

Electric Industry Restructuring in Five States

Final Report

Jeffrey M. Fang

**Prepared for the
Energy Information Administration**

**Center for Energy Analysis and Applications
National Renewable Energy Laboratory
Operated for the U. S. Department of Energy
by Midwest Research Institute**

October 31, 1996

Contents

| | <u>Page</u> |
|-----------------------------------------------------|-------------|
| 1.0 Introduction | 1 |
| 2.0 California | 2 |
| 2.1 Brief History | 2 |
| 2.2 Final Policy Decision | 5 |
| 2.3 Implementation Status | 8 |
| 3.0 Massachusetts | 10 |
| 3.1 Brief History | 10 |
| 3.2 Policy on Incentive Regulation | 11 |
| 3.3 The Restructuring Proceeding | 13 |
| 3.4 Proposed Restructuring Rules | 15 |
| 3.5 Current Status | 17 |
| 4.0 Michigan | 18 |
| 4.1 Brief History | 18 |
| 4.2 Retail Wheeling Experiment | 19 |
| 4.3 A Framework for Electric and Gas Utility Reform | 21 |
| 4.4 Utility Filings | 25 |
| 4.5 Current Status and Developments | 26 |
| 5. New York | 28 |
| 5.1 Brief History | 28 |
| 5.2 Guiding Principles | 29 |
| 5.3 Final Order | 31 |
| 5.4 Implementation Status | 33 |
| 6. Wisconsin | 34 |
| 6.1 Brief History | 34 |
| 6.2 Objectives and Principles | 35 |
| 6.3 A Reasonable Strategy | 37 |
| 6.4 Implementation Status | 38 |

| | | |
|-----|-----------------------------------------------------|----|
| 7. | Comparisons | 40 |
| 7.1 | Stages of the Restructuring Process | 40 |
| 7.2 | Initial Approaches to Restructuring | 40 |
| 7.3 | Nature of Competition | 42 |
| 7.4 | Treatment of Stranded Costs | 42 |
| 7.5 | Treatment of Renewable Energy and Energy Efficiency | 44 |
| 7.6 | Performance Based Regulation | 44 |
| 8 | Findings | 47 |
| | List of Acronyms | 49 |
| | References | 51 |

List of Tables

| | | Page |
|----|--------------------------------------------------------------------------------------------------|-------------|
| 1 | Major Timeline of Electric Restructuring in California As of June 30, 1996 | 6 |
| 2 | Major Timeline of Electric Restructuring in Massachusetts As of June 30, 1996 | 12 |
| 3 | Major Timeline of Electric Restructuring in Michigan As of June 30, 1996 | 20 |
| 4 | Approved Retail Delivery Rates and Charges in the Michigan Retail Wheeling Experiment | 22 |
| 5 | Major Timeline of Electric Restructuring in New York As of June 30, 1996 | 30 |
| 6 | Major Timeline of Electric Restructuring in Wisconsin As of June 30, 1996 | 36 |
| 7 | Status of Electric Restructuring in Five States, by Stage, As of June 30, 1996 | 41 |
| 8 | The Nature of Competition Embodied in the Final Decisions As of June 30, 1996 | 43 |
| 9 | Treatment of Stranded Costs in the Final Decisions, As of June 30, 1996 | 45 |
| 10 | Treatment of Renewable Energy & Energy Efficiency in the Final Decisions, as of June 30, 1996 | 47 |

1. Introduction

The electric industry in the United States is undergoing fundamental changes; it is transitioning from regulated monopolies to competitive markets offering customer choice. In this process, the states have been in the forefront of considering the changes in the industry structure and regulation. The Energy Information Administration (EIA) wants to promote a better understanding of the nature and status of the restructuring processes in the states. The Center for Energy Analysis and Applications, National Renewable Energy Laboratory assisted the EIA in this effort with a project on electric restructuring in the states.

This is the final report prepared under the project.¹ The purpose of the report is to describe and compare the overall restructuring processes that took place in five states through June 30, 1996. The five states are California, Massachusetts, Michigan, New York, and Wisconsin. These are the first major states to consider restructuring or retail wheeling.

This report takes a descriptive and comparative approach. The next five chapters (Chapters 2 through 6) provide a description of the processes in the five states. Each chapter first presents a brief history of the events and then explains in more detail the most important aspects of the restructuring process in the state. In the last section of each of these five chapters, the status of implementation or developments as of June 30, 1996, is noted. Chapter 7 compares selected aspects of the restructuring process among the states, including stages of the restructuring process, initial approaches to restructuring, the nature of competition as embodied in the regulatory agency's final decision, treatment of stranded costs, treatment of renewable energy and energy efficiency, and performance based regulation. Chapter 8 summarizes the findings of the study.

¹ A separate report, "Table A: Status of Electric Industry Restructuring by State, as of June 30, 1996" was submitted on September 6, 1996.

2. California

California is the first state to initiate a formal proceeding to restructure the electric industry. Its initial proposal in April 1994, would fundamentally change the nature of electric utility regulation in California. It also started a wave of restructuring activities in other states. This chapter first presents a brief history of the developments in California and then explains important aspects of the structure and policies eventually adopted by the California Public Utility Commission (CPUC). It closes with a mention of the status of implementation.

2.1 Brief History

California started with an internal study of the electricity market and its regulation in California conducted by the CPUC staff from April 1992 to February 1993. The result was released in a staff report, entitled *California's Electric Service Industry: Perspectives of the Past, Strategies for the Future* (CPUC Staff 1993), often referred to as the "Yellow Book." From February 1993 to April 1994 hearings on the Yellow Book were held and comments were received. On April 20, 1994, the CPUC started the formal proceeding by issuing a combined order instituting rulemaking and investigation on the commission's proposed restructuring policies (Dockets R. 94-04-031 and I. 94-04-032) (CPUC 1994a). It is often referred to as the "Blue Book".

The Blue Book proposal had two components: direct access and performance-based regulation (PBR). Under direct access, customers would be allowed to choose among different providers of electricity and have the power wheeled in through the transmission systems and distribution lines to their facilities. Direct access would be phased in over a period of several years. It would start with the largest customers on January 1, 1996, and become available to all customers by the year 2002. Some customers would choose to obtain electric energy from their local utility. For such energy service sectors, the traditional cost-of-service, rate-of-return regulation would be replaced by PBR. Under PBR, utility shareholder interests would be aligned with ratepayer interests by setting goals for the utility to achieve. Financial incentives will be provided for achieving beyond the targeted goals and penalties will be imposed for failing to meet the goals. In general, revenue requirements would not be set using cost-of-service calculations, but would be indexed using inflation, customer growth, and productivity growth. Applicable incentives or penalties would also be applied.

Other elements in the Blue Book proposal include the following:

- The electric generation market would be competitive. Although divestiture of generation would not be required, functional unbundling is an option that would be considered.
- A spot market for electricity similar to the Pool in the United Kingdom was contemplated. It would provide market participants with a market price for each half hour.
- The utility's financial integrity would be assured by allowing recovery of transition costs or stranded investment. A methodology for using utilities' marginal costs of generation to determine the market value of utility plants was noted.

- The regulatory structure regarding utility resource planning would be fundamentally modified; i.e., the Biennial Resource Plan Update (BRPU) proceeding would be eliminated.
- Utility services and prices would be unbundled.

The Blue Book proposal was controversial. For example, while large industrial customers embraced the direct access proposal, residential and small commercial customers realized the possibility that they may have to pay a larger share of the transition costs. Environmentalists, energy efficiency and renewable energy supporters worried that their causes would lose their footing in the restructured world. There was widespread concern that the proposed schedule for restructuring, such as starting direct access in 1996, was overly ambitious and optimistic. The California General Assembly took a keen interest in the Blue Book proposal. On May 23, 1994, approximately one month after the issuance of the CPUC proposal, the Assembly Committee on Utilities and Commerce and the Assembly Committee on Natural Resources held a joint oversight hearing on the Commission's order. Then, on August 31, 1994, the California General Assembly adopted Assembly Concurrent Resolution (ACR) 143. It urged the CPUC not to start implementing any performance-based regulations and policies in restructuring the electric industry through direct access until after the CPUC met certain reporting requirements to the state legislature. Specifically, ACR 143 asked the commission to submit a report to the legislature by January 31, 1995. Among the reporting requirements was the legislature's concern about the impacts of the CPUC's reform proposal on public policy programs. It also established the Joint Oversight Committee on Lowering the Cost of Electric Services to monitor the CPUC's restructuring process and to consult with the governor, the CPUC, the California Energy Commission, and other parties on restructuring issues.

The CPUC issued an interim decision on December 7, 1994, setting a new and expanded schedule and responding to a motion concerning the preparation of an environmental impact statement EIS (CPUC 1994b). Further, in response to the legislature's concern on the potential impacts of the reform proposal on public policy programs, the CPUC directed that a working group be formed to address such public policy issues. The working group involved a large number of stakeholders who worked collaboratively. The group worked intensively for about 2 months and submitted its report, entitled *Options for Commission Consideration* (Working Group 1995), to the commission on February 22, 1995. At that time, the working group became inactive. In another response to the requirements of the legislature's ACR 143, the CPUC submitted, on January 24, 1995, an interim status report to the legislature.

The CPUC considered the substantial amount of comments, suggestions, and proposals by investor- and publicly-owned utilities, industries, commercial and consumer groups, public interest groups, and other state and local governmental agencies. Many of the comments are submitted in written form. Others are comments provided during public hearings, informational meetings, and technical workshops. The commission was unable to reach a unified approach. On May 24, 1995, the CPUC issued an interim order designating the CPUC's preferred policy (the Majority Proposal) and an alternative policy (the Minority proposal).

The Majority Proposal would create a central pool, or wholesale power pool and set electric prices to reflect the true cost of service in real time or "real-time pricing." It would allow all customers to enter into contractual transactions with generators to hedge against the fluctuations in the pool price of electricity, or "contracts for differences." There would be functional separation of generation, transmission, and distribution. The distribution function would remain under commission regulation and the local utility would continue to provide local distribution service to all consumers. The transmission function would offer open and nondiscriminatory access to energy providers under the Federal Energy Regulatory Commission (FERC) approved tariffs. The utilities would retain ownership of transmission

facilities but transfer the control and dispatch functions of the facilities to an independent system operator (ISO). The utilities' generation function would also be separated. Existing resources of investor-owned utilities would be dispatched first. Other suppliers would submit bids to the pool with specific time increments. Buyers would submit demand bids on the same time increments. With such demand and supply data, market clearing prices (spot prices) would be determined.

The Minority Proposal will institute retail wheeling, or "direct access," and require utilities to sell off their generation plants, or divestiture. There would be an ISO, known as OPCO. Generation services would be separated from other utility services. There would be bilateral or multilateral negotiations and contracts. Voluntary pools may form, but there would not be a mandated pool or pools (CPUC 1995b).

Both the Majority and the Minority Proposals would allow recovery of transition costs. With respect to energy efficiency, the commission would continue to authorize funds for conservation and demand-side management (DSM) activities in the near term during the transition. In the long term, utility DSM activities would be separated into two categories: market transformation and customer services. While market transformation activities would continue to receive funding, the customer service variety of DSM would no longer be supported by public or ratepayers funds. For renewable energy, both proposals envisioned a legislature mandated renewables portfolio standard for the long term. Under this approach, individual requirements would be tradeable among customers and suppliers as long as the diversity requirement is met in the aggregate.

Following the release of the Majority and Minority Proposals, there was another period of public comments and hearings. In the process, coalitions of groups of stakeholders started forming. On September 11, 1995, a coalition of Southern California Edison (SCE) Company, California Manufacturers Association, California Large Energy Consumers Association, and Independent Energy Producers filed a memorandum of understanding (MOU) (SCE, *et al.* 1995). The MOU combined major elements of both the Majority and the Minority CPUC Proposals with significant modifications and refinements. It provided for the simultaneous development of a power pool or exchange and direct access by January 1998. According to the MOU, there would be a voluntary statewide pool or power exchange that would perform the functions of a short-term spot market. In addition, an ISO would manage and provide access to the transmission system on a nondiscriminatory basis and would perform settlement functions. Direct access for retail customers and a nonbypassable competitive transition charge (CTC) would be established simultaneously.

On October 2, 1995, a coalition of customer groups² and the Division of Ratepayer Advocates of the CPUC filed a response to the MOU: the "Customer Statement of Principles on Electric Restructuring in Response to Commission's Order for Comments" (Customer Statement Parties, 1995). The Statement suggested that the MOU contained "market structure elements that could serve as a far more appropriate starting point for restructuring the electricity industry than the commission's Majority Proposal." The Statement set forth principles on rate reduction, market structure, stranded costs, market power, public policy programs, and the process of further proceedings.

² The groups are: Association of California Water Agencies, Agricultural Energy Consumers Association, California City-County Street Light Association, California Department of General Services, California Farm Bureau Federation, California Hotel and Motel Association, California Industrial Users, California League of Food Processors, California Restaurant Association, California Retailers Association, Division of Ratepayer Advocates, and School Project for Utility Rate Reduction. Collectively, they are referred to as the "Customer Statement Parties."

Also on October 2, 1995, another coalition of environmental, energy efficiency, renewable energy, and other public interest groups filed a framework for restructuring in the electric industry.³ The framework provided general guidelines on rates and bills and other benefits from restructuring; PBR; stranded costs; market power; generation resources and the wholesale power market; equitable direct access for small customers; and for low-income and public interest programs. It also specified principles for environmental, renewable resources, energy efficiency, and public policy programs such as research, demonstration, and development (Framework Parties, 1995).

On December 20, 1995, the CPUC issued a "final" policy decision on electric industry restructuring (Decision 95-12-063). On January 10, 1996, the CPUC made minor corrections and changes to the decision (Decision 96-01-009). The CPUC's final decision created two new institutions to handle the wholesale power market and transmission: the Power Exchange and the ISO. The Power Exchange would foster the development of a transparent spot market for the generation of electricity. The ISO would coordinate the daily scheduling and dispatch of generation and provide open and nondiscriminatory access to the transmission system. The order anticipates that, shortly after January 1, 1998, electric consumers would choose among three options: (a) retain the traditional relationship as a full service customer of the local electric utility; (b) conduct financial hedges to maintain price stability and predictability through contracts for differences; and (c) attain direct access through physical, bilateral contracts. PBR would be applied to distribution utilities regulated by the commission (CPUC 1995c).

The CPUC issued a roadmap decision on March 13, 1996. It also started the environmental impact report (EIR) process by issuing, on March 29, 1996, a notice of preparation of an EIR (CPUC, 1996b).

Table 1 presents a summary of the main events of the California restructuring process.

2.2 Final Policy Decision

Some of the main policies adopted by the CPUC in its final decision are those concerning customer choice, creation of separate entities of ISO and the Power Exchange, PBR, market power, transition costs, renewable energy, and energy efficiency. Each of these items is briefly explained below.

Customer Choice. Electric consumers would have the options of (1) retaining the traditional relationship as a full service customer of the local electric utility or the utility distribution company, (2) "contracts for differences" to hedge against price fluctuations, and (3) have direct access through physical, bilateral contracts. The CPUC plans to start phase-in of direct access no later than January 1, 1998. There will be an initial period of 12 months, after which direct access will be available to all customers, and all customers will have the option within five years. Utility distribution companies will continue to control the operation of their distribution system, power production, and procurement of generation services for their customers. However, such distribution utilities may not enter into retail contracts to purchase the output of a generation facility that is under their own and any of their affiliates' ownership.

³ Parties to this group include Utility Consumer Action Network, Union of Concerned Scientists, Toward Utility Rate Normalization (TURN), Sierra Club California, Public Citizen, Natural Resource Defense Council (NRDC), Environmental Defense Fund, Center for Energy Efficiency and Renewable Technologies (CEERT), California Public Interest Research Group, California Nevada Community Action Association, and American Wind Energy Association (AWEA). Collectively, they are referred to as the "Framework Parties."

**Table 1: Major Timeline of Electric Restructuring in California
As of June 30, 1996**

| Date | Major Event |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| February 3, 1993 | After one year of internal study, the commission staff issued the "Yellow Book" report. |
| April 20, 1994 | The CPUC issued its initial "Blue Book" proposal (Docket R. 94-04-031 & I. 94-04-032), calling for customer direct access, and performance based ratemaking. |
| August 31, 1994 | The General Assembly issued ACR 143. |
| December 7, 1994 | Decision 94-12-027: an interim opinion that set a new schedule, established the working group to address public policy programs, and responded to California Environmental Quality Act issues. |
| January 24, 1995 | The CPUC submitted interim status report to the legislature in response to ACR 143. |
| February 22, 1995 | The working group report was issued. |
| May 24, 1995 | CPUC Decision 95-05-045 designated the commission's proposed majority and minority policy decisions. |
| September 11, 1995 | Southern California Edison and others submitted memorandum of understanding (MOU). |
| October 2, 1995 | Other coalitions of parties submitted "Customer Statements of Principles," and "Framework for Restructuring." |
| December 20, 1995 | CPUC issued its final decision on restructuring (Decision 95-12-063). |
| January 10, 1996 | CPUC issued minor corrections to its final restructuring decision (Decision 96-01-009). |
| March 13, 1996 | CPUC issued its "Roadmap" for implementation (Decision 96-03-022). |
| March 19, 1996 | PG&E and SCE divestiture plans filed. |
| March 29, 1996 | A notice of Preparation of an Environmental Impact Report was issued. |
| April 1996 | Western Power Exchange Plan Filed |
| April 1996 | The CPUC approved PG&E's request for an interim CTC |

Utilities are directed to offer real time pricing and time-of-use rate options not later than January 1, 1998. Pacific Gas and Electric Company (PG&E), SCE, and San Diego Gas and Electric Company (SDG&E) were directed to file their direct access proposal within 30 days of the effective dates of the CPUC decision.

The Power Exchange. The power exchange is a spot market pool that has no financial interest in any source of generation. It will have no ownership ties to the ISO. It will function as a clearinghouse by providing a transparent auction for generation with hourly or half-hourly price signals to consumers. For the 5-year transition period, all the generation of investor-owned utilities would be bid into the Power Exchange and then they would purchase from the Power Exchange the total requirements of their full-service customers. The generation facilities divested by the investor-owned utilities (IOU's) would be freed from the obligation to bid all their capacity into the Exchange. After the transition period, utilities would be freed from bidding their resources into the Power Exchange and from buying out of the Exchange.

ISO. The ISO will coordinate the daily scheduling and dispatch activities of all market participants so that there would be open and nondiscriminatory access to the transmission system while maintaining reliable services and achieving the lowest total costs for all uses of the transmission system. It will set transmission pricing based on marginal costs and differentiated by location and time. Operationally, the ISO will file transmission tariffs and operating procedures with the FERC. Initially, PG&E, SCE and SDG&E are to file a joint proposal to the FERC by April 29, 1996, for establishing the ISO. The ISO will have coordination responsibilities of scheduling, managing transmission constraints and congestion, real-time load balancing, maintaining reliability and increasing efficiency, and recovering the cost of providing ancillary services, providing information to all market participants.

Performance Based Regulation. Traditional utility services are unbundled into generation, transmission, and distribution functions. Transmission services would be taken over by the ISO. In contrast, utility distribution service and utility-owned generation would subject to CPUC regulation. Utility distribution companies would continue to be regulated, using PBR, instead of the traditional cost-of-service ratemaking. Utility performance would be measured against the established benchmark. Performance beating the benchmark would be rewarded with financial incentive, while performance falling short of the benchmark would be penalized financially. Utilities are directed to file applications for new PBR mechanisms to accommodate new market structures.

Market Power. To ensure fair competition in the market, the presence of market power must be dealt with. Market power can be vertical or horizontal. Vertical market power involves a single utility controlling generation, transmission, and distribution functions in a specific geographic market. To avoid abuse of vertical market power, the CPUC proposal adopts the ISO to assure there would be operational unbundling. Further, PG&E and SCE are required to file plans to voluntarily divest themselves of at least 50% of their fossil generating assets. The commission indicated that it would provide incentives to encourage divestiture of generating assets. For each 10% of fossil generating capacity divested, the allowed rate of return for the equity components will be increased by up to 10 basis points (CPUC 1995c, p. 101). In addition, a distribution utility affiliated with a generation company will be prohibited from entering contracts with an affiliated generator.

Horizontal market power exists when there are significant barriers to entry or when there are few market participants. One potential abuse here is exclusive access to customer information. The CPUC would

require that the utility distribution company make customer information available to all market participants on equal terms and conditions with customers' consent.

Transition Costs. As a result of transitioning from a regulated monopoly to the competitive marketplace, utilities may not be able to recover the higher costs "associated with past regulatory promises by the commission regarding the timing of the recovery of depreciation and taxes, past requirements to diversify sources of power by signing long-term contracts that in hindsight have high costs, and the costs incurred by utilities (most notably those associated with qualifying facilities (QFs) and nuclear power) that were reviewed and deemed reasonable when incurred" (CPUC, 1995c, p. 110). Such costs are called transition cost or stranded investments. To address this issue, the CPUC will institute a nonbypassable CTC for all distribution utility customers and direct access customers. The CTC will be a percentage surcharge on the dollar amount of each bill of each customer, including those served under contracts with nonutility suppliers, of the distribution utility. Recovery of transition costs will be capped so that electricity price will not rise above the levels in effect as of January 1, 1996 without adjusting for inflation. Recovery of transition costs will be completed by 2005, except for payments required through contracts entered into before January 1, 1996.

Renewable Energy. The CPUC adopted the minimum renewables requirement approach developed in both the Majority and Minority proposals. Such requirements would be placed on either retail providers of electricity or generators. The commission prefers to set the requirement at the same level for all investor-owned utilities in the state but would allow variations based on the current resource portfolios of the utilities. Credits for meeting the requirements would be tradeable. Initially, the minimum renewables levels would be in place between 1998 and 2000. A review will then be conducted to determine if modification and/or continuation of the requirements are necessary (CPUC, 1995c, pp. 141-152).

Energy Efficiency. For energy efficiency, the final policy decision adopted the two-track approach enunciated in both the Majority and the Minority Proposals. For the competitive customer service conservation and DSM programs, there would be no more ratepayer or public funding. For market transformation DSM programs, continued customer funding would be necessary because the competitive market would not likely support such activities. The commission proposed a "public goods charge" (PGC) to support market transformation DSM spending by January 1, 1997. Initially, it would be a line item on utility bills. If enacted by the legislature, it would become a surcharge (CPUC, 1995c, pp. 152-159).

2.3 Implementation Status

As of June 30, 1996, implementation of the adopted restructuring decision in California was ongoing. The CPUC issued a restructuring road map decision on March 13, 1996. It grouped implementation issues into four subject areas: 1) management and coordination, including compliance with the California Environmental Quality Act; 2) market structure issues such as the ISO, power exchange, and market power; 3) consumer choice issues such as direct access, consumer protection, public purpose programs including renewables, energy efficiency, research, development and demonstration (RD&D), and low-income programs; and 4) ratesetting issues such as unbundling, pricing, rate design, PBR, and transition costs. The decision also established different working groups to address and work toward consensus on implementation issues. It encouraged any interested party to join a working group and laid out a procedure for a working group to obtain commission recognition of its status and to ensure completeness in issue coverage and to avoid duplication. The decision also set milestones for various implementation filings:

- Proposal for establishing the ISO - April 29, 1996, to be filed simultaneously with the CPUC and FERC
- Proposal for establishing the Power Exchange - April 29, 1996, to be filed simultaneously with the CPUC and FERC
- Divestiture plans and comments on corporate restructuring (functional unbundling) - March 19, 1996
- Utility proposals on direct access, including eligibility criteria - August 30, 1996; initial phase of direct access to begin no later than January 1, 1998
- Working group report on consumer protection - October 30, 1996
- Working group reports on: renewable issues - July 1, 1996; public goods charge issues on competitive and public interest DSM, competitive and public interest RD&D, and definition of market transformation, July 1, 1996; PGC issues on proposed public funding level for January 1, 1998; independent administrator, proposed implementation legislation, and analysis of impact of treatment of electric energy efficiency and RD&D on gas programs - October 1, 1996; low-income issues - September 6, 1996
- Utility filings on separate proposals for distribution and generation PBR - July 15, 1996; application to identify and value the sunk costs of non-nuclear generation assets - July 15, 1996; applications to estimate transition costs as of January 1, 1998 - August 30, 1996; proposals to provide information on separating rates into identifiable components - July 15, 1996.

With respect to environmental issues, the CPUC issued a notice of preparation of the environmental impact report (EIR) on March 29, 1996. It included a calendar for scoping meetings and requests for comments. It also initiated the public involvement process by announcing informational meetings (CPUC, 1996b). The EIR process is expected to be completed by the Spring of 1997.

On March 19, 1996, PG&E and SCE filed plans to divest 50% of their fossil-fueled power plants. In April, the investor-owned utilities, non-utility generators, and other parties in California jointly formed the Western Power Exchange and submitted their proposal to FERC for a wholesale power pool and an ISO. In March, PG&E asked the CPUC to approve an interim CTC to be imposed on those large customers who leave the PG&E system prior to actual implementation to direct access and the regular CTC. The commission approved the request in April.

3. Massachusetts

In Massachusetts, a task force convened by Governor Weld in late 1993 did some preparatory work on electric utility restructuring. Formal proceedings were opened by the Department of Public Utilities (DPU) sequentially in 1994, 1995, and 1996 to address issues in incentive regulation, principles of the future electric industry and the transition from regulated to competitive markets, and the proposed rule for implementing the transition. This chapter starts with a brief sketch of the events in the Massachusetts restructuring process and provides descriptions of the major topics covered in the DPU proceedings.

3.1 Brief History

In December 1993, Governor Weld convened the Electric Utility Market Reform Task Force (EUMRTF), consisting of representatives from the Massachusetts Division of Energy Resources, the DPU, the Attorney General's Office, the legislature, electric utilities, industry, and energy efficiency groups. The charge to the task force was "to identify and suggest modifications to the existing regulatory system in Massachusetts that would help to lower the costs of electricity to consumers in the state" (EUMRTF, 1994, p.1). The task force met six times between March and June 1994 and discussed three major topics: wholesale competition, retail competition, and alternatives to the traditional ratemaking approach. In July, 1994, the task force issued its report and summarized its main conclusions in the following four points (EUMRTF, 1994, pp. 2-3.):

- (1) The recommendations of the task force could lead to significant cost reductions in the long term. Although the long-term benefits of introducing more competitive market dynamics into utility regulation may be significant, many difficult issues need to be resolved regarding which groups will benefit economically from competition, and what the societal impacts associated with those benefits would be.
- (2) The state should encourage further implementation of wholesale competition and work closely with utilities and other interested parties to develop a Regional Transmission Group (RTG). A prime objective of the RTG should be to offer proposals to the FERC, setting forth equitable rules for wholesale transmission access and pricing for all forms of generation. Regulatory reforms should be investigated that will make wholesale competition more effective with clear benefits to consumers and without adversely affecting environmental policies. At the same time, regulators should ensure that utility shareholder interests are considered.
- (3) The DPU should encourage utilities to submit innovative proposals for establishing performance-based incentive ratemaking. These proposals could take several forms adopted elsewhere in the United States and internationally. The DPU should review and build on recent reforms to develop new approaches to accomplish the legitimate objectives of the Integrated Resource Management (IRM) process in a way that achieves a better alignment between utility incentives and consumer impacts.
- (4) Unlike wholesale competition and performance-based ratemaking, the task force could not form a consensus regarding the introduction of retail

competition in the state at this time. However, the task force does agree that the state should move in a timely manner to understand the implications of retail competition on all stakeholders, including, but not limited to, all classes of ratepayers, the environment, utility bondholders and shareholders, conservationists, and low-income families.

In the context of the above recommendations of the task force, the DPU has taken two tacks on reforming the regulatory system and promoting increased competition in the electrical market place. The first tack addresses incentive regulation. On September 20, 1994, the DPU opened Docket No. DPU 94-158 to investigate replacing the traditional utility cost-of-service, rate-of-return regulation with performance-based incentives. Following two rounds of written comments by stakeholders, the DPU issued, on February 24, 1995, an order summarizing the comments and formalizing DPU's policy concerning incentive regulation (DPU 1995b).

The second tack pursues the overall restructuring of the electric industry. On February 10, 1995, the DPU issued a Notice of Inquiry in Docket No. DPU 95-30. A list of 43 questions were posed for comments by stakeholders. The questions covered issues regarding customer choice, future industry structure, generation, transmission, distribution, the benefits and costs of restructuring, ratemaking, jurisdiction, regulatory role, effects on different classes of customers, as well as transition and short-term issues. Initial comments were filed by the interested parties and the DPU held a hearing on the comments in April-May, 1995. Written reply comments were then filed and a hearing was held on June 19, 1995. The Massachusetts Electric Industry Restructuring Roundtable filed a set of interdependent principles on July 17, 1995. A hearing on the roundtable principles was held on July 19, 1995. The DPU then issued, on August 16, 1995, an order setting forth its goal for the future electric industry, and the principles of restructuring and for the transition from a regulated to a competitive industry structure. It also directed electric utilities to make filings involving a plan for moving from the current regulated industry structure to a competitive market and to increased customer choice; to develop illustrative unbundled rates for generation, transmission, distribution and ancillary services, charges for recovering stranded costs, and to propose incentive regulation for the transmission and distribution systems. In response, Boston Edison Company, Eastern Edison Company, Massachusetts Electric Company, and Western Massachusetts Electric Company filed their respective restructuring proposals on February 16, 1996. Each utility's filing has been assigned a separate docket number and will be considered separately. Issues that are common to all utilities may be consolidated by the DPU.

On March 15, 1996, the DPU issued a notice of inquiry and rulemaking to establish the procedures to be followed in electric industry restructuring by electric utilities (Docket No. DPU 96-100). Comments from stakeholders were filed on April 12, 1996. Then an explanatory statement and draft rules were released on May 1, 1996. On May 24, 1996, comments was filed on the statements and draft rules. During June and July 1996, hearings on the proposed rules were held. The DPU plans to adopt final regulation in the case by September 1996. Table 2 summarizes the key dates described above.

3.2 Policy on Incentive Regulation

In conducting the inquiry into incentive regulation, the DPU's goal was "to provide a framework that ensures the utilities it regulates provide safe, reliable, and least-cost service" (DPU 1995b, p. 1). The DPU enumerated three considerations in developing an incentive plan (DPU. 1995b p. 54):

**Table 2: Major Timeline of Electric Restructuring in Massachusetts
As of June 30, 1996**

| <u>Date</u> | <u>Major Event</u> |
|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| December 1993 | Governor Weld convened the Electric Utility Market Reform Task Force |
| July 1994 | Report of the Electric Utility Market Reform Task Force issued |
| September 20, 1994 | The DPU opened investigation into replacing traditional utility cost-of-service, rate-of-return regulation with performance-based incentives (Docket No. DPU 94-158) |
| February 10, 1995 | The DPU issued Notice of Inquiry in DPU 95-30, seeking comments on electric industry restructuring |
| February 24, 1995 | The DPU issued final order on incentive regulation for electric and gas companies (Docket No. DPU 94-158) |
| July 17, 1995 | The Electric Industry Restructuring Roundtable submitted its Interdependent Principles to the DPU |
| August 16, 1995 | DPU issued order setting forth principles for electric industry restructuring (Docket No. DPU 95-30) |
| February 16, 1996 | Electric utilities filed restructuring plans Boston Edison Company (Docket No. DPU 96-23) Eastern Edison Company (Docket No. DPU 96-24) Massachusetts Electric Company (Docket No. DPU 96-25) Western Massachusetts Electric Company (Docket No. DPU 96-26) |
| March 15, 1996 | DPU issued Notice of Inquiry/Rulemaking to establish the procedures to be followed in electric industry restructuring by electric companies (Docket No. DPU 96-100) |
| May 1, 1996 | DPU issued draft rules (Docket No. DPU 96-100) |
| June-July, 1996 | Hearings on Docket No. DPU 96-100 |
| September, 1996 | Final rules on electric industry restructuring (Docket No. DPU 96-100) to be adopted |

- A plan "must credibly assign benefits to consumers whether in the form of lower rates or increased service or an improvement over the current regulation."
- "A plan should not encourage or allow cross subsidization or other anti-competitive behaviors that could inhibit or suppress emerging competition."
- With good performance, an incentive plan could lead to exceptional rewards and improved financial integrity for the utility in question. It may not be desirable to truncate such rewards.

The DPU will evaluate and review incentive proposals on a utility-specific basis consistent with the general principles and guidelines adopted in DPU. The specific criteria for evaluating incentive ratemaking proposals are as follows (DPU 1995b, pp. 55-66):

- (1) Consistency with DPU regulations, statutes, and governing precedents. Proposals that meet the consistency requirements are preferred. For proposals not meeting the requirements, the petitioner has the burden to make the case and should submit any proposed legislation for resolving the conflict.
- (2) Incentive mechanisms must complement the ongoing movement towards a more market-based utility framework.
- (3) Incentive mechanisms must safeguard system integrity, reliability, and current policy objectives.
- (4) Incentive mechanisms should reward utility performance and address exogenous costs.
- (5) Incentive mechanisms can be broad based or targeted. In general, broad-based incentive mechanisms complement a competitive marketplace better and should be emphasized. While targeted incentives are not precluded, petitioners need to demonstrate how such incentives may complement a comprehensive plan to control overall costs and improve service.
- (6) Proposals of incentive mechanisms should incorporate well-defined, measurable indicators of performance.
- (7) Proposals should be consistent with accounting standards and acceptable within the financial community.

In addition, incentive mechanisms should be administratively simple and have a minimum time horizon that would give the incentive plan enough time to achieve its goals. Finally, the proposal for incentive mechanisms should provide for re-evaluation of the program at least once during its term to monitor goal attainment and make required modifications, as necessary.

3.3 The Restructuring Proceeding

In the final order of Docket No. DPU 95-30, the DPU set forth its goal for the future electric industry, the principles for a restructured electric industry, and the principles for the transition from a regulated industry to a competitive market. This section briefly describes these goals and principles.

Goals for the Future Electric Industry. The primary objective of the DPU's efforts in restructuring the electric industry in Massachusetts is to reduce, over time, the costs of electricity to all consumers. The DPU's overall goal in the proceeding is to develop an efficient industry structure and regulatory framework that would minimize the costs to consumers while maintaining safe and reliable electric service with minimum impacts on the environment. In the DPU's words, "long-term cost reductions will be achieved most effectively by increasing competition in the generation industry and enabling broad customer choice, thereby allowing market forces to play the principal role in organizing electricity supply for all customers. The primary elements of a fully competitive electricity market therefore will be customer choice and full and fair competition in generation. A competitive industry structure can also ensure safety and reliability and further environmental protection goals effectively" (DPU 1995c, p. ii).

Principles for A Restructured Electric Industry. The DPU adopted the following seven principles for a restructured electric industry:⁴

- (1) *Provide the broadest possible customer choice:* Customers should be able to choose among a range of service providers, services, pricing options, and payment terms.
- (2) *Provide all customers with an opportunity to share in the benefits of increased competition:* One customer class may not reap benefits at the expense of another.
- (3) *Ensure full and fair competition in generation markets:* The rules that govern market activity must apply to all buyers and sellers in a fair and consistent manner in order to ensure a fully competitive market.
- (4) *Functionally separate generation, transmission, and distribution services:* Mandatory divestiture is not desirable or necessary at this time. The functional separation of generation from transmission and distribution is a necessary first step to address market power issues and limit a company's ability to obtain an undue advantage in buying or selling services in competitive markets.
- (5) *Provide universal service:* Each distribution utility must maintain an obligation to connect all customers in its service territory to the distribution system.
- (6) *Support and further the goals of environmental regulation:* All like generating facilities should, over time, be subjected to equivalent levels of environmental regulation, insofar as it is compatible with the objective of cost reduction and does not disadvantage Massachusetts relative to other states.
- (7) *Rely on incentive regulation where a fully competitive market cannot or does not yet exist:* Incentive regulation should govern the monopolistic segments of the industry, such as distribution and transmission services.

⁴ The principles are italicized. The additional text included contains explanatory language. For more detailed discussion on these principles, see DPU (1995c), pp. 15-29.

It should also be applied to those generation providers that retain market power prior to the emergence of a fully competitive market.

Transition Principles. The DPU also adopted the following five principles to guide the transition from a regulated to a competitive industry structure:⁵

- (1) *Honor existing commitments:* Stranded costs should be determined on a net basis that reflects all resources in a utility's portfolio. They should be recovered using a nondiscriminatory, nonbypassable charge for a period of no longer than 10 years.
- (2) *Unbundle rates:* Rates for generation, transmission, distribution, and ancillary services should be unbundled as soon as possible.
- (3) *Seek near-term rate relief:* In the near term, utilities should work to produce rates for all customers that are meaningfully lower than they would have been under the current system of rate regulation.
- (4) *Maintain DSM programs:* The infrastructure of expertise, capital, and labor built up through past utility DSM programs must be preserved during the transition so that DSM can meaningfully compete in a restructured industry.
- (5) *Ensure that the transition is orderly, expeditious, and minimizes customer confusion:* Use a negotiation process that involves all affected parties. There should be public involvement and education.

3.4 Proposed Restructuring Rules

In the current rulemaking proceeding (Docket No. DPU 96-100), the DPU has incorporated the above principles into its proposed rules. In the statement explaining the development of the rules, the DPU summarized its vision of a restructured industry as follows (DPU 1996b, pp. ii-iii):

Our vision of a restructured industry includes (1) an independent system operator (ISO) and a power exchange (PE) that are independent of those who would transact business with these entities; (2) a regional, zoned network transmission tariff; (3) the functional separation of electric companies into distinct corporate entities with appropriate rules governing interaffiliate transactions; (4) protections to ensure that electricity is available and affordable to all customers; (5) possible mechanisms to provide a reasonable opportunity for stranded cost recovery, options for phased incentives to divest, and a proposal to protect municipalities from loss of electric company property taxes associated with diminished generation plant value; (6) protection of the environment; (7) promotion of energy efficiency and renewable resources; (8) encouragement, but not a requirement, for municipal electric companies to participate in the restructured industry; (9) a price cap system of performance-based regulation;

⁵ The principles are italicized. The additional text included contains explanatory language. For more detailed discussion on these principles, see DPU (1995c), pp. 29-45.

and (10) the unbundling of rates on bills, beginning January 1, 1997, into separate components, i.e., transmission, distribution, and a market proxy for energy costs; and (11) a competitive generation market by January 1, 1998.

ISO and PE. The ISO would be responsible for operating the transmission system in New England in accordance with established reliability standards. The PE would facilitate a short-term pool for energy transactions. Both the ISO and PE should be truly independent from market participants.

Transmission. There is a need for a regional, network transmission tariff that would include adders and subtractors within zones to reflect transmission constraints. Some solutions to the issues may be based on the FERC Order 888.

Corporate Structure. Distribution companies should make service available under nondiscriminatory tariffs that offer the same terms to both affiliated and non-affiliated entities in the market. With customers' approval, they should also make customer information available to market participants on the same terms and at the same time as they provide such information to their own marketing and retail affiliates.

Basic Service and Universal Service - Consumer Protections. Basic service is provided to all customers in a distribution utility's service territory "(1) who do not choose to contract directly for electricity with another supplier; (2) who cannot obtain power in the open market; or (3) whose supplier fails, for any reason, to provide electricity." It is available to all customers at all times. Universal service provides a discount to low-income customers and is available to those who are currently eligible. The discount will be applied only to the regulated components of the customer's bill; i.e., transmission, distribution and stranded cost charges.

Stranded Costs Recovery and Property Taxes. Electric companies should take actions to mitigate stranded costs through sales of generation and other assets, reduction in power purchase contracts, and other means. Then they would have "a reasonable opportunity to recover the net, nonmitigable stranded costs on their book as of August 16, 1995." A nonbypassable "stranded cost access charge" would be put in place for the 10-year transition period. There will be periodical reconciliation of the recovery of stranded costs. Municipalities should be paid property taxes commensurate with the sum of the market value and the stranded costs associated with any given facility.

Environmental Protection. Comments and suggestions are needed on how to ensure that generators take appropriate steps to minimize environmental impacts from restructuring, and to establish specific options such as setting comparable emissions standards for existing and new generating units, and standards for toxics.

Renewable Energy Resources and Energy Efficiency. There are three options for promoting renewables in the utility industry's transition to a competitive future: (1) encourage direct purchases from renewable energy sources or from a portfolio that includes renewable resources where the price of electricity from such sources might be slightly higher than the market price; (2) establish a renewable fund collected through a low, nonbypassable charge; and (3) continue to require distribution companies to purchase power generated by customers' on-site renewable energy resources with capacities of 30 kilowatts or less. Distribution companies should also continue their demand-side management activities, but these should evolve to be more market driven.

Municipals. While municipally-owned utilities are not required to comply with the DPU's rules, it is hoped that they would integrate their operations with these rules.

Performance-Based Regulation. Price cap regulation is the DPU-preferred option. A price cap formula is specified that adjusts a price cap index by factors that would accommodate inflation, changes in productivity, and exogenous costs. The cap would remain for 5 years with annual adjustments. The customers' bill will reflect a price cap component, and components of generation, transmission, stranded cost access charge, and a general access charge for low-income discounts, energy efficiency programs, and the renewable fund.

Target Implementation Dates. Beginning on January 1, 1997, and no later than March 31, 1997, the DPU plans to implement unbundled rates. Toward this purpose, the DPU directed utilities to file revenue-neutral, unbundled rates by October 7, 1996. The DPU plans to start a competitive generation market by January 1, 1998.

3.5 Current Status

As of June 30, 1996, the DPU was proceeding with the deliberation on the proposed rulemaking in Docket No. DPU 96-100. Hearings on various issues were held. The DPU plans to adopt final rules in September 1996. Although individual utilities submitted their proposed restructuring plans in February 1996, it is expected that they will be required to file updated plans once the DPU adopts the final rules.

4. Michigan

In Michigan, restructuring related activities involved two tracks. One track is a limited retail wheeling experiment that was started in 1992 but may have been overtaken by current events. The other has a broader scope and was initiated at the urging of Governor John Engler in early 1996. This chapter first provides a brief history of the major events and then describes the retail wheeling experiment and the broader restructuring initiative. It concludes with a brief note on the current status.

4.1 Brief History

The Michigan Public Service Commission (MPSC) began consideration of retail wheeling issues in 1992. In August 1992, the Association of Businesses Advocating Tariff Equity (ABATE) filed an application for approval of an experimental retail wheeling tariff for the Consumers Power Company (Consumers Power). On September 11, 1992, the commission issued an order initiating the process to consider experimental retail wheeling tariffs for Consumers Power (Case U-10143) and for the Detroit Edison Company (Detroit Edison [Case U-10176]) on a contested case basis. The commission asked ABATE and other interested parties to submit proposed tariffs for an experimental program (MPSC 1994, pp. 1-2).

Following evidentiary hearings, the administrative law judge (ALJ) issued a Proposal for Decision on August 27, 1993. The ALJ recommended that retail wheeling transactions go forward only if the electric utility serving the customer requesting the retail wheeling services voluntarily agrees to provide such services. In the ALJ's opinion, the commission lacked the authority to compel utilities to provide retail wheeling services. Nevertheless, on April 11, 1994, the MPSC issued an interim order adopting a limited experiment of retail wheeling for both Consumers Power and Detroit Edison. The commission stated that it has the authority to order retail transmission service. Although the order defined the scope and the terms and conditions for a 5-year experiment, it did not set the rates and rate structures for the experiment. Instead, the commission remanded the case back to the ALJ for the limited purpose of further consideration of appropriate rate structures (MPSC 1994, pp. 2-3).

On June 19, 1995, the MPSC issued the final order on the retail wheeling experiment. It established the rates and charges for retail delivery service for the two companies. The experiment for a company would formally begin when the company notifies the commission that it needs new capacity. Since neither Consumer Power nor Detroit Edison require new capacity in the near term, the actual experiment has not been started yet. As discussed below, the significance of this retail wheeling experiment may be much reduced because of subsequent events.

In the other track, the MPSC staff started to look into the broader industry competition issues in 1995. In June, 1995, the commission staff issued a draft of *Proposal "M", A Michigan Plan for Flexible and Competitive Energy Utility Services* for discussion. The specific proposals included in *Proposal M* involve customer choice of energy providers, elimination of rate base regulation, establishment of a Michigan power pool with statewide coordination of investor-owned utilities, cooperatives, municipally owned utilities and entrepreneurs, options for municipal electric utilities, and elimination or modification of unnecessary regulation.⁶

⁶ In addition, there are two proposals that are specific to the natural gas market: (1) institute flexible pricing to meet natural gas needs, and (2) allow an optional contract service that is a fully deregulated service (MPSC Staff, 1995, pp. 32-36).

On January 8, 1996, Governor John Engler transmitted to the MPSC "A Framework for Electric and Gas Utility Reform," developed by the Michigan Jobs Commission. Governor Engler "strongly encouraged" the MPSC to use the framework as guiding principles in the effort "to promote competition within reasonably established time frames". The framework contains actions for the near-term (by January 1, 1997), the intermediate term (by January 1, 1998), and the long term - by January 1, 2001.⁷

On April 12, the MPSC opened Case No. U-11076 to address the issues raised in the Framework "in an orderly manner within the recommended time frame" (MPSC, 1996, p. 1). It directed Consumers Power and Detroit Edison to file applications by May 15, 1996 to allow the power for new industrial/commercial electric load to be purchased directly from the generators and wheeled over common transmission lines. Other electric utilities subject to the Commission's jurisdictions were directed to file applications by June 14, 1996.

On May 15, 1996, Consumers Power (U-11091) and Detroit Edison Company (U-11092) filed their respective applications and the MPSC opened separate cases to consider the applications. On June 14, 1996, other utilities including American Electric Power Company, Alpena Power Company, Upper Peninsula Power Company, Edison Sault Electric Company, Michigan's Rural Electric Cooperatives, Wisconsin Electric Power Company, Wisconsin Public Service Corporation, Wabash Valley Power Association, and Northern States Power Company also filed applications in Cases U-11110 through U-11118. These cases were pending as of June 30, 1996.

On July 16, 1996, the MPSC scheduled a series of public hearings for July and August to get a better picture of the need for competition in electric rates and how to accomplish that goal. The MPSC wants to expand the scope of its information gathering by scheduling five public hearings statewide to hear about Michigan consumer concerns, ideas, and questions on restructuring the electric industry.

A summary of the key dates described above is shown in Table 3.

4.2 Retail Wheeling Experiment

The first track in Michigan's restructuring efforts is the retail wheeling experiment. This section provides a brief description of the experiment, including the purpose, capacity limits, eligibility, duration, reentry conditions, other aspects, data collection and program evaluation, and approved retail delivery rates and charges.

Purpose. The purpose of the limited experiment is "to gather and evaluate information that would inform future deliberations concerning whether retail wheeling is ultimately in the public interest and whether it should be included as an element of retail competition on a permanent basis" (MPSC 1994, p. 29).

Capacity Limits and Eligibility. As defined by the MPSC, the experiment will be limited to about 1% of the two major utilities' peak demand: 90 megawatt (MW) for Detroit Edison and 60 MW for Consumers Power. Participants are limited to between 2 MW and 10 MW of retail delivery capacity at each location. In addition, no single customer may account for more than one-half of the total capacity allowed in the experiment regardless of the number of locations involved. Only transmission and

⁷ See Section 4.3 for a more detailed description of the framework.

**Table 3: Major Timeline of Electric Restructuring in Michigan
As of June 30, 1996**

| <u>Date</u> | <u>Major Event</u> |
|--------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| August 20, 1992 | ABATE filed application for an experimental retail wheeling tariff for Consumers Power. |
| September 11, 1992 | The MPSC opened Cases U-10143 and U-10176 to consider experimental retail wheeling tariffs for Consumers Power and for Detroit Edison. |
| August 27, 1993 | Administrative Law Judge's Proposal for Decision for Cases U-10143/ U-10176 is issued. |
| April 11, 1994 | The MPSC issued an interim order in Cases U-10143/U-10176, approving the terms and conditions for a 5-year experimental retail wheeling program, but remanded to the ALJ for further consideration about the appropriate rate structure. |
| May 11, 1994 | Detroit Edison filed a suit with the Court of Appeals, challenging the MPSC's jurisdiction to order retail transmission services. |
| June 19, 1995 | The MPSC issued the final order in Cases U-10143/U-10176, establishing the rates and charges for retail delivery service for Detroit Edison and Consumers. The experiment would begin when each of the two utilities formally informs the commission that it needs new capacity. |
| June, 1995 | The MPSC staff issued a discussion draft of <i>Proposal M</i> for competitive utility services. |
| January 8, 1996 | Governor John Engler transmitted to the MPSC "A Framework for Electric and Gas Utility Reform," developed by the Michigan Jobs Commission. |
| April 12, 1996 | The MPSC initiated Case No. U-11076 to address the issues in the "Framework." |
| May 15, 1996 | Consumers Power and Detroit Edison filed applications for direct customer access tariffs in accordance with the "Framework." |
| June 14, 1996 | Other utilities filed applications for direct customer access tariff in accordance with the "Framework." |
| July 16, 1996 | The MPSC issued an order scheduling five public hearings statewide to hear about Michigan consumer concerns. |

subtransmission voltage customers are eligible to participate in the program. Primary voltage customers are not eligible. Self-service wheeling customers are also eligible to participate in the experiment.

Duration and Reentry. The experiment for a company will begin when the company issues its next capacity solicitation and will last for 5 years. At the end of the experiment, participants can return to full retail service without penalty. If participants decide to quit the experiment before the end of 5 years, they will be allowed to take service under any rate for which they qualify, subject to the condition that they will be charged for the cost of incremental supply, i.e., the cost of the most expensive source of fuel or purchased power, including capacity costs or other fixed costs. They will also be subject to interruption to maintain system integrity.

Other Aspects. There would be no set-aside for educational institutions. The local utilities are not required to enter into buy/sell arrangement; instead, participating retail wheeling customers should assume the responsibility of contracting directly with third-party providers for their power purchases. Customers are free to form cooperative pools for negotiating the purchase of power from third-party providers, but "each customer's load at any one location will be treated as separate for purposes of applying the retail delivery tariff and will be metered and billed separately" (MPSC 1994a, p. 41). Reassignment of rights to receive power from third-party is permitted only with the consent of the local utility. Separate metering would be required for those participants who obtain retail wheeling for only part of their loads. Participating retail wheeling customers are permitted to take standby service under existing tariff rates. For those customers opting out of standby service, their retail wheeling load must be physically capable of being interrupted.

Data Collection and Program Evaluation. Utilities are directed to collect data to assess the potential impacts of retail wheeling on the reliability and safety of utility operations, on the central dispatch operation, on the utility's ability to provide efficient services to non-retail wheeling customers, the administrative burden generally, and those caused by self-service wheeling and by the criteria for determining customer eligibility. Data should also be collected for evaluating the methodology and accuracy of determining the cost of service. Data on customers' load curves, energy consumption values, shares of customers' demand and energy served by the cooperative approach should be collected. The real and perceived economic benefits, utility benefits, impacts on a utility's ability to recover its capital investment, and a utility's financial integrity are issues that need to be studied in program evaluation.

Approved Retail Delivery Rates and Charges. Following the remand to the ALJ, the record was reopened to consider additional evidence concerning retail delivery rates. Components of rates such as customer service charges, capacity reservation charges, mandatory ancillary services (including operating reserve, voltage support and control, and reactive support), optional services (such as substation charges, transmission system losses, and deadband protection), standby service, unauthorized use, regulatory charges and stranded investment were addressed. The commission's determination on these items are summarized in Table 4. According to information provided by the MPSC, for an industrial customer with 5 MW of retail delivery capacity using 3,000,000 kilowatt hours (kWh) of electricity per month, the average rates would be 0.80 cents per kWh for Consumers Power, and 1.24 cents per kWh for Detroit Edison (MPSC 1995b).

4.3 A Framework for Electric and Gas Utility Reform

As transmitted by Governor John Engler, the Michigan Jobs Commission's economic development recommendations for electric and gas utility reform is titled "A Framework for Electric and Gas

Table 4: Approved Retail Delivery Rates and Charges in the Michigan Retail Wheeling Pilot Program

| | Detroit Edison Company | Consumers Power Company |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Customer Service Charge | \$3,000.00 per customer location, plus \$ 500.00 per additional location | \$3,000.00 per customer, plus \$ 500.00 per additional location |
| Capacity Reservation Charge: Subtransmission voltage Transmission voltage | \$ 1.96 per kW ¹ \$ 1.18 per kW | \$ 1.81 per kW \$ 1.23 per kW |
| Mandatory Ancillary Services: Operating Reserves Charge System Control & Load Dispatch Charge Voltage Support Charge Reactive Support Charge | \$ 0.38 per kW, plus \$ 0.00053 per kWh ² \$ 0.05 per kW \$ 0.30 per kW \$ 0.05 per kVAR | \$ 0.46 per kW, plus \$ 0.00053 per kWh \$ 0.11 per kW ³ Adjustment for power factor to system support service charge |
| Optional Services: Substation Charge Loss Supply Charge: Subtransmission Voltage Transmission voltage | \$ 0.30 per kW \$ 0.77 per kW, plus \$ 0.001 per kWh \$ 0.43 per kW, plus \$ 0.0005 per kWh | \$ 0.13 per kW per percentage of line loss plus system average cost of energy per kWh of replaced energy (energy deliveries multiplied by line loss percentages) ⁴ |
| Deadband Service (± 3%) Standby Service Unauthorized Use Charge | Return of energy in kind or, \$ 0.10 per kWh See existing standby tariffs. \$ 5.00 per kW of unauthorized use, plus \$ 0.05 per kW (or top incremental cost plus 1¢ per kWh, if more) for unauthorized energy usage. | Return of energy in kind or, \$ 0.10 per kWh See existing standby tariffs. \$ 5.00 per kW of unauthorized use, plus \$ 0.05 per kW (or top incremental cost plus \$0.01 per kWh, if more) for unauthorized energy usage. |

| | | |
|----------------------------|----------------------|---------------------|
| Regulatory Charges: | | |
| SFAS 106 | \$ 0.0008264 per kWh | \$ 0.000877 per kWh |
| Nuclear Decommissioning | \$ 0.0006985 per kWh | \$ 0.001351 per kWh |
| Fermi 2 | \$ 0.0048793 per kWh | |
| SFAS 109 | \$ 0.0013110 per kWh | |
| Midland Amortization | | \$ 0.001134 per kWh |

Source: Michigan Public Service Commission, 1995, Exhibit A and B

Notes: ¹ Kilowatt charges apply to capacity reservation, unless otherwise noted.

² Kilowatt-hour charges apply to energy delivered, unless otherwise noted.

³ For System Support Service Charge

⁴ For Line loss Replacement Service Charge.

Utility Reform." It has been termed "the Michigan Jobs Commission Report" or "the Michigan Jobs Commission recommendations." There was little information about how the Michigan Jobs Commission developed this set of recommendations. The major elements of the Framework are as follows:⁸

A. The Near Term -By January 1, 1997

- (1) Allow new industrial/commercial electrical load to be negotiated directly from the generator and wheeled over "common" transmission
- (2) Address stranded costs by giving shareholder utilities a greater opportunity to prepare for market competition
- (3) For both gas and electric power, explore replacing the rate-of-return regulation with rate-cap regulation for all loads statewide that are not wheeled
- (4) Allow immediate "file and use" tariffs for all existing industrial and commercial loads, which are not wheeled but are negotiated through bilateral contracts
- (5) MPSC should not mandate demand-side management, conservation programs, billing practices, rules for issuing securities, rules for promotional programs, and nonutility business transactions and other similar prescriptive regulatory measures
- (6) Reorganize the MPSC into three streamlined divisions - electric, gas, and telecommunications

B. The Intermediate Term -by January 1, 1998

- (1) Create an independent wholesale electric pool

C. The Long Term -by January 1, 2001

- (1) Allow industrial/commercial rate classes to aggregate demand, purchase retail electricity, negotiate bilateral agreements, or buy wholesale power
- (2) Do not impede mergers and acquisitions. The model will only be false and thus, be reflected in price if the system of companies cannot constrict with demand and efficiency. Large shareholder utilities should have the flexibility to acquire and divest. Michigan utilities should be given opportunities and incentive to

⁸ See Michigan Jobs Commission (1995) for specific actions to support each of these proposals.

prepare for competition and help ensure that they remain Michigan based companies that provide jobs to the people of Michigan

4.4 Utility Filings

In response to the filing requirements imposed by the MPSC in the case concerning the recommendations of Michigan Jobs Commission (Case No. U-11076), both Consumers Power and Detroit Edison filed their applications on May 15, 1996. Consumers Power's application is for an "open access, new load delivery service" tariff. Detroit Edison's is for a "retail access transmission, new load" service, effective January 1, 1997, and an "interim economic growth electric service rider for new electrical load installations in Michigan," effective immediately. Both applications specifically address the issue of new industrial and commercial loads contained in Item (1) of the Michigan Jobs Commission recommendations for the near term: "Allow new industrial/commercial electrical load to be negotiated directly from the generator and wheeled over 'common' transmission." Both companies made their applications conditional. The following conditions were mentioned by both companies:

- While the MPSC's Scheduling Order refers only to the Michigan Jobs Commission recommendation to allow new industrial/commercial electric load to be negotiated directly from the generator and wheeled over 'common' transmission and related issues, the companies stated that all six recommendations for the near term should be viewed as an integrated, comprehensive package. Only when all the issues are satisfactorily addressed and resolved should implementation of the proposed new load/retail access tariff or the economic growth electric service rider be started. In particular, the companies insisted that a workable plan to authorize full recovery of stranded costs be in place.
- In the companies' view, there is a relationship between this case and the retail wheeling experiment (Case Nos. U-10143 and U-10176). The companies asserted that the commission should formally recognize that the retail wheeling experiment has been superseded by events. There is also a relationship between the current case and the other cases involving a direct access tariff. Consumers Power stated that the amount of load served under the proposed new load tariff should be counted toward the total load specified in Case No. U-10787. Detroit Edison indicated that all competitive solicitation, retail access, and integrated resource planning activities in Case Nos. U-10840 and U-11057 should be dismissed.
- Alternate service providers must agree to full reciprocity provisions.

In addition, **Consumers Power** (1996) also stated the following:

- Eligible customers are those "authorized businesses" with at least 3,000 kW of new or expanded load and customers with at least 10,000 kW of new or expanded load. The new load must be separately metered. The entirety of the separately metered load must be placed on the tariff.
- In addition to transmission and subtransmission voltage loads, primary voltage loads are also eligible.
- The proposed rates and charges are patterned after those approved by the commission in the retail wheeling experiment, as shown in Table 4. The major differences relate to the charges for capacity reservation and for substation charges in the optional services:

| | <u>Retail Wheeling Experiment</u> | <u>Open Access New Load Delivery</u> |
|------------------------------|-----------------------------------|------------------------------------------|
| Capacity Reservation Charge: | | |
| primary service | Not applicable | \$3.48 per kW |
| subtransmission service | \$1.81 per kW | \$2.58 per kW |
| transmission service | \$1.23 per kW | \$2.00 per kW |
| Optional Services: | | |
| substation | Not listed | \$0.52 per kW |

For **Detroit Edison**, the transmission and distribution service to "Retail Access Transmission Service - New Load" customers will be offered in accordance with rates, terms, and conditions consistent with the economic and nondiscriminatory principles identified in its submittal in the commission's retail wheeling proceedings. They will also be compatible with Federal Energy Regulatory Commission (FERC) retail transmission pricing and service requirements. The Interim Economic Growth Electric Service Rider is intended to bridge the gap between now and January 1, 1997, when the Retail Access Transmission Service - New Load goes into effect. It is applicable to the company's existing Primary Supply Rate Schedule D6, providing additional discount for the billing demand charge. For the first year, the additional discount is 30% for firm service and 40% for the interruptible service (Detroit Edison, 1996).

4.5 Current Status and Developments

As of June 30, 1996, the Michigan retail wheeling experiment (Case Nos. U-10143/U-10176) is essentially inactive. The focus is now shifted to the Framework presented in the Michigan Jobs Commission recommendations. The MPSC has opened a docket to address the first item of the Michigan Jobs Commission's near-term recommendations on tariffs for direct access transmission for new load that is expected to be in effect by January 1, 1997 (Case No. U-11076). Consumers Power and Detroit Edison have filed applications to offer direct access transmission -- new load tariff. Other utilities have also filed applications for the tariffs, which are expected to be in effect on January 1, 1997.

As specified by the MPSC, the retail wheeling experiment will go into effect when either Detroit Edison or Consumers Power requires new capacity. Since neither utility needs new generating capacity in the near future, the experiment is currently on hold. Further, several developments make it uncertain whether the experiment will be implemented.

- (1) Although the commission found that its enabling statutes authorize it to approve a retail delivery tariff and to institute an experimental retail wheeling program, Detroit Edison filed a suit in the Appeals Court challenging the MPSC's authority to do so. The company claimed that the 1992 Energy Policy Act preempts the MPSC from mandating retail transmission service. Consumers Power also joined in the suit. The case is still pending.
- (2) While the overall restructuring framework and activities were being pursued, the retail wheeling experiment may have been overtaken by events. As noted above in Section 4.4, both Consumers Power and Detroit Edison mentioned this point. The same observation was also made by one witness in the formal proceeding. Steven Brick, MSB Energy Associates, Inc., testifying on behalf of the Michigan United Conservation Clubs in the retail wheeling proceeding, observed that nationally, the retail wheeling agenda had been overtaken by a broader competition agenda

and that the experiment was "likely to yield little if any useful information on economic efficiencies from retail wheeling" (The Electric Utility Weekly, 1994).

- (3) In addition to the voluntary retail access transmission service tariffs filed by Consumers Power and Detroit Edison, both companies have negotiated with major industrial customers and signed special long-term contracts. For example, in March, 1995, the MPSC approved special 10-year contracts between Detroit Edison and the Big Three automakers -- Ford, General Motors, and Chrysler. The aggregate load covered about 1,000 MW of connected load, saving 10% to 15%. The average energy charge for firm services was \$0.0216 per kWh. Consumers Power has also negotiated similar contracts with some of its large customers. One potential impact of such special contracts is that they reduce the numbers of potential participants in actual retail competition on the customer side, to the extent that such special contracts are still in effect when retail competition is implemented. However, the contracts may contain buyout provisions that allows customers to terminate the contracts after paying the termination costs.

5. New York

In New York, the restructuring process started within a formal proceeding on selected issues of competition in the overall energy market. A set of guiding principles was first developed, using the collaborative approach. Collaboration also figured prominently in the substantive work leading to New York Public Service Commission's (NYPSC's) final decision that set forth its vision, goals, and policy direction. In this section, we first present a brief history of the restructuring process in New York. We then describe the elements of the commission's final order and the status of implementation.

5.1 Brief History

The overall restructuring process in New York started within a formal proceeding. In Case 93-M-0229, the NYPSC addressed selected issues of competition in the overall energy market. The focus of Phase I of the case was on the sale of electricity at flexible rates to customers with competitive opportunities. On July 11, 1994, the commission adopted an order setting forth general guidelines for such transactions. In addition, the commission decided that it was appropriate to investigate issues related to the future regulatory regime in light of the competitive opportunities for electric services (NYPSC 1994a, p. 2). On August 9, 1994, the NYPSC issued an order initiating Phase II of the competitive opportunities proceeding in Case 93-M-0229 "to identify regulatory ratemaking practices that will assist in the transition to a more competitive electric industry designed to increase efficiency in the provision of electricity while maintaining safety, environmental, affordability, and service quality goals" (NYPSC, 1994a, pp. 1-2).⁹ Specifically, parties were directed to collaborate on developing comprehensive principles to guide the transition of the electric industry following collaborative meetings and discussions of stakeholders. On December 22, 1994, the NYPSC issued one set of proposed principles for comment (NYPSC, 1994b). After considering the written comments submitted by the parties, the NYPSC issued a set of guiding principles on June 7, 1995 (NYPSC 1995b).

Subsequently, the collaborative process continued on many substantive restructuring issues, resulting in the preparation of the Phase II final report by the New York Department of Public Service (NYDPS), entitled *Restructuring New York's Electric Industry: Alternative Models and Approaches* in November 1995 (NYDPS 1995a). In addition, parties were also afforded opportunities to present their positions and interests. On December 21, 1995, the ALJ's Recommended Decision was issued (NYPSC 1995c). It recommended that the Commission adopt a transition leading to a flexible retail poolco model for the electricity industry in New York. In the transition, there would be a wholesale poolco with an ISO and implementation of various market mechanisms to facilitate an orderly movement to full retail access. In the process, generation would be separated from transmission and distribution functions. An energy service market will be developed. The ALJ also recommended that an EIS be prepared prior to the commission adopting its final decision so that the commission could take into consideration the information developed in the EIS (NYPSC 1995c, Vol. I pp. 111 - 112 and Appendix F in Vol II). On February 13, 1996, the NYPSC (1996a) issued a memorandum and resolution, concurring with the ALJ's findings on the preparation of an EIS and directing that the commission staff proceed to prepare an EIS. The commission staff then issued a draft generic EIS on March 6, 1996 (NYDPS, 1996a). On May 3, 1996, the Commission issued its final generic EIS (NYDPS, 1996b).

⁹ The case number was changed subsequently from Case 93-M-0229 to Case 94-E-0592 to better reflect its focus on the electricity market.

The NYPSC issued its final decision on May 16, 1996. It decided to implement wholesale competition by early 1997 and retail competition by early 1998. It directed utilities to file proposals and plans by October 1, 1996. To prevent the onset of market power, it encouraged utilities to divest generation from transmission and distribution systems. Divestiture of energy services is also encouraged if it would provide benefits to consumers (NYPSC, 1996b, pp. 89-91). Table 5 presents a summary of the key milestones of the New York restructuring process.

5.2 Guiding Principles

The principles issued by the NYPSC on June 7, 1995 to guide the transition to competition for electric service states the following (NYPSC 1995b, Appendix C):

In accordance with the commission's mandate that all New Yorkers must have access to reliable and reasonably priced electric service provided safely, cleanly and efficiently, the following guiding principles apply in the transition to a more competitive electric industry:

- (1) Competition in the electric power industry will further the economic and environmental well-being of New York State. The basic objective of moving to a more competitive structure is to satisfy consumers' interests at minimum resource cost. Prices should therefore accurately reflect resource costs, and consumers should have a reasonable opportunity to realize savings and other benefits from competition.
- (2) The commission should strive to minimize "bill shock" for any class of customers. A basic level of reasonably priced service must be maintained for all New Yorkers.
- (3) Increased emphasis should be placed on market-based means or competitively neutral approaches to preserve research, environmental protection, cost-effective energy efficiency and fuel diversity.
- (4) The integrity, safety, reliability, and quality of bulk electric system should not be jeopardized.
- (5) Any new electric industry structure should provide:
 - a. increased consumer choice of service and pricing options;
 - b. a suitable forum for promptly resolving consumer concerns and complaints; and
 - c. leeway for approaches that reflect the differences that exist among New York electric utilities.
- (6) With more competition should come less regulation, although the transition requires vigorous fair trade safeguards. All market participants should be subject to fair and consistent laws, rules, and regulations. Mechanisms should exist to identify and correct anticompetitive

**Table 5: Major Timeline of Electric Restructuring in New York
As of June 30, 1996**

| Date | Major Event |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| July 11, 1994 | Final order on flexible rates |
| August 9, 1994 | Order initiating Phase II of the competitive opportunities proceeding issued (Case 93-M-0229, later changed to Case 94-E-0952); the goal of Phase II is to develop guiding principles for the transition to competitive electric markets |
| December 22, 1994 | Order on proposed principles (Opinion No. 94-27) issued |
| June 7, 1995 | Final guiding principles issued (Opinion No. 95-7) |
| September, 1995 | Phase II final report issued |
| December 21, 1995 | ALJ's Recommended Decision issued |
| February 13, 1996 | NYPSC issued a memorandum and resolution, directing that an EIS be prepared |
| March 6, 1996 | Draft generic EIS issued |
| May 3, 1996 | Final generic EIS issued |
| May 16, 1996 | Final order on Competitive Opportunities for Electric Service (Opinion No. 96-12) adopted |
| October 1, 1996 | Various utility filings |

behavior. Where monopoly remains, emphasis on performance-based regulation should continue.

- (7) The current industry structure, in which most power plants are vertically integrated with natural monopoly transmission and distribution, must be thoroughly examined to ensure that it does not impede or obstruct development of effective wholesale or retail competition.
- (8) Utilities should have a reasonable opportunity to recover prudent and verifiable expenditures and commitments made pursuant to their legal obligations, consistent with these principles. There should also be respect for the reasonable expectations of independent power producers, investors, and other market participants. Utilities and

independent power producers should share responsibility for taking all practicable measures to mitigate transition costs. The transition should balance order, deliberation, and speed.

- (9) Pro-competitive policies should further economic development in New York State.

5.3 Final Order

In its "final" order on electric restructuring, the NYPSC set forth its vision, goals, and policy directions. This section describes these items briefly.

Vision. As envisioned by the NYPSC, the future of the competitive electric industry should include seven factors: (1) There should be effective competition in the generation and energy service sectors. (2) Electricity prices will be reduced, leading to improved economic development for the state as a whole. (3) There will be increased consumer choice of suppliers and service companies. (4) There will be a system operator that treats all participants fairly and ensures reliable service. (5) There will be a provider of last resort for all consumers and some means to fund necessary public programs will be continued. (6) Ample and accurate information will be provided to consumers for use in making informed decisions. (7) Information will be available to allow adequate oversight of the market to ensure that market operation is fair (NYPSC 1996b, p. 24).

Goals. The commission stated that its adopted guiding principles outline the general goals of the future regulatory scheme. The commission further translated those principles into six specific goals (NYPSC 1996b, pp. 26-28):

- (1) *Lower rates for consumers:* It is expected that more competition in the market would lead to lower electric prices for all consumers.
- (2) *Increasing customer choice:* Customers can choose from a number of suppliers of electricity and other services, different types of services, different pricing and service options.
- (3) *Continuing reliability of service:* The new system should have an ISO to ensure fair and equal access to the transmission system and the reliability of service.
- (4) *Continuing programs that are in the public interest:* Programs such as energy efficiency, research and development, environmental protection, and low-income should be maintained beyond what competitive markets would provide so as to ensure electric service is provided safely, cleanly, and efficiently.
- (5) *Allaying concerns about market power:* The competitive market should be free from vertical and/or horizontal market power. From the commission's perspective, divestiture of (a) generation, (b) transmission and distribution, and (c) energy services is most effective in preventing vertical market power. Horizontal market power can be avoided by ensuring that a sufficient number of providers are in the competitive market.

- (6) *Continuing customer protection and the obligation to serve:* Each customer must be able to count on at least one supplier who will continue to provide service at reasonable rates in the event that (a) the customer chooses to make no change from the current situation, (b) a new supplier fails to meet its obligation, or (c) competitive alternatives are not yet available in the geographic area in which the customer is located.

Policy Directions. In its final order, the NYPS&C set forth its policy direction in the areas of competition in general, wholesale and retail competition, system reliability, strandable costs, environmental and public policy, market power/corporate structure, and obligation to serve/customer protection. Each of these items is briefly described below (NYPS&C 1996b, pp. 88 - 91):

Competition in general

- Pursue competition in the generation and energy service sectors to reduce rates over the long term, to increase customer choice, and for other economic development advantages.
- In their filings, utilities should propose mitigation measures for areas of excessive market power due to transmission constraints.

Wholesale and Retail Competition

- Make retail competition available to all customer classes to realize its potential for benefitting them by providing greater choice with respect to electricity providers, pricing and reliability options.
- Implement wholesale competition by early 1997 and retail competition by early 1998.
- Utilities should file, by October 1, 1996, with the NYPS&C and the FERC, a plan to distinguish and classify transmission and distribution facilities and a transmission pricing proposal.

System Reliability

- Reliability of the bulk power system is of paramount importance. The ISO must have the independence, authority and the means to ensure reliability of the bulk power system. Utilities should file an ISO plan by October 1, 1996.

Strandable costs

- Deal with the computation of strandable costs, and the timing of recovery on a utility-by-utility basis and include them in the utility rate plan.
- Utilities and independent power producers should pursue creative means to reduce the amount of strandable costs. Incentives will be provided to those entities that are able to reduce the amount of strandable costs.
- Use a nonbypassable distribution charge for recovering strandable costs.
- Allow utilities a reasonable opportunity to recover strandable costs.

Environmental and public policy

- Use a nonbypassable system benefits charge to fund necessary environmental and other public policy programs. Utilities should address such issues in detail in their individual filings.

Market power/corporate structure

- Functionally separate generation and energy services from transmission and distribution systems to prevent the onset of vertical market power. Total divestiture of generation is encouraged. Divestiture of energy services is also encouraged if it provides benefits to customers.
- Use the collaborative approach to address horizontal market power. Utilities should discuss their proposals thoroughly in the filings.

Obligation to serve/customer protection

- Encourage the development of a robust market for energy services. Transmission and distribution companies should remain obligated to serve all customers for the short term. All customer protection measures currently in place should remain. Utilities should address the relationship between energy service function and the transmission and distribution company in their filings.

5.4 Implementation Status

The NYPS&C indicated that the policy decisions described above would be implemented in two ways. First, staff, utilities, and other interested parties should continue to collaborate on conducting technical studies on market power concerns, the role of energy service companies, and reporting requirements, making necessary FERC filings, and engaging in public educational forums by October 1, 1996. Second, the utilities, except for Niagara Mohawk Power Company and Long Island Lighting Company (LILCO), should make their filings by October 1, 1996, to address issues such as the corporate structure of the utilities, retail access proposals, long-term rate plans, public programs, market power, and energy services. Niagara Mohawk and LILCO already have ongoing rate proceedings in which issues involving competition are being addressed (NYPS&C, 1996b, p. 91).

6. Wisconsin

Wisconsin is the one state with relatively low electricity prices that has initiated industry restructuring at an early date. Energy Information Administration data show that, in 1993-1994, average electricity prices in Wisconsin for the end-use sector ranged from 15% to 24% below the U.S. average. In contrast, the average prices for California and New York ranged from 17% to 61% above the U.S. average.¹⁰ Despite the relatively low electricity prices in the state, the Public Service Commission of Wisconsin (PSCW) was interested in increasing customer choice and reducing electricity costs to consumers through heightened competition at both the wholesale and retail levels. Thus, the commission started a formal proceeding in September 1994, 5 months after California started its proceeding. By December 1995, the PSCW adopted its "reasonable strategy" to work toward retail competition by the year 2000. This chapter first presents a brief history of the events. It then describes the objectives and principles of restructuring and the elements of the strategy adopted. Finally, the status of implementation is noted.

6.1 Brief History

The restructuring process in Wisconsin started with an informal public discussion. From March to September 1994, the Wisconsin Public Utility Institute (WPUI) Roundtable on Electric Power Industry Trends and Regulatory Policy Directions was convened by Commissioner John Coughlin of the PSCW. The PSCW chair and the other commissioner¹¹ also addressed separate sessions of the roundtable. Various groups were represented in the roundtable, including the PSCW; Department of Natural Resources; investor-owned utilities; municipal utilities; rural electric cooperatives; independent power producers; residential, commercial and industrial customers; citizens and environmental organizations; and the University of Wisconsin-Madison. The results of the roundtable discussions are documented in a report entitled *Policy Options for Competition in Wisconsin's Electric Power Industry* (Cullen, et al. 1994). The Roundtable report identified plausible sets of policy options to serve as a starting point for the restructuring debate. Those policy options cover the topical areas of generation, transmission, retail wheeling, alternative forms of regulation, advance planning, environmental protection, energy efficiency, renewable energy, social programs, and public participation and funding.

On September 8, 1994, the PSCW initiated an investigation into the probable costs and benefits of changing the electric utility company structure and regulation (Docket 05-EI-114). In the notice of generic investigation and assessment of costs, the PSCW requested interested parties to comment on the following three questions (PSCW 1994):

- Should the current objectives of Wisconsin regulation of the electric industry, or implementation of those objectives, be changed, and in what form?
- What utility institutional structure(s) will be likely to provide the best balance of the desired objectives in the future?
- What regulatory regime will likely provide the best balance of desired objectives in the future?

¹⁰ For additional discussion on electricity costs in the three states, see Fang and Galen, 1996, pp. 3-5.

¹¹ The PSCW is composed of three commissioners, including the chair.

Following consideration of the comments submitted by the parties, the PSCW issued a supplemental notice of generic investigation on February 2, 1995. It set forth the objectives of the investigation and the principles for restructuring. The PSCW also appointed a 22-member advisory committee to develop and assess alternative market structures, as well as transmission and distribution systems. The advisory committee was chaired by Commissioner Scott Neitzel of the PSCW. In addition, the commission directed staff to prepare an EIS. Both the advisory committee's work on restructuring issues and staff's assessment of environmental impacts were to be completed in time to allow the commission report to the state legislature by December 1, 1995 (PSCW 1995a).

In July 1995, the commission staff issued a draft EIS (PSCW staff, 1995) for public review and comments. Subsequently, after considering and incorporating the comments received, the final EIS was released in October 1995 (PSCW 1995b & c).

The advisory committee worked from February to October 1995 when its report to the commission, entitled *Report of the Advisory Committee on Electric Utility Restructuring*, was issued (PSCW 1995d). The report examined options for transmission, generation, distribution, and public policies, and then formulated five consolidated market structures. At the same time, a survey of the general public's views on restructuring, conducted for the Energy Center of Wisconsin, was also published in October 1995 (Opinions Dynamics, 1995).

On December 19, 1995, the PSCW adopted "A Reasonable Strategy for Restructuring Wisconsin's Electric Utility Industry" (PSCW 1995e). The commission's preference was to use competition to attain an efficient and customer-driven electricity marketplace for Wisconsin. All customers should have access to competitive energy supplies. The target date for implementing retail competition is the year 2000. However, retail competition will be implemented only if the PSCW is satisfied that necessary conditions are in place to sustain a competitive market that is in the public interest.

On February 22, 1996, the PSCW submitted a report on electric utility restructuring in Wisconsin to the legislature. The report briefly reviewed the restructuring activities to date, the role of the commission, the role of the legislature, and elaborated on the commission's work plan to achieve the restructuring objectives.

Table 6 summarizes the key milestones of the Wisconsin restructuring process.

6.2 Objectives and Principles

As enunciated by the PSCW in its February 2, 1995 supplemental notice, there are three primary objectives of the investigation (PSCW, 1995a, pp. 1-2):

- (1) To create a system that sends accurate price signals to customers, resulting in the most economically efficient use of the resource
- (2) To create a system which maximizes, within the public interest, the number and diversity of service offerings to customers
- (3) To create a system in which providers maximize economic efficiency and environmental stewardship

**Table 6: Major Timeline of Electric Restructuring in Wisconsin
As of June 30, 1996**

| <u>Date</u> | <u>Major Event</u> | | | | | | | | | | | | | | |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|--------------|----------|------------------------------|-----------|-----|-----------|-----------------------|-----------|-------------------------------|-----------|---------------------|-----------|-------------------------------------------|
| March 1994 | The WPUI Roundtable on Electric Power Industry Trends and Regulatory Policy Directions convened. | | | | | | | | | | | | | | |
| September 1994 | The WPUI's report on policy options for competition in electric industry was published, following a series of Roundtable discussions. | | | | | | | | | | | | | | |
| September 8, 1994 | The PSCW opened Docket 05-EI-114 to investigate the probable costs and benefits of changing electric utility company structure and regulation. | | | | | | | | | | | | | | |
| February 2, 1995 | The PSCW issued supplemental notice of investigation for Docket 05-EI-114, setting forth the objectives of the investigation and the principles for the transition to competition in the industry, and established a 22-member advisory committee. | | | | | | | | | | | | | | |
| July, 1995 | Draft EIS was published. | | | | | | | | | | | | | | |
| October, 1995 | Final EIS was issued. | | | | | | | | | | | | | | |
| October, 1995 | The Energy Center of Wisconsin report on public opinion was released. | | | | | | | | | | | | | | |
| October, 1995 | The Advisory Committee report was issued. | | | | | | | | | | | | | | |
| December 19, 1995 | "A Reasonable Strategy" was adopted. | | | | | | | | | | | | | | |
| February 22, 1996 | A report to the Wisconsin Legislature was filed. | | | | | | | | | | | | | | |
| March 1996 | The PSCW opened five dockets to address various implementation issues: | | | | | | | | | | | | | | |
| | <table border="1"> <thead> <tr> <th><u>Docket No.</u></th> <th><u>Issue</u></th> </tr> </thead> <tbody> <tr> <td>1-AC-164</td> <td>Quality of service standards</td> </tr> <tr> <td>05-BE-100</td> <td>ISO</td> </tr> <tr> <td>05-BE-101</td> <td>Functional separation</td> </tr> <tr> <td>05-BE-102</td> <td>Affiliated interest standards</td> </tr> <tr> <td>05-BE-103</td> <td>Advance plan reform</td> </tr> <tr> <td>05-BU-100</td> <td>the Public Benefits Policy Advisory Board</td> </tr> </tbody> </table> | <u>Docket No.</u> | <u>Issue</u> | 1-AC-164 | Quality of service standards | 05-BE-100 | ISO | 05-BE-101 | Functional separation | 05-BE-102 | Affiliated interest standards | 05-BE-103 | Advance plan reform | 05-BU-100 | the Public Benefits Policy Advisory Board |
| <u>Docket No.</u> | <u>Issue</u> | | | | | | | | | | | | | | |
| 1-AC-164 | Quality of service standards | | | | | | | | | | | | | | |
| 05-BE-100 | ISO | | | | | | | | | | | | | | |
| 05-BE-101 | Functional separation | | | | | | | | | | | | | | |
| 05-BE-102 | Affiliated interest standards | | | | | | | | | | | | | | |
| 05-BE-103 | Advance plan reform | | | | | | | | | | | | | | |
| 05-BU-100 | the Public Benefits Policy Advisory Board | | | | | | | | | | | | | | |
| March-June 1996 | Work on the six dockets was proceeding according to plan. | | | | | | | | | | | | | | |

Principles. In conjunction with the above objectives, the PSCW (1995a, p.2) established the following 7 principles for the viable utility market structure that might be developed:

- (1) Consumers of all customer classes should benefit, or at least be left unharmed by any changes.
- (2) Nothing done in this proceeding should preclude future movement to the most market-oriented model.
- (3) Competitive markets are preferred to regulation to meet the objectives if consumers benefit.
- (4) Consumers must have ready access to the information necessary to make informed decisions about services and suppliers.
- (5) Safe and reliable universal service must be maintained.
- (6) Regulatory, social, environmental, and financial commitments have been made in the past and cannot and should not be ignored or discarded in the transition to a new structure.
- (7) Simple deregulation does not guarantee a competitive market.

6.3 A Reasonable Strategy

Based on the work of the advisory committee and the inputs obtained from the EIS process and public hearings and meetings, Commissioner Scott Neitzel, the chair of the advisory committee, outlined a strategy for restructuring the electric industry in Wisconsin. The PSCW then reviewed the proposal and adopted a revised strategy on December 19, 1995 (PSCW 1995e), which was later included in the commission's report to the legislature (PSCW 1996). Major elements of the plan are as follows:

Retail competition. Competition is the preferred policy instrument to attain the most efficient and customer driven electricity market. All customers should have access to alternative service providers. The target date for implementing retail competition is the year 2000. However, actual implementation is dependent on attainment of the necessary conditions for sustaining competition.

Consumer protection. Traditional programs such as the winter moratorium on disconnection and low-income and universal service programs will be continued. New entrants must be licensed to participate in the Wisconsin market. The current low-cost Wisconsin electricity supply will be tied to Wisconsin customers.¹² Distribution facilities will be regulated. Plans for transmission facilities will be reviewed and approved by the commission with public input. Shareholders will assume the risk of new generation decisions.

Existing financial commitments. The commission will adopt a responsible, prudent program, allowing appropriate recovery or credit for stranded costs and benefits

¹² This requirement is interpreted to mean that the low-cost power generated within Wisconsin would not be exported to other states.

Competitive new generation. There will be no review of the need-for-power issue. Siting review is limited to conformance with transmission plans and environmental standards. Reform and streamline the advance plan process and the bidding process.

ISO. Establish an ISO to operate the transmission system as a common carrier. If the ISO is not possible, the commission will institute a statewide, independent transmission company.

Regulating distribution service. Continue to regulate distribution service. Reliability and safety standards will be developed.

Public benefits programs. Preserve public benefits by continuing conservation programs, encouraging renewable resources, implementing green pricing, and continuing low-income programs.

The PSCW adopted a two-phase 32-step process to implement retail competition by 2000 (PSCW 1995e). Phase I is generally devoted to conducting studies, developing plans, and initiating reforms to help generate the necessary conditions for implementing retail competition. Phase II generally involves implementation of plans and programs developed in Phase I. At the end of each phase, there will be a "check phase" at which four steps will be taken: evaluate progress; examine the state of the industry; determine the need for any legislation; and make any mid-course corrections and adjustments.

6.4 Implementation Status

Among the 32 steps outlined, 12 will be started in 1996. Six of the 12 are expected to be completed during 1996:¹³

- (1) Request utilities to file plans for functionally segmenting generation, transmission, distribution, and customer services.
- (2) Determine the commission's intent to retain generation siting authority with necessary process reform.
- (3) Request legislature to increase intervenor compensation to \$500,000 annually.
- (4) Adopt affiliated interest standards consistent with those in place for the gas industry.
- (5) Make legal and policy determinations on whether merchant plants should be allowed to file certificates of public convenience and necessary (CPCN) applications.
- (9) Establish an ISO to operate and coordinate transmission system on a statewide basis.

¹³ The numbering of these 12 steps are as assigned by the PSCW in its work plan. In the following presentation, Step 9 is out of sequence because, according to the work plan, it is in the category of being scheduled for completion during 1996.

The other six are expected to be completed during the first half of 1997:

- (6) Establish Public Benefits Policy Advisory Board and implement recommendations; coordinate with gas industry and explore coordination with Telecommunications Fund Administrator.
- (7) Examine generation and transmission market power and take necessary action in merger and interface transmission cases.
- (8) Establish quality of service standards and mechanisms for measuring and monitoring service quality.
- (10) Workshop studies and reports on issues associated with spinning-off or divesting utility assets.
- (11) Reopen Docket 05-EI-112 to reform Stage I bidding process.
- (12) Initiate and complete process to further reform Advance Plan.

In March 1996, the commission opened the following six dockets to address the implementation issues included in the first 12 steps:

| <u>Docket No.</u> | <u>Issue</u> | <u>Implementation Step No.</u> |
|-------------------|----------------------------------------------|--------------------------------|
| 1-AC-164 | Quality of service standards | Step 8 |
| 05-BE-100 | ISO | Step 9 |
| 05-BE-101 | Functional separation | Step 1 |
| 05-BE-102 | Affiliated interest standards | Step 4 |
| 05-BE-103 | Advance plan reform | Steps 2, 5, 11, and 12 |
| 05-BU-100 | the Public Benefits Policy Advisory Board | Step 6 |

Among the first 12 steps, Steps 3, 7, and 10 are not specifically covered above. Step 3 involves the exchange of information between the commission and the legislature. Such exchange had taken place as of June 30, 1996. Step 7 involves consideration of market power, which is being addressed in considering the merger between Wisconsin Electric Power Company and Northern States Power Company. Step 10 concerns utility asset spin-off or divestiture. It's likely to be addressed in the dockets involving ISO and functional separation, as well as in the merger case.

As of June 30, 1996, all six dockets were progressing well. With respect to the standards for the quality of service, the PSCW staff was developing proposals. For ISO, utilities had filed four proposals and a question-and-answer session with the commission had also taken place. Utilities were expected to file plans for functional separation in September 1996. The PSCW staff were studying what standards were presently in place and what changes could be done. The staff had reviewed the comments regarding reform and streamlining of the advance plan process and was developing proposals. It is expected that the Public Benefits Policy Advisory Board will be set up in the second half of 1996.

7. Comparisons

This chapter compares selected aspects of the restructuring processes among the five states as described in Chapters 2 through 6. Issues covered include stages of the restructuring process, initial approaches to restructuring, the nature of competition embodied in the regulatory agency's final decision, treatment of stranded costs, treatment of renewable energy and energy efficiency, and performance based regulation.

Before making the comparisons, two caveats are in order. First, neither Massachusetts nor Michigan had the final decision as of June 30, 1996. For Massachusetts, the information contained in the proposed rulemaking in Docket No. DPU 96-100 was used. For Michigan, the information from the Michigan Jobs Commission's Framework for Electric and Gas Utility Reform was applied. Second, events and decisions that have occurred since June 30, 1996, are not included. For example, in late August 1996, a new restructuring law, AB 1890, was enacted in California. The new legislation may have modified some aspects of the CPUC decisions. A specific example of such modifications is that AB 1890 establishes a renewables program funded through a distribution charge, instead of the minimum renewables requirements program adopted by the CPUC. Updates of such changes are outside the scope of this report.

7.1 Stages of the Restructuring Process

The restructuring process can be divided into the following six stages: (1) the gestation period, (2) initiation of the formal proceeding, (3) interim decisions, (4) public input and collaborative process, (5) final decision, and (6) implementation.¹⁴ Table 7 shows the application of these stages in the five states and the status of their restructuring processes as of June 30, 1996. It provides the dates of key items in the various stages. A blank cell indicates that the stage has not been realized.

Overall, California and Wisconsin had adopted "final" decisions and were well into the implementation stage. New York had just adopted its final decision and was getting ready to implement it. Massachusetts was well into its restructuring proceeding; the DPU had issued several interim orders. The final order was expected in September 1996. In Michigan, the process was just getting started. The formal restructuring proceeding started in April 1996, and initially focused on retail transmission tariffs for new commercial and industrial loads. Michigan also had a separate track on retail wheeling. As discussed in Chapter 4, however, the Michigan retail wheeling pilot program appears to have been overtaken by recent events.

7.2 Initial Approaches to Restructuring

The initial approaches to restructuring the electric industry in the five states were different. In California, the CPUC proposed in the Blue Book to implement both the PBR and direct access. The phased-in direct access proposal proved to be very controversial from the start. The controversy and the injection of the state legislature into the process at an early stage made the restructuring process longer than otherwise would be the case. In contrast, Massachusetts, New York, and Wisconsin started the process by developing a set of principles or guidelines for restructuring. This approach was much less controversial and more easily managed. In Michigan, the process started when Governor Engler sent to the MPSC "A Framework for Electric and Gas Utility Reform" (the Framework), developed by the Michigan Jobs Commission. There was little public information about how the Michigan Jobs Commission developed

¹⁴ For a description of these stages and their application to California, New York, and Wisconsin in the consideration of environmental issues, see Fang & Galen (1996), pp. 10-30.

**Table 7: Status of Electric Restructuring In Five States, by Stage,
as of June 30, 1996**

| | California | Massachusetts | Michigan | New York | Wisconsin |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------|--------------------------------|----------------------------------------------------------------------------------------------|-------------------------------------------------------------|
| Gestation period | 1992 - Feb. 2, 1993: The Yellow Book | Dec. 1993 - July 1994 | Jun. 1995 - Mar. 1996 | Note 1 | Mar. - Sept. 1994 |
| Initiation of formal proceeding | Apr. 20, 1994: The Blue Book | PBR docket: Sept. 20, 1994. February 10, 1995 | Apr. 12, 1996 | Aug. 9, 1994 | Sept. 8, 1994 |
| Interim Decisions | Dec. 7, 1994 May 24, 1995 | Aug. 16, 1995 Mar. 15, 1996 May 1, 1996 | | Dec. 22, 1994 Jun. 7, 1995 Dec. 21, 1995 | Feb. 2, 1995 |
| Public Input/ Collaborative Process | Apr. 20, 1994 - Nov. 1995: public comments. Dec. 1994 - Feb. 1995: working group process, the MOU process, EIS process. | Jul. 17, 1995: Restructuring Roundtable submitted Interdependent Principles. | | Aug. 1994 - Sept. 1995: public comments. Sept. 1995: working group report. EIS process | Sept. 1994 - Nov. 1995: public comments. EIS process |
| Final Decision | Adopted, Dec. 20, 1995. Minor modifications: Jan. 10, 1996 | PBR: Feb. 24, 1995. Expected, Sept. 1996 | | Adopted May 16, 1996 | Adopted Dec. 19, 1995. Report to legislature, Feb. 19, 1996 |
| Implementation | Mar. 13, 1996: "Read map" decision | | | Utility filings expected Oct. 1, 1996 | Mar. 1996: Issue-specific dockets opened |
| Comments | | | Separate retail wheeling track | | |

Notes: 1. There was no gestation period because the process was started within another proceeding.

the Framework. It includes action items for the near term, the intermediate term, and the long term. The governor "strongly encouraged" the MPSC to use the Framework as the guiding principles to promote competition in the energy industry. Although the MPSC has started the restructuring process on the first near-term item, it remains to be seen how much of the Framework's guidelines will be eventually adopted by the MPSC.

7.3 Nature of Competition

The nature of competition as embodied in the utility regulatory agency's final decision in the areas of retail competition, treatment of generation assets, and the formation of the power exchange and the ISO are shown in Table 8. California and New York will commence retail competition in 1998. In California, all customers will have the direct access option in 5 years. Wisconsin targets the year 2000 for the start of retail competition, which will be implemented only if all the necessary conditions for sustaining competition are in place. Massachusetts proposed to have a competitive generation market by January 1, 1998. According to the Framework, direct access will be available to new loads by January 1, 1997.

With respect to the treatment of generation assets, California, Massachusetts, New York, and Wisconsin require only functional unbundling, not total divestiture. Functional unbundling means that the generation, transmission, and distribution functions of the traditional electric utility will be segregated into three different parts that treat one another at arm's length. The generation function will be deregulated, while the transmission and distribution will continue to be regulated. Total divestiture usually means that the utility is required to sell all of its generation assets. California will provide incentives for voluntary divestiture, while New York encourages total divestiture.

California, Massachusetts, Michigan, and New York will include a power exchange in the new industry structure.¹⁵ Wisconsin does not require formation of a power exchange, but the participants in the market may establish one voluntarily.

Among the five states, all but Michigan requires an ISO to operate the transmission system and to dispatch the generations plants. In Michigan, the Jobs Commission's Framework did not explicitly address the ISO issue.

7.4 Treatment of Stranded Costs

California, Massachusetts, New York, and Wisconsin all allow recovery of stranded costs. In Michigan, the Framework addressed the stranded costs issue by giving utilities "a greater opportunity to prepare for market competition." A charge on the use of the transmission or distribution line will be used as the recovery mechanism in California, Massachusetts, and New York. In Wisconsin, the mechanism will be determined in the implementation stage.

In California, recovery of stranded costs should be completed by the year 2005. Massachusetts allows 10 years for recovering stranded costs. New York will consider stranded costs on a case-by-case basis. Wisconsin will address the issue in the implementation process.

¹⁵ In Michigan's case, this is based on the Michigan Jobs Commission's intermediate term guidelines.

**Table 8: The Nature of Competition Embodied in the Final Decisions,
as of June 30, 1996**

| | California | Massachusetts (1) | Michigan (2) | New York | Wisconsin |
|--------------------|---------------------------------------------------------------------------|---------------------------------------------|---------------------------------------------------|-----------------------------------------------------|----------------------------------------------------------|
| Retail Competition | Jan. 1, 1998: Start phasing in. All customers will have access in 5 years | Jan. 1, 1998: Competitive generation market | Jan. 1, 1997: Direct access for new loads | Start in early 1998 | Target date:2000, necessary conditions must be in place. |
| Generation Assets | Functional unbundling, Incentives for voluntary divestiture | Functional unbundling | Flexibility to acquire and divest for large IOU's | Functional unbundling, total divestiture encouraged | Functional unbundling |
| Power Exchange | yes | yes | yes | yes | Not required |
| ISO | yes | yes | | yes | yes |

Notes: (1) Final decision was not available as of June 30, 1996. Use information from the proposed rule in Docket No. DPU 96-100.
(2) Final decision was not available as of June 30, 1996. Use information from the Michigan Jobs Commission's Framework.

In California, recovery of stranded costs will be capped each year so that the electricity price will not exceed the price established on January 1, 1996. Massachusetts requires that utilities mitigate the level of stranded costs. Only the non-mitigable net costs will be recoverable. In New York, incentives are provided for creative means to reduce the amount of stranded costs. (See Table 9).

7.5 Treatment of Renewable Energy and Energy Efficiency

Renewable Energy. The five states adopted different approaches for renewable energy. In California, the CPUC adopted the minimum renewables requirement approach, which states that suppliers must have a minimum share of their portfolio from renewable generation sources. Credits for renewables would be tradeable.¹⁶ The CPUC prefers to have a uniform requirement statewide, but would initially allow some variations to account for differences across utility service areas. The minimum would be in place between 1998 and 2000. It will then be reviewed to determine whether it should be modified and/or continued.

Wisconsin will continue to encourage development of renewable resources. The PSCW directed the utilities to study and propose green pricing programs. A Public Benefits Policy Advisory Board will be established, which may address renewable issues as part of its duties. In New York, there was no explicit treatment of renewable energy in the NYPSC's final decision.

The proposed rule in Massachusetts contemplated three options: (1) direct purchases of renewables, (2) establishing a renewable energy fund through the nonbypassable system benefits charge, and (3) requiring distribution companies to purchase customer generation from on-premise facilities that are 30 KW or less. In Michigan, there was no direct mention of renewables in the Framework, but one of the near-term guidelines states that the MPSC should not mandate "other similar prescriptive regulatory measures." (See Table 10)

Energy Efficiency. California, New York, and Wisconsin have decided to use the non-bypassable system benefits charge to fund energy efficiency and DSM programs during the transition to competitive markets. In California, it is called the Public Goods Charge (PGC), and it will be used to fund only those DSM programs that can transform the DSM market. The PGC will not be used to fund competitive DSM programs. In Massachusetts, the proposal is to have the distribution companies continue DSM programs during the transition. In contrast to the policy of these four states, the Michigan Jobs Commission's guideline is that the MPSC should not mandate DSM and conservation programs.

7.6 Performance Based Regulation

In all five states, the distribution function of the electric utility will continue to be regulated based on the principles of performance based regulation or performance based ratemaking. California directed the utilities to submit specific proposals. Massachusetts and Michigan specified the price-cap approach.

¹⁶ As proposed by the American Wind Energy Association, this approach is called the renewables portfolio standard (RPS).

**Table 9: Treatment of Stranded Costs in the Final Decisions
as of June 30, 1996**

| | California | Massachusetts (1) | Michigan (2) | New York | Wisconsin |
|------------------|--------------------------------------------------------------|--------------------------------------------------------|-------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------|
| Recovery allowed | Yes | Yes | | Yes | Yes |
| Mechanism | Competition transition charge | Stranded cost access charge | Allow utilities a greater opportunity to prepare for market competition | Non-bypassable distribution charge | To be decided in the implementation process |
| Recovery period | Complete by 2005 | 10 years | | On a case-by-case basis | To be decided in the implementation process |
| Cap | Electric price will be no higher than the Jan. 1, 1996 level | Only the non-mitigable net cost are permitted recovery | | | |
| Mitigation | | Requires mitigation | | Incentives for creative means to reduce stranded costs | |

Notes: (1) Final decision was not available as of June 30, 1996. Use information from the proposal rule in Docket No. DPU 96-100.
(2) Final decision was not available as of June 30, 1996. Use information from the Michigan Jobs Commission's Framework.

**Table 10: Treatment of Renewable Energy and Energy Efficiency in the Final Decisions
as of June 30, 1996**

| | California | Massachusetts (1) | Michigan (2) | New York | Wisconsin |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|---------------------------------------------|-----------------------------------------------------------------------------------------------|
| Renewable Energy | Minimum renewables requirement approach: uniform requirement preferred; tradeable credits; effective during 1998-2000; program to be reviewed in 2000 | Three options: Direct purchase of renewables; renewable energy fund through system benefits charge; requiring distribution company to purchase customer generation from on-premise facility of 30 KW or less | The MPSC should not mandate "other similar prescriptive regulatory measures." | No explicit treatment in the final decision | Encourage Renewable Resources; green pricing; establish Public Benefits Policy Advisory Board |
| Energy Efficiency | No ratepayer funds for competitive DSM; "public goods charge" for market transformation DSM | Distribution companies continue DSM programs | MPSC should not mandate DSM and conservation programs | Nonbypassable system benefits charge | Continue conservation programs: Nonbypassable system benefits change |

- Notes: (1) Final decision was not available as of June 30, 1996. Use information from the proposed rule in Docket No. DPU 96-100
(2) Final decision was not available as of June 30, 1996. Use information from the Michigan Jobs Commission's Framework.

8. Findings

The previous chapters have described the restructuring processes in California, Massachusetts, Michigan, New York, and Wisconsin and compared several aspects of the processes in these states. In conclusion, the following findings are summarized:

- (1) California was first state to consider industry restructuring: Its formal proceeding was started in April 1994. New York, Wisconsin, and Massachusetts opened their proceedings in August or September, 1994. In Michigan, the formal restructuring proceeding was not started until April 1996, although proceedings on retail wheeling pilot programs for the Detroit Edison Company and the Consumers Power Company were initiated in September 1992 and concluded in mid-June 1995.
- (2) As of June 30, 1996, California and Wisconsin had adopted final decisions and were well into the implementation stage. New York had just adopted its final decision and was getting ready to implement it. Massachusetts was well into its restructuring proceeding; the DPU had issued several interim orders. The final order was expected in September 1996. In Michigan, the process was just getting started, with the formal restructuring proceeding initially focusing on retail transmission tariffs for new commercial and industrial loads. Michigan also had a separate track on retail wheeling. However, the Michigan retail wheeling pilot program may have been overtaken by recent events for several reasons. First, the MPSC specified that implementation of the program will commence when the two utilities plan to solicit new capacity and neither Detroit Edison nor Consumers Power has such need in the near term. Second, the two utilities challenged in court the authority of the MPSC to order retail wheeling. The case was still pending as of June 30, 1996. Third, in the restructuring proceeding, the MPSC is considering the framework for electric utility reform developed by the Michigan Jobs Commission. Fourth, both Detroit Edison and Consumers Power have negotiated special long-term contracts with some of their large industrial customers. Finally, developments in the restructuring arena are moving ahead steadily and pilot programs are being implemented elsewhere without the kind of restriction imposed by the MPSC. Thus, the experience and lessons learned from the processes in other states are likely to be available before the Michigan program is activated for either Detroit Edison or Consumers Power.
- (3) In the restructuring process, it was less controversial to start with the objective of developing a set of guidelines or principles, as was done in Wisconsin, New York, and Massachusetts, compared to what California did with the CPUC proposing to implement direct access (retail competition) from the very beginning.
- (4) Implementation of retail competition is targeted to start in 1998 for California, New York, and Massachusetts; and in the year 2000 in Wisconsin. However, the PSCW must be assured that the necessary conditions to sustain competition are in place before it will allow implementation of retail competition.
- (5) For generation assets, California, New York, Wisconsin, and Massachusetts require only functional unbundling. Divestiture is being encouraged, but not required. California offers incentives for voluntary divestiture.
- (6) California, New York, Wisconsin, and Massachusetts require an ISO for the operation of transmission systems and the dispatch of generation plants. California, New York, and Massachusetts require formation of a power exchange as well. Wisconsin does not require a power exchange.

(7) California, New York, Wisconsin, and Massachusetts all allow recovery of stranded costs. A charge on the use of the transmission system or distribution lines is the recovery mechanism in California, New York and Massachusetts. Wisconsin will determine the recovery mechanism in the implementation stage.

(8) The four states that have advanced sufficiently in the restructuring process considered various public policy objectives. For renewable energy, the CPUC adopted the minimum renewables requirement approach. Wisconsin ordered utilities to study and propose green pricing programs and a Public Benefits Policy Advisory Board will be established. New York did not explicitly address renewables in the final decision. Massachusetts was considering three options, including direct purchases of renewable energy power by market participants, establishing a renewable energy fund using the nonbypassable system benefits charge, and requiring distribution utilities to purchase customer generation from on-premise facilities of 30 kW or less.

(9) For energy efficiency, California, New York, and Wisconsin will use the non-bypassable system benefits charge to fund appropriate energy efficiency and DSM programs. In California, such funding is limited to market transformation DSM. In Massachusetts, distribution companies will be directed to continue DSM programs.

(10) In Michigan, the restructuring process is not as far along as the other four states. However, the Framework advanced by the Michigan Jobs Commission contains one near-term recommendation that is unfavorable to energy efficiency and renewable energy. It states that "the MPSC should not mandate DSM, conservation programs, billing practices, rules for issuing securities, rules for promotional programs, and nonutility business transactions and other similar prescriptive regulatory measures."

(11) For the distribution utilities that will continue to be regulated under competition, all five states would implement performance based regulation.

List of Acronyms

| | |
|--------|-----------------------------------------------------------|
| ABATE | Association of Businesses Advocating Tariff Equity |
| ACR | Assembly Concurrent Resolution (California) |
| ALJ | Administrative Law Judge |
| AWEA | American Wind Energy Association |
| BRPU | Biennial Resource Plan Update (California) |
| CEERT | Center for Energy Efficiency and Renewable Technologies |
| CPCN | Certificate of Public Convenience and Necessity |
| CPUC | California Public Utility Commission |
| CTC | Competition transition charge |
| DEC | Department of Environmental Conservation (New York) |
| DEIS | Draft Environmental Impact Statement |
| DNR | Department of Natural Resources (Wisconsin) |
| DPU | Department of Public Utilities (Massachusetts) |
| DSM | Demand-Side Management |
| EIA | Energy Information Administration |
| EIR | Environmental Impact Report |
| EIS | Environmental Impact Statement |
| ELCON | Electricity Consumers Resource Council |
| EUMRTF | Electric Utility Market Reform Task Force (Massachusetts) |
| FEIS | Final Environmental Impact Statement |
| FERC | Federal Energy Regulatory Commission |
| FGEIS | Final Generic Environmental Impact Statement |
| GEIS | Generic Environmental Impact Statement |
| IRM | Integrated Resource Management |
| ISO | Independent system operator |
| KV | Kilo volt |
| KW | kilo watt |
| kWh | kilowatt-hour |
| LILCO | Long Island Lighting Company |
| MOU | Memorandum of Understanding |
| MPSC | Michigan Public Service Commission |
| MW | megawatts |
| NEPA | National Environmental Policy Act |
| NOP | Notice of Preparation (California) |
| NRDC | Natural Resource Defense Council |
| NYDPS | New York Department of Public Service |
| NYPSC | New York Public Service Commission |
| PBR | Performance-Based Regulation or Ratemaking |
| PE | Power Exchange |
| PGC | Public goods charge |
| PG&E | Pacific Gas and Electric Company |
| PSC | Public Service Commission |
| PSCW | Public Service Commission of Wisconsin |
| PUC | Public Utility Commission |
| QF | Qualifying facility |

| | |
|------------------|------------------------------------------------|
| RD&D | Research, development and demonstration |
| RTG | Regional transmission group |
| SCE | Southern California Edison Company |
| SDG&E | San Diego Gas and Electric Company |
| WPUI | Wisconsin Public Utility Institute |

References

- California Public Utilities Commission Staff. (1993). *California's Electric Services Industry: Perspectives on the Past, Strategies for the Future*, Report to the CPUC by the Division of Strategic Planning [February 3].
- California Public Utilities Commission. (1994a). *Order Instituting Rulemaking and Order Instituting Investigation on the Commission's Proposed Policies Governing Restructuring California's Electric Services Industry and Reforming Regulation*, R. 94-04-031 & I.94-04-032, [April 20].
- California Public Utilities Commission. (1994b). *Interim Opinion: Procedural Schedule, Call for Briefs, and Applicability of CEQA*, Decision 94-12-027, R. 94-04-031 & I.94-04-032, [December 7].
- California Public Utilities Commission. (1995a). *Status Report on Restructuring California's Electric Services Industry and Reforming Regulation*, (prepared in Response to Assembly Concurrent Resolution No. 143), Vol. I [January 24].
- California Public Utilities Commission. (1995b). *Order Designating Commission's Proposed Policy Decisions and Requesting Comments*, Decision 95-05-045, R. 94-04-031 & I.94-04-032, [May 24]. As reprinted in *Public Utilities Reports*, 1995, Fourth Series, pp. 217-415.
- California Public Utilities Commission. (1995c). *Order*, Decision 95-12-063 [December 20, 1995] as modified by D. 96-01-009 [January 10, 1996], R. 94-04-031 & I.94-04-032.
- California Public Utilities Commission. (1996a). *Interim Opinion*, Decision 96-03-022 [March 13]. R. 94-04-031 & I.94-04-032.
- California Public Utilities Commission. (1996b). *Notice of Preparation of an Environmental Impact Report*, R. 94-04-031 & I.94-04-032 [March 29].
- Consumers Power Company. (1996). *Application of Consumers Power Company for Approval of an Open Access - New Load Delivery Service Tariff*, Case No. U-11076 and Case No. U-11091 [May 15].
- Cullen, L., Mathis, G., Ray, D., and Stevenson, R. (1994). *Policy Options for Competition in Wisconsin's Electric Power Industry*, Report to the Roundtable on Electric Power Industry Trends and Regulatory Policy Directions. Madison, WI: Wisconsin Public Utility Institute [September].
- Customer Statement Parties. (1995). *Customer Statement of Principles on Electric Restructuring in Response to the Commission Order for Comments*, CPUC R. 94-04-031 and I. 94-04-032 [October 2].
- Detroit Edison Company. (1996). *Application of the Detroit Edison Company for Approval of Principles for Direct Customer Access and An Interim Economic Growth Electric Service Rider for New Electrical Load Installations in Michigan*, Case No. U-11076 and Case U-11092.
- Electricity Daily. (1995). "MPSC OKs Detroit-Big 3 Power Contracts," in *the Electricity Daily* [March 28].

Electric Utility Market Reform Task Force (Massachusetts). (1994). *Report of the Electric Utility Market Reform Task Force* [July].

Electric Utility Week. (1994). "Michigan Retail Wheeling Experiment Seen Overshadowed by Larger Agenda," in *Electric Utility Week* [October 24], pp. 10-11.

Fang, J. M. and Galen, P. S. (1994). *Issues and Methods in Incorporating Environmental Externalities into the Integrated Resource Planning Process*, NREL/TP-461-6684. Golden, CO: National Renewable Energy Laboratory [November].

Fang, J. M. and Galen, P. S. (1996). *Electric Industry Restructuring and Environmental Issues: A Comparative Analysis of the Experience in California, New York, and Wisconsin*, NREL/TP-461-20478. Golden, CO: National Renewable Energy Laboratory [August].

Framework Parties. (1995). *Joint Motion for Consideration of Framework for Restructuring in the Public Interest and for Further Public Process; Joint Response to Memorandum of Understanding*. CPUC R. 94-04-031 and I. 94-04-032 [October 2].

Massachusetts Department of Public Utilities. (1995a). *Notice of Inquiry and Order Seeking Comments on Electric Industry Restructuring, Investigation by the Department on its own motion into electric industry restructuring*. D.P.U. 95-30 [February 10].

Massachusetts Department of Public Utilities. (1995b). *Order, Investigation by the Department on its own motion into the theory and implementation of incentive regulation for electric and gas companies under its jurisdiction*. D.P.U. 94-158 [February 24].

Massachusetts Department of Public Utilities. (1995c). *Order, Investigation by the Department on its own motion into electric industry restructuring*. D.P.U. 95-30 [August 16].

Massachusetts Department of Public Utilities. (1996a). *Order Commencing Notice of Inquiry ("NOI")/Rulemaking and Setting A Procedural Schedule to establish the procedures to be followed in electric industry restructuring by electric companies*. D.P.U. 96-100 [March 15].

Massachusetts Department of Public Utilities. (1996b). *Order on Explanatory Statement and Proposed Rules*. D.P.U. 96-100 [May 1].

Massachusetts Electric Industry Restructuring Roundtable. (1995). *Interdependent Principles of the Massachusetts Electric Industry Restructuring Roundtable* [July].

Michigan Jobs Commission. (1995). "A Framework for Electric and Gas Utility Reform" [November].

Michigan Public Service Commission. (1994). *Opinion and Interim Order Remanding to the Administrative Law Judge for Further Proceedings*, Case No. U-10143 and Case No. U-10176 [April 11].

Michigan Public Service Commission. (1995a). *Opinion and Order After Remand*, Case No. U-10143/U-10176 [June 19].

Michigan Public Service Commission. (1995b). *News Release - Retail Wheeling Rates and Charges*, Case No. U-10143/U-10176 [June 19].

Michigan Public Service Commission. (1996). *Scheduling Order*, Case No. U-11076, in the matter of the recommendation of the Michigan Jobs Commission for electric and gas utility reform [April 12].

Michigan Public Service Commission Staff. (1995). *Proposal "M": A Michigan Plan for Flexible and Competitive Energy Utility Services*, Discussion Draft [June].

New York Department of Public Service. (1995a). *Restructuring New York's Electric Industry: Alternative Models and Approaches*, Phase II Final Report, Case No. 94-E-0952 [November].

New York Department of Public Service. (1995b). *Staff's Motion Regarding SEQRA Compliance*. Case No. 94-E-0952 [November, 17].

New York Department of Public Service. (1995c). *Recommended Full Environmental Assessment Form*. Case No. 94-E-0952 [November, 17].

New York Department of Public Service. (1996a). *Draft Generic Environmental Impact Statement*. Case 94-E-0952 - In the Matter of Competitive Opportunities Regarding Electric Service [March 6].

New York Department of Public Service. (1996b). *Final Generic Environmental Impact Statement*. Case 94-E-0952 - In the Matter of Competitive Opportunities Regarding Electric Service [May 3].

New York Public Service Commission. (1994a). *Order Instituting Phase II of Proceeding*. Case 93-M-0229 - Proceeding on Motion of the Commission to Address Competitive Opportunities Available to Customers of Electric and Gas Service and to Develop Criteria for Utility Responses [August 9].

New York Public Service Commission. (1994b). *Opinion and Order Regarding Proposed Principles to Guide The Transition to Competition. (Opinion No. 94-27)*. Case 94-E-0952 - In the Matter of Competitive Opportunities Regarding Electric Service [December 22].

New York Public Service Commission. (1995a). *Opinion and Order Adopting Principles to Guide The Transition to Competition. (Opinion No. 95-7)*. Case 94-E-0952 - In the Matter of Competitive Opportunities Regarding Electric Service [June 7].

New York Public Service Commission. (1995b). *Recommended Decision by Administrative Law Judge Judith A. Lee, Ronald Liberty, Deputy Director, Energy and Water Division*. Volume I & II. Case 94-E-0952 - In the Matter of Competitive Opportunities Regarding Electric Service [December 21].

New York Public Service Commission. (1996a). *Memorandum and Resolution*. Case 94-E-0952 - In the Matter of Competitive Opportunities Regarding Electric Service [January 13].

New York Public Service Commission. (1996b). *Opinion and Order Regarding Competitive Opportunities for Electric Service*. Opinion No. 96-12. Case 94-E-0952 - In the Matter of Competitive Opportunities Regarding Electric Service [May 20].

Opinion Dynamics. (1995). *Qualitative Assessment of Public Opinion on Restructuring of the Electric Utility Industry in Wisconsin*. Madison, WI: Energy Center of Wisconsin [October].

Public Service Commission Advisory Committee. (1995a). *A Framework for Identifying and Evaluating Alternatives for the Future Structure of the Electric Industry in Wisconsin*. Docket No. 05-EI-114 [February].

Public Service Commission of Wisconsin. (1994). *Notice of Generic Investigation and Assessment of Costs*, 05-EI-114, Investigation into the Probable Costs and Benefits of Changing Electric Utility Company Structure and Regulation [September 8].

Public Service Commission of Wisconsin (1995a): *Supplemental Notice of Generic Investigation*, 05-EI-114, Investigation into the Probable Costs and Benefits of Changing Electric Utility Company Structure and Regulation. [February 2]

Public Service Commission of Wisconsin (1995b). *The Future of Wisconsin's Electric Power Industry, Environmental Impact statement*, Volume I. PSC Docket 05-EI-114, Investigation into the Probable Costs and Benefits of Changing Electric Utility Company Structure and Regulation. [October]

Public Service Commission of Wisconsin (1995c). *The Future of Wisconsin's Electric Power Industry, Comments and Staff Responses on the Draft Environmental Impact statement*, Volume II. PSC Docket 05-EI-114, Investigation into the Probable Costs and Benefits of Changing Electric Utility Company Structure and Regulation. [October]

Public Service Commission of Wisconsin (1995d). *Report of the Advisory Committee on Electric Utility Restructuring to the Public Service Commission of Wisconsin*, PSCW Docket No. 05-EI-114. [October]

Public Service Commission of Wisconsin (1995e). *Revised Proposal for Electric Restructuring*, Memorandum from Scott Neitzel to Cheryl Parrino and Dan Eastman, PSCW Docket No. 05-EI-114. [December 18, 1995]

Public Service Commission of Wisconsin (1996). *Electric Utility Restructuring in Wisconsin, Report to the Wisconsin Legislature*. [February 22]

Public Service Commission of Wisconsin Staff (1995). *Draft Environmental Impact Statement*, 05-EI-114, Investigation on the Commission's Own Motion into the Probable Costs and Benefits of Changing Electric Utility Company Structure and Regulation. Madison, WI: PSCW. [July]

Southern California Edison Company, California Manufacturers Association, California Large Energy Consumers Association, and Independent Energy Producers. (1995). *Memorandum of Understanding*, Re: Electric Services Industry Restructuring. CPUC Dockets R. 94-04-031/I.94-04-032 [September 11].

Working Group. (1995). *Options for Commission Consideration*, Report in response to Decision 92-12-027 of the California PUC R. 94-04-031 and I. 94-04-032 [February 22].