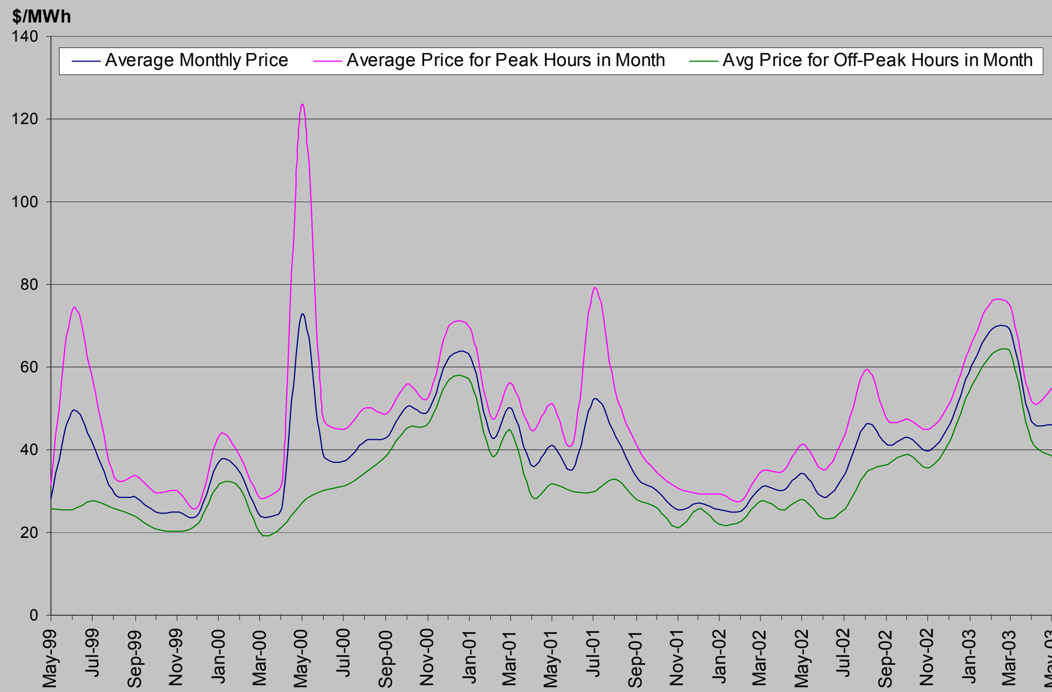
Data Source: PJM

Midwest Trading Hub Daily Prices



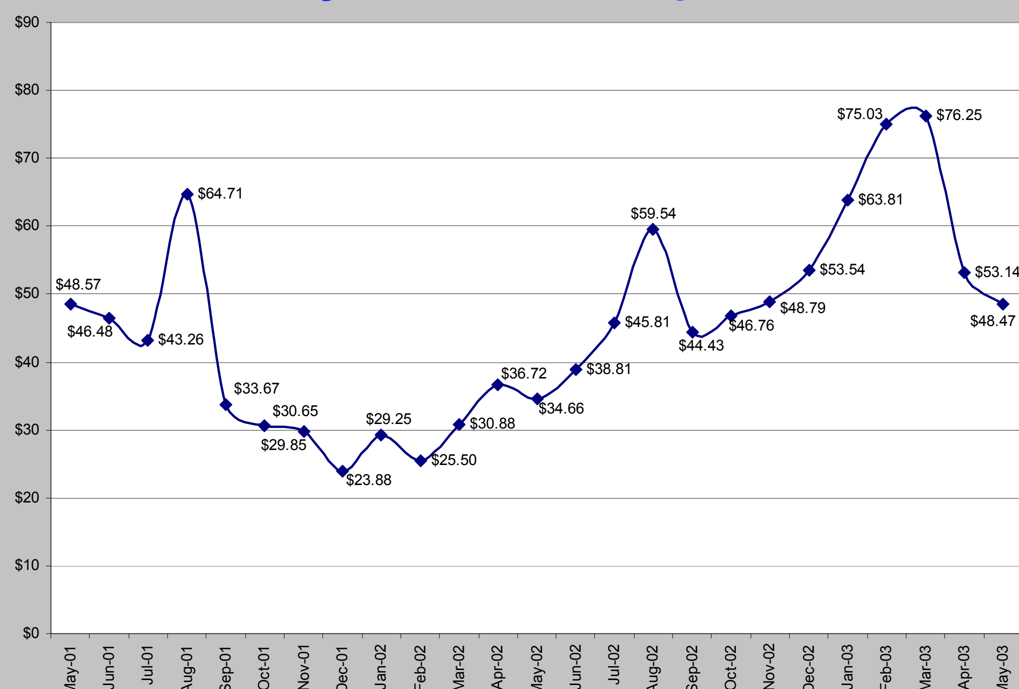
Data Source: IntercontinentalExchange, Inc.

ISO New England average monthly, average monthly peak, and average monthly off-peak prices



Data Source: ISO New England, June 2003.

New York ISO load weighted monthly average day ahead market prices



Data Source: New York ISO, May 2001 through May 2003.