DOER report

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The Commonwealth of Massachusetts

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1999 Market Monitor: Electric Industry Restructuring

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Introduction

During the twelve-month period ending in December 1999, the electric utility industry in Massachusetts continued its progress toward reliance on competitive markets. Transitional rate reductions mandated by the restructuring legislation resulted in more than $535 million saved by Massachusetts electric customers. In addition, wholesale electricity markets underwent a major transformation as the market for "spot" or daily wholesale transactions shifted from a cost-based to a bid-based system. The Restructuring Act requires the Division of Energy Resources to monitor changes in the electricity markets each year. This report contains descriptions of the highlights and significant events in 1999.

Highlights

- ***Consumers saved more than $535 million in 1999.***
- ***The average residential customer saved $92 in 1999.***
- ***Utility mergers transformed the industry landscape.***
- ***Wholesale "spot" market shifted to competitive bidding.***
- ***Large commercial and industrial customers took advantage of competitive electricity supply.***
- ***The number of Default Service customers increased significantly.***
- ***Price disparities did not change among customer sectors or service territories.***

Table 1: Savings from Mandated Rate Reductions

	Residential	Commercial	Industrial	Other	All Customers
1999 Sales (Billions of kWh)	14.875	20.899	7.666	0.285	43.724
Average Number of Customers (1999)	2,174,668	278,728	7,860	6,154	2,467,410
Average Annual Expenditure Per Customer (1999)	$703	$6,428	$70,907	$8,287	$1,592
Average Annual Savings Per Customer (1999)	$92	$900	$9,910	$1,055	$219
Estimated Total Savings (millions)	$200	$251	$78	$6	$535

Sources: Energy Information Administration EIA Forms (1999), EIA Power Annual 1998, DOER

The Electric Restrucutring Act of 1997

Goals

The Act provides the framework for the evolution of the competitive electric industry in Massachusetts. Its primary goals are to reduce electricity prices, provide choice of power suppliers to all retail customers, maintain the reliability of the electric system, improve distribution performance, and ensure consumer protection and education.

Provisions

Recognizing that restructuring the industry would be a complex process, the Legislature specified that transition to competition should occur in "an orderly manner." Beginning on March 1, 1998, the most dramatic provision of the Act gave retail customers of the affected distribution companies the option to chose their generation (power) supplier. They also began to receive at least a 10% discount (relative to 1997 rates) on their electric bills. These customers received an additional 5% decrease starting September 1, 1999.

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This Executive Summary and the full Market Monitor 1999 report can be found on our web site at www.state.ma.us/doer

Suggestions and comments can be e-mailed to energy@state.ma.us

1999 in Review

1. Consumers Saved Over $535 Million In 1999.

As mandated by the Act, each distribution company was able to meet the required fifteen percent savings by September 1999. Massachusetts consumers saved over $535 million over pre-restructuring rates. Over the course of the year, residential customers saved $200 million, commercial customers $251 million, and industrial customers $78 million. The average residential customer saved $92 in 1999. Commercial and industrial customers saved, on average, $900 and $9,910 respectively (see Table 1). When added to the savings realized in 1998, total savings after twenty-two months of restructuring equals $910 million.

2. Massachusetts Enjoyed 4th Highest Savings Among Deregulated States.

For 1999, Massachusetts featured the 4th highest percent reduction in price among deregulated states. Of the 21 states and the District of Columbia, only Pennsylvania, Rhode Island, and Illinois showed greater percent rate decreases than Massachusetts. Stimulated by the five percent rate cut mandated by the Restructuring Act, ratepayers saved an average of six percent over 1998 prices.

3. The Number of Default Service Customers Increased.

In 1999, the percentage of Massachusetts customers receiving default service grew from 13.2% to 19.0%, an increase of 146,070 customers. Despite the fact that default service customers are supposed to receive market-priced power, default rates continued to be priced below market at standard offer levels. As a consequence, some utilities accumulated costs to serve default service customers that will have to be recovered at a later date.

4. The Number of Customers Served by Competitive Suppliers Grew Slowly.

As in 1998, the competitive retail market for electricity grew slowly in 1999. At the end of 1999, only 9,009 of nearly 2.5 million eligible Massachusetts customers had switched to a competitive supplier. Low standard offer and default service rates, and immature wholesale electricity markets contributed to minimal competition. Even though the number of licensed suppliers increased, few retail electricity products were available in 1999.

5. Price Disparities Did Not Change Dramatically.
Price disparities among the Commonwealth's distribution companies experienced no significant changes despite statewide rate reductions. Substantial differences in rates existed between the different service territories. In addition, the data indicate that customer rates continued to vary among customer sectors—on average, residential customers pay the highest electric rates, and industrial customers the lowest.

6. Merger Activity Changed the Retail Market Landscape.
Following substantial changes in the ownership of generating plants in 1998, 1999 saw unprecedented merger activity among distribution companies. In the pursuit of increased efficiency, greater market share, and broader service territories, local distribution companies in Massachusetts joined with each other to form bigger corporations. Three mergers saw activity in 1999: BEC Energy and Commonwealth Energy joined to form NSTAR, New England Electric Systems merged with the National Grid Group from England, and Eastern Utilities Associates was acquired by New England Electric Systems.

7. Limited Number of Eligible Households Obtain Residential Discount Rate.
In spite of increased outreach and expanded eligibility criteria in 1999, the number of households receiving the discount rate increased only slightly compared to pre-deregulation levels (see Figure 6).

8. Wholesale "Spot" Markets Shifted to Competitive Bids.
On May 1, 1999, the Independent System Operator of New England (ISO-NE) initiated a "spot" market for wholesale electricity and energy products. The new competitive bidding system was intended to stimulate competition for wholesale electricity and keep prices low. Early experience revealed significant increases in price volatility and pointed to a need for additional reforms.

Table 2: 1998 and 1999 Price Levels for Distribution Companies (cents/kWh)

Distribution Company	Residential			Commercial			Industrial		
	1999	1998	Change	1999	1998	Change	1999	1998	Change
Boston Edison	11.8	12.0	-1.5%	9.4	10.0	-5.7%	8.9	9.2	-3.6%
Cambridge Electric	10.8	11.5	-5.8%	7.1	7.6	-6.9%	6.4	7.0	-7.6%
Commonwealth Electric	11.9	12.5	-4.8%	9.5	10.0	-5.1%	7.7	8.5	-8.5%
Eastern Edison	9.3	9.8	-5.2%	8.0	8.6	-6.2%	7.9	8.5	-7.2%
Fitchburg Gas & Electric	11.9	11.9	-0.4%	11.3	11.8	-4.3%	8.9	8.9	-0.8%
Massachusetts Electric	8.9	9.7	-8.1%	7.5	8.7	-13.2%	6.4	7.7	-16.4%
Nantucket Electric	11.5	12.3	-7.2%	12.4	13.2	-5.6%	17.5	18.3	-4.2%
Western Massachusetts Electric	10.5	10.8	-2.8%	9.0	9.3	-3.2%	7.5	7.7	-1.9%
Price Disparity	1.7	1.5		4.0	3.7		1.2	0.6	

Source: FERC Form 1, EIA 826

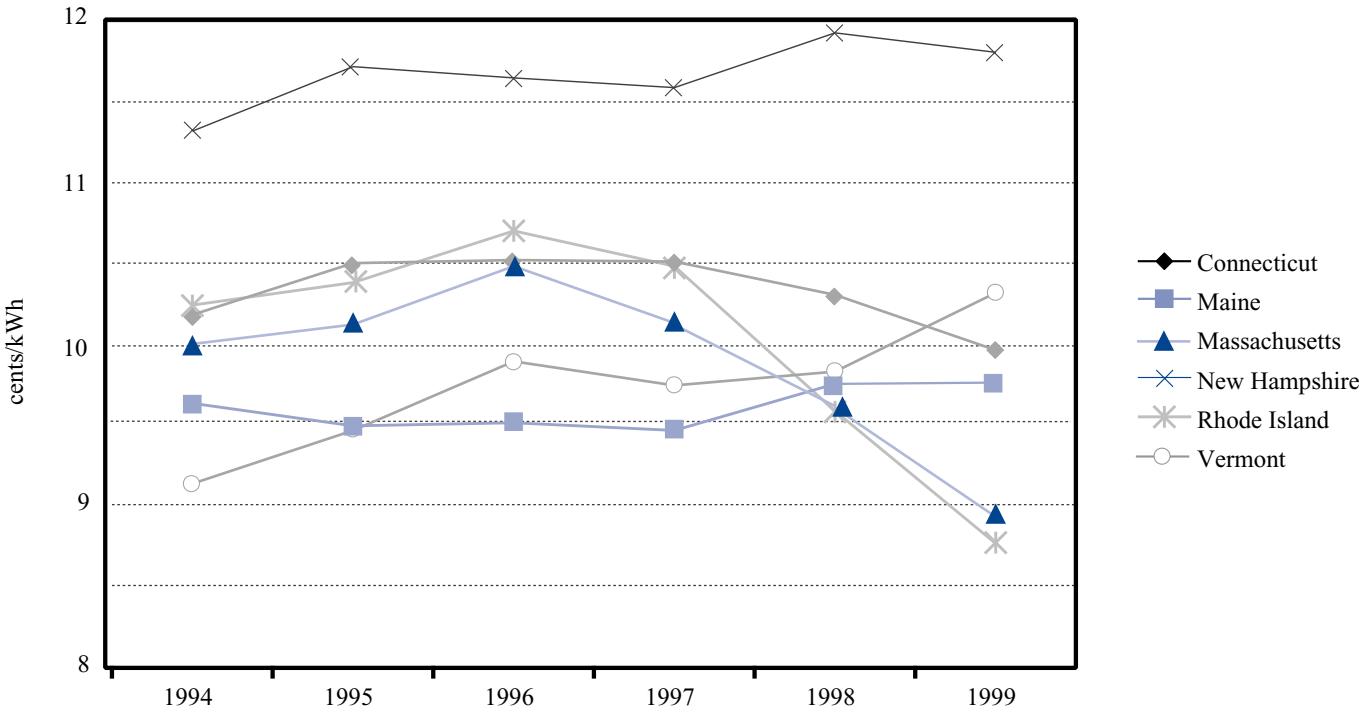
Electricity Prices: Massachusetts, New England, and the Nation

Massachusetts continues to make progress in price reductions relative to the other New England states (Figure 1). Only Rhode Island, which started restructuring at about the same time as Massachusetts, has done as well. The Commonwealth continues to make gains relative to other states in the nation, but still remains in a group of high-priced states. In 1999, Massachusetts was ranked as having the 9th most expensive electricity prices (8.9 cents per kWh). That is the same ranking reported for 1998.

Figure 2 shows 1999 price data for each state. The prices shown are the weighted-average of prices paid by all customers in each state. The U.S. average electricity price is 6.6 cents per kWh. However, the United States continues to have widely disparate electricity prices among the states with a low of 4.0 cents per kWh (Idaho) and a high of 11.9 cents per kWh (Hawaii). This disparity is reflective of wide differences in supply and demand conditions across the nation.

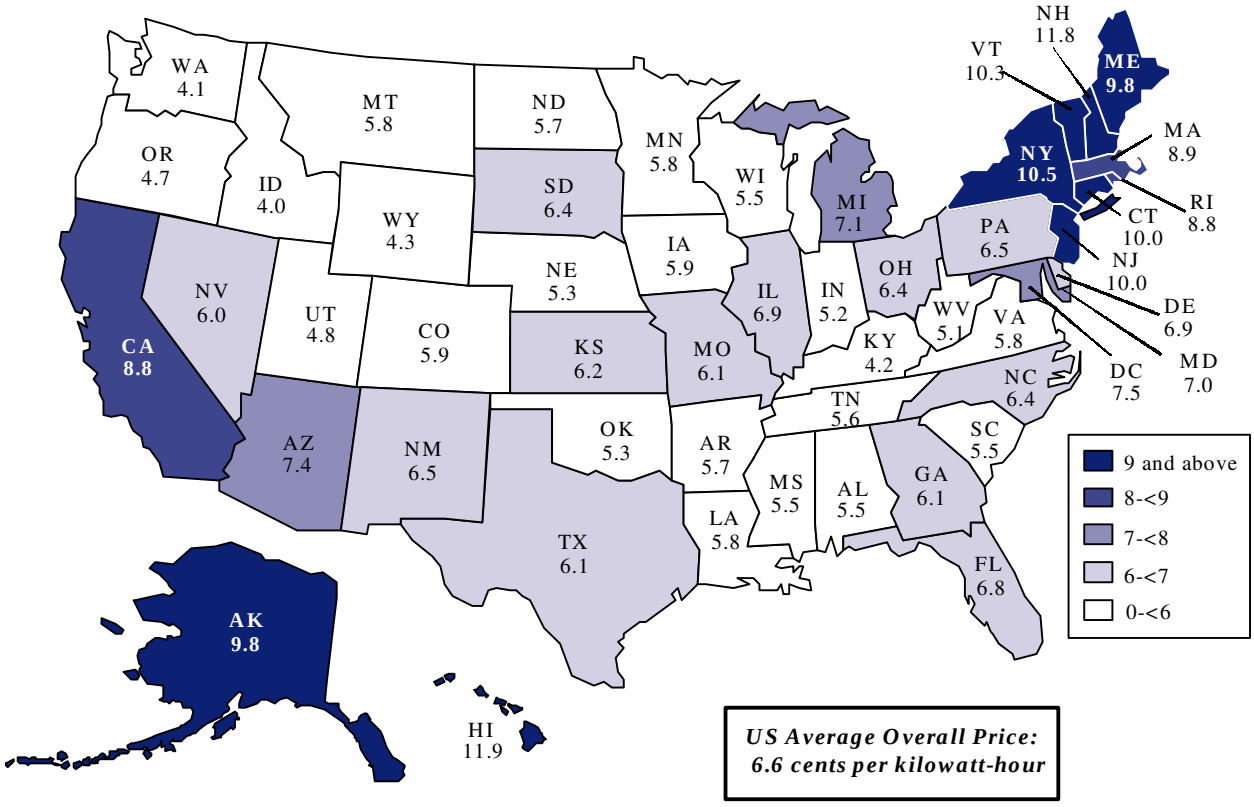
An examination of Figure 2 shows a cluster of states with prices above 8.0 cents per kWh. Outside of California, Alaska, and Hawaii, all of these states are located in the northeastern United States. The difference between the lowest price state in this group (Rhode Island at 8.8 cents per kWh) and the next region (the District of Columbia at 7.5 cents per kWh) is a large 1.3 cents per kWh. Massachusetts continues to be a high-cost state for electricity despite the gains from restructuring.

Figure 1: Historical Electricity Prices for All Customers, New England States



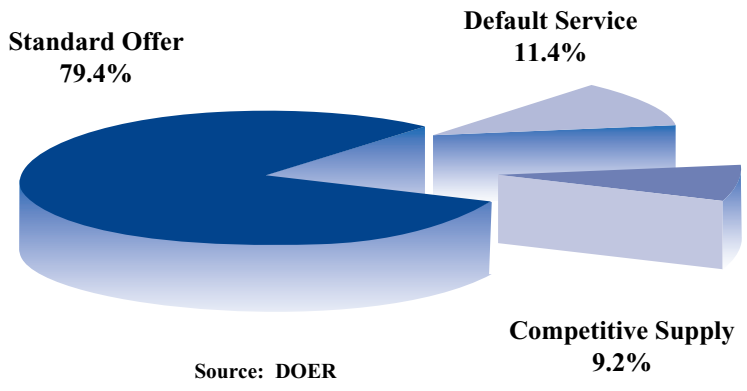
Source: Electric Power Annual Volume 1 1994-1999

Figure 2: 1999 Average Overall Electricity Prices by State (cents/kWh)



Source: Electric Power Annual 1999, Volume 1

Figure 3: Composition of Distribution Company Sales (kWh): December 1999



Source: DOER

Electricity customers in Massachusetts receive one of three types of generation service: Standard Offer, Default Service, or Competitive Supply. The percentage of standard offer sales has dropped from 91.7% at the beginning of 1999 to 79.4% by December. In addition, several large commercial and industrial customers have switched to competitive suppliers, helping to drive competitive sales up from 1.3% to 9.2% of total sales over the course of 1999.

Generation Expected to Keep Up With Demand

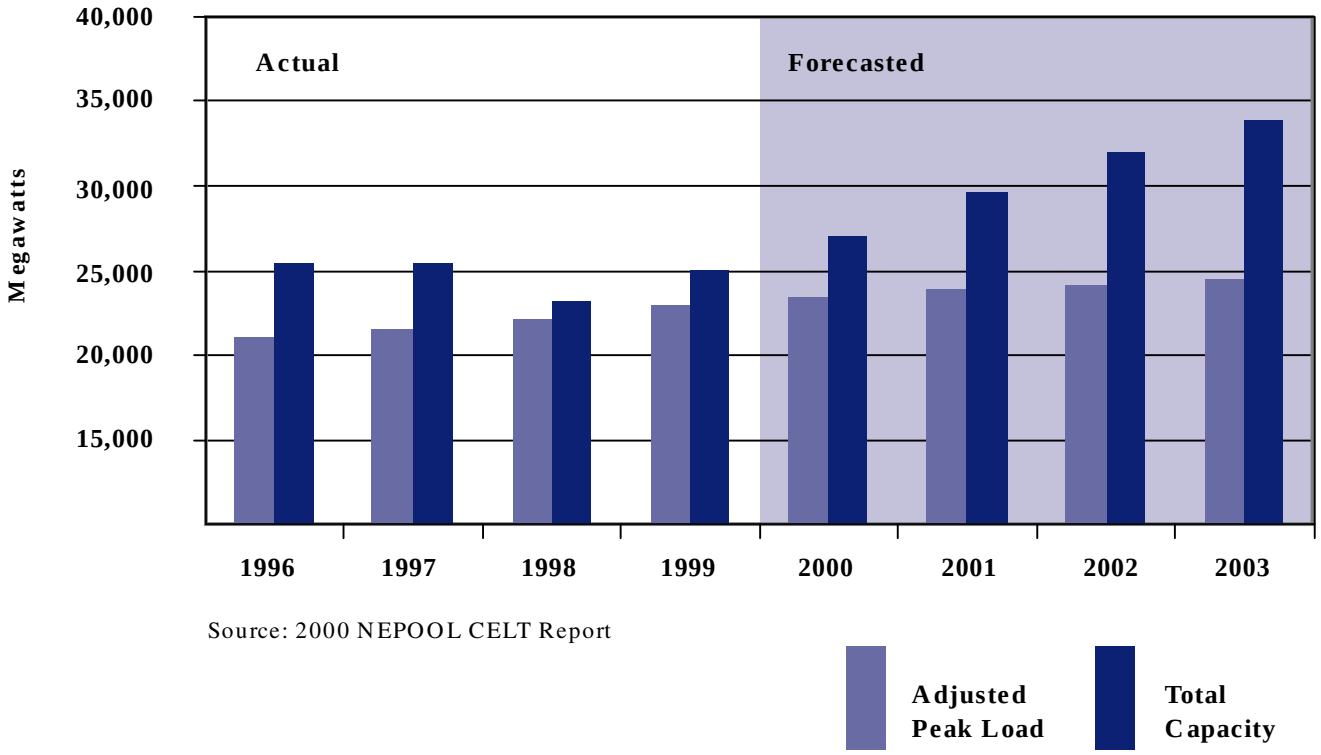
Table 3: New Generation in Massachusetts

Name, Developer	Size	Location	Completed/ Expected
Dighton Power, Calpine	160 MW	Dighton	1999
Berkshire Power, PDC	275 MW	Agawam	2000
Millenium, PG&E	360 MW	Charlton	2000
Blackstone, ANP	580 MW	Blackstone	2001
Bellingham, ANP	520 MW	Bellingham	2002
Mystic Expansion, Sithe	1,600 MW	Everett	2002
Edgar Station Expansion, Sithe	750 MW	Weymouth	2002
Nickel Hill, Constellation	750 MW	Dracut	2003
TOTAL GENERATION	4,995 MW		

Source: ISO-New England, Annual Market Report 1999 - 2000

Open access to the transmission system and a new source of natural gas supply are two of the factors that are contributing to investment in new generation in New England. This expected increase in capacity should be sufficient to meet demand growth in the coming years. Figure 4 shows the historical trends and forecasted growth in generation capacity relative to peak demand in New England. As demand grows and older power plants are withdrawn, it is essential to continue developing new generation in the region. In 1999, 730 megawatts of new generation capacity were added in New England. An additional 1,250 megawatts of capacity is expected on-line in 2000 in New England. Table 3 lists the Massachusetts plants recently built, under construction, and planned through 2003.

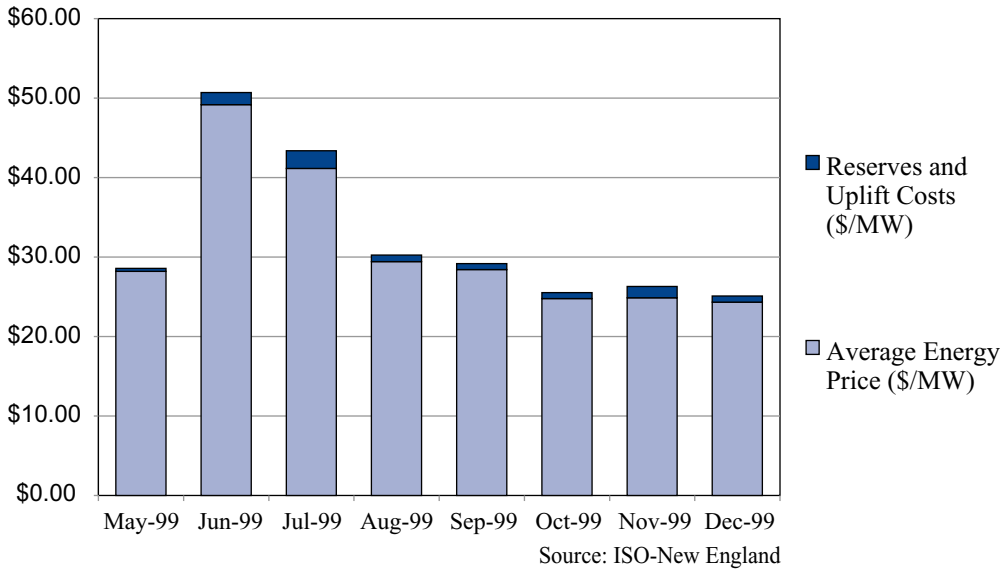
Figure 4: Installed and Forecasted Generation in New England, 1999-2003



Source: 2000 NEPOOL CELT Report

Figure 5: Monthly Wholesale Market Prices

Figure 5 presents weighted average wholesale prices since the opening of the competitive market in May of 1999. Prices peaked during June due to unseasonably warm weather coinciding with sheduled power plant maintenance. The final five months of 1999 show prices within $20-$30 per megawatt hour. These relatively low and stable prices give hope that market mechanisms set by ISO-New England will work to keep a balance between supply and demand.

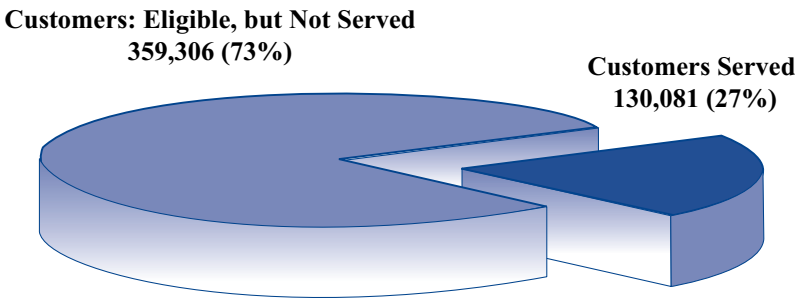


Source: ISO-New England

Electric Discount Rate

In accordance with the Act, DOER published *The Low-Income Outreach Guidelines* in December of 1998. The guidelines assist distribution companies in the development of effective procedures for identifying RDRE households and enrolling them as RDR customers. When compared to the DOER estimate of the total 1999 RDRE households (489,387), the distribution companies' reported figures show that approximately 27 percent were enrolled as RDR customers (see Figure 6). These low enrollment levels suggest that more needs to be done. Consequently, DOER will be reviewing its guidelines and will be working with stakeholders to identify procedural barriers to enrollment. DOER plans to file revised outreach guidelines with the Department of Telecommunications and Energy (DTE) in 2001.

Figure 6: 1999 Percentage of Residential Discount Rate Eligible Households Served



Source: DOER

Outlook for 2000 Market Monitor

In the next Market Monitor, DOER will report on the significant events and issues of 2000, including:

FERC Order 2000

In its December 1999 order, the Federal Energy Regulatory Commission set a mandate for all regions in the United States to develop regional transmission organizations to control the operation of the power grid. DOER's 2000 Market Monitor will report on ISO-New England's efforts to comply with the requirements of the order.

Default Service Decoupling

2000 brought the decoupling of standard offer and default service rate structures in Massachusetts. In its set of orders under docket #DTE 99-60, the Department of Telecommunications and Energy allowed default service rates to reflect market prices, while keeping standard offer rates set by approved rate schedules.

E-Commerce and Retail Competition

In 2000, retail competition showed significant activity over the Internet. Several e-commerce operations offered competitive electricity products to Massachusetts residents and businesses during the year. The 2000 report will examine successes and challenges of these innovative retail options.

Merger Outcomes

DOER will look at the final outcomes of the three mergers discussed in this year's report, and will survey the impacts of these mergers on the retail industry.

Fuel Prices and Electric Rates

Higher prices of natural gas and oil translated into higher costs for electric generation. 2000 saw public debate over whether or not utilities could pass these higher costs along to the customer.

Wholesale Market Reform

Through the identification of flaws in the wholesale power system, ISO-New England and NEPOOL drafted a proposal for the implementation of Congestion Management and Multi-Settlement Systems. The two entities filed the proposal with the FERC in the beginning of 2000.

The DOER report is a publication of the Commonwealth of Massachusetts Office of Consumer Affairs and Business Regulation, Division of Energy Resources. Suggestions, questions and input are invited. Send to: Market Development Team, DOER, 70 Franklin Street, Seventh Floor, Boston, MA 02110. Contact DOER staff members at (617) 727-4732.

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