

# Market Power Discussion Paper

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## I. INTRODUCTION

### A. The Objective: Effective Competition

The prospect of an effective competitive market producing maximum value from capital investment and offering customers a wide variety of choices is certainly enticing. The objective of restructuring utility industries is to achieve a better, more efficient, allocation of resources by increasing the role of market forces where conditions permit, and simultaneously decreasing the role of regulation. Lower prices, greater efficiency, product improvement, and innovation are expected to result. Given the decision to deregulate electricity generation, the major question to be answered is how best to make that vision a reality: What features need to be present in the marketplace -- both during and after the transition -- in order to assure that competition can take root and thrive?

### B. The Importance of Careful Analysis -- Followed by Both Structural Implementation & Appropriate Regulations -- in Pursuing Competition

There is no pure competitive market anywhere, for anything. There are only various mixtures of imperfect regulation and imperfectly competitive markets. Policy makers need to be concerned about finding the best mix of competition and government intervention to ensure the necessary environment is established, to best promote and nurture a workably competitive market. If policy development is not comprehensive, then restructuring could leave behind the worst of all possible market conditions: unregulated monopolies.

Under most scenarios being actively considered today, the electric industry will

be transformed into a hybrid structure, with competition intended to replace regulation in the realm of generation, while transmission and distribution remain under regulation. Because of the market power of incumbent monopoly providers, competition will not magically appear once regulation is removed. The most desirable condition is almost certainly one of competition in the context of adequate oversight, where corporate self-interests are kept in check and competition is supported and encouraged by an artfully designed set of regulatory constraints.<sup>1</sup> As Tonn, Hirst, and Bauer point out, “[S]ociety must treat electric-industry restructuring as an empirical problem, with the wisdom to maintain institutions that can make midcourse corrections.”<sup>2</sup> As Kuttner warns, the prominent paradox is that some degree of regulation is required “in order to safeguard competition and allow markets to work more nearly in the textbook fashion.” If effective regulation is not present, “[f]irms that enjoy market power...retard competition with coercive or anticompetitive mergers, discriminatory or predatory pricing, cross-subsidies, retail-price maintenance, tying or bundling arrangements...and so on.”<sup>3</sup>

### C. Purpose of This Paper

The purpose of this paper is to provide a conceptual overview of the issue of market power as it relates to the electric industry, and to provide an initial analysis of the practical implications of market power with regard to the electric industry

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<sup>1</sup> See, for example, Kuttner, 1997, Chapter 7.

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<sup>3</sup> Kuttner, id.

restructuring. The paper begins with a definition of market power and a discussion of its importance, followed by a brief history of electric regulation, leading up to the current state of affairs. The potential for market power problems to present obstacles to a properly functioning competitive electric market is then discussed in some detail, followed by an analysis of the extent of market power in the electric industry in Michigan. The paper then presents sections outlining the extensive federal legislative and regulatory roles in antitrust and related areas and summarizing the positions regarding market power mitigation that have been taken by nine other leading states in their restructuring proposals. Next, the paper provides a summary of potential pitfalls and concerns to watch out for as Michigan examines restructuring. That is followed by a discussion of options for mitigating market power, and the paper ends with a brief set of conclusions and initial recommendations for further action.

As the electric generating industry is deregulated, regulators will play a smaller direct role in the activities of the generation market, but they need to retain an oversight role, to ensure the market is competitive and that dominant players are not able to take advantage of market power to reestablish a monopoly position. This requires an understanding of both market economics and the established legal parameters for dealing with potential problems. In addition, familiarity with other states' efforts and experiences in approaching this issue will be helpful. Armed with such understanding, regulators can take a proactive approach towards obviating market power problems in the industry transition, minimizing the potential for abuses.

The issue of market power is complex, and events and circumstances are continually unfolding. As a result, this paper should be regarded as an initial step in an

ongoing effort to examine and respond to the market power issue.

## II. DEFINING MARKET POWER

### A. Basic Definitions

In the most basic characterization, market power is defined as the ability of one or a few firms to profitably maintain the price of a product above competitive price levels for a significant period of time.<sup>4</sup> To achieve this end, a firm must be able: to control prices, distribution systems, and/or other crucial resources or wield political influence or other types of power. The result would be to weaken or eliminate existing competitors or inhibit new market entrants. Once competition is weakened or eliminated, the firm gains monopoly power and is able to raise the price and sustain it. The same basic principles apply whether market power is held by a single firm or a few firms operating in tight oligopoly structure.

Economic theory is replete with caveats, qualifications, and distinctions necessary for competitive markets to exist. Under the calculus as explained by classical economic theory, the natural state to which most markets trend is towards monopoly, and (even under the protections provided by modern U.S. antitrust law) there are powerful forces operating towards markets manipulated by oligopolies or cartels. It is only through the application of a variety of social (moral and cultural) and governmental (legislative and regulatory) controls that competition can be sustained in any meaningful way. As Selwyn notes, individual firms in a competitive market “seek to acquire *and to exercise* market power...[and] [i]ndividual firms will continue to accumulate market

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<sup>4</sup> Public Utilities Commission of the State of California, “Status Report on Market Power to the California State Legislature,” March 19, 1997, p. 4.

power until the costs and risks associated...exceed the potential gains..."<sup>5</sup>

According to classical economic theory, a market must be characterized by several vitally important features, if it is to be perfectly competitive. Those features include:

1. There are a large number of buyers and sellers, and ease for purchasers to shop around.
2. The full cost of the product is paid in the price. There are no externalities and no subsidies.
3. There are no significant barriers to entry. The cost of market entry and exit is low enough as to not be a significant deterrent. Market entry or exit can be accomplished quickly enough that this speed is not a significant deterrent.
4. There is easy, inexpensive, and rapid mobility of all factors of production. Capital, labor, and customers are all free to go elsewhere if they do not like their compensation.
5. There is perfect information. Consumers have full information about the present and future market.

In a free and competitive market, prices are thought to be self-regulating. If prices are too high, customers will switch suppliers. If profits are too high, new competitors will enter the market. On the other hand, if one or more firms has ample market power, then abuses can occur. Such abuses involve two kinds of market

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<sup>5</sup> Selwyn, 1994, p. 21. [Emphasis in original.]

power: vertical and horizontal. The production of any complex manufactured good, such as electricity, involves many sequential and related activities (e.g., generation, transmission, and distribution in the electric industry). If successive production stages are not vertically integrated, then prices will tend to be set by competitive markets. If a firm controls two or more of the successive stages of production, however, it is said to be vertically integrated. This situation presents two possible market distortions: (1) products pass from one process to the next with prices being set internally, and those prices may reflect motives and incentives internal to the firm, rather than reflecting production costs; and (2) there is at least some danger that a market may be foreclosed, and new entrants excluded.<sup>6</sup> Horizontal market power can result from market concentration when control of a large portion of the competitive resources at any particular level of production is held by one or a small number of firms.<sup>7</sup> It is often associated with a geographical component, for a variety of reasons (mostly centered around transportation and transaction costs). If few firms compete for customers in a given market, or if one or two firms have a very large market share, then significant market distortions can result. In this situation, the entire market may be affected, and prices may not reflect costs. A large variety of means exist for firms to exercise horizontal market power, resulting in price distortions and often significant barriers to

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<sup>6</sup> See Shepard, 1990, Chapter 15.

<sup>7</sup> California Public Utilities Commission, Status Report on Market Power to the California State Legislature, March 19, 1997, p. 6.

market entry.<sup>8</sup>

A discussion of the features of perfect markets, and how they can be analyzed and understood in relation to the electric utility industry follows. For now, though, it should suffice to say that today's market for electricity is transitional. It does not fully possess any of these attributes. Both vertical and horizontal market power problems appear to be trouble-some in the Michigan -- and perhaps even the Midwest regional -- market for electricity.

#### B. The Importance of Market Power

Market power can be used to prevent new market entrants or eliminate competitors, not through the provision of superior products at lower costs, but through manipulation of the market. Some of the means that are used include: predatory pricing; using cross subsidies from captive customers with relatively inelastic demand for their service in order to lower prices to those customers with elastic demand; using tying arrangements; engaging in joint ventures that exclude competitors; and -- perhaps most important for the electric utility industry -- controlling access to markets through delivery channels (that is, limiting access to the transmission grid). Firms with market power have ability to extract excess profits from customers. Electricity is not just another commodity. Unlike most other products, it is one of life's necessities. For most applications, customers have few, if any, suitable options. Therefore, exerting market power over an essential service would trap many customers.

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<sup>8</sup> The litany of horizontal market power problems includes outright or tacit collusion, cartel behaviors, price leadership, umbrella pricing, etc. See, for example, Shepherd, William G., *The Economics of Industrial Organization* (Third Edition), Englewood Cliffs, NJ: 1990, Chapters 13 & 14.

In order to fully understand the importance of the issue of market power with respect to electricity, it is important to understand the history of the electric power industry. Therefore, before proceeding with a more detailed review of the features and factors that define the market for electricity in Michigan today, this paper will provide a brief overview of the history of the electric industry and its regulation.

### III. BACKGROUND

#### A. History of Electric Industry Regulation

Electric utility regulation in the U.S. has its roots in medieval Europe, when governments “first declared that prices charged for particular ‘public’ products must be ‘just and reasonable’ ”<sup>9</sup> The basic foundation for government control of business in Anglo-American jurisprudence can be traced back to Lord Hale, of 17th Century England. In his treatise De Portibus Maris, he declared that when private property becomes “affected with a public interest”, it “ceases to be juris privati only”.<sup>10</sup>

Although the “public interest” aspect of electricity supply is now quite clear, when electric companies began operation in the late 1800s, they were mostly small unregulated entities promoting a new product. At the turn of the century, many businesses (nonutilities) generated their own electricity. Vertically integrated electric utilities accounted for only two-fifths of the nation’s electricity.<sup>11</sup>

The early 1900s was a period of intense, largely unregulated competition amongst rival firms intent upon supplying electric power and electricity services. The terms “ruinous competition” or “cutthroat competition” are used to describe situations in the early days of the industry.<sup>12</sup> Competitors built excess capacity and duplicated infrastructure, and then tried to cut prices below costs to put competitors out of

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<sup>9</sup> Colton, 1989, p. 7.

<sup>10</sup> Colton, 1989, pp. 6, 7.

<sup>11</sup> EIA, 1996.

<sup>12</sup> Scherer & Ross, 1990.

business. Following the pattern that resulted in the eventual breakup of Standard Oil, competitors struggled to gain local monopolies, with the intention that they could then raise rates and rake in extra profits. Small customers were seen to be at the mercy of profit-seeking companies. As electricity started to be used to power factories and provide household services like lighting, it started to be viewed as a public good, and therefore one that ought to be subject to regulation.

State level regulation began to take form in the early 1900s, and the first state regulatory commissions were founded in 1907. However, these fledgling regulatory efforts were no match for the barons of the electric industry. As the industry evolved, firms consolidated, the market became much more concentrated, and the tactic of forming “holding companies” was used to frustrate and evade state regulation. These developments proceeded with extraordinary speed. By the late 1920s, the 16 largest electric power holding companies controlled more than 75 percent of all U.S. generation.<sup>13</sup> By 1932, three giant holding companies controlled 49 percent of all investor owned generation in the country.<sup>14</sup>

This concentration of ownership in the electric power industry led to widespread abuses of both customers and investors. As a part of the economic reforms pushed by President Franklin Roosevelt in the wake of the economic collapse of the early 1930s, the Public Utility Holding Company Act (PUHCA) of 1935 was passed. Section 1 of PUHCA detailed many of the utility holding company abuses which the legislation was

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<sup>13</sup> EIA, 1996.

<sup>14</sup> Greenberger, 1991.

designed to counter, including: extracting from subsidiary utility companies “excessive charges for services, construction work, equipment and materials” and the absence of arm’s-length bargaining; controlling subsidiaries “so as to complicate and obstruct state regulation of such companies”; and growing and extending in a way that “bears no relation to economy of management and operation or the integration and coordination of related operating properties.”<sup>15</sup>

PUHCA sought to correct the abuses with four strategies: (1) reorganize the small number of holding companies into a large number of smaller utilities; (2) prohibit or subject to advance review inter-affiliate transactions within the larger holding company systems; (3) prohibit or limit investment by utility holding companies into nonutility businesses; and (4) prohibit the acquisition of distant utility companies. The Act also created a limited category of “exempt” holding companies which were permitted to make investments in nonutility businesses if it did not become “detrimental to the public interest, or the interest of investors or consumers.”<sup>16</sup>

After three years of court challenges, the trust busting by the Securities and Exchange Commission (SEC) began in earnest in 1938. At that time, 214 holding companies controlled 922 utilities and 1,054 nonutility subsidiaries. By 1955, when the SEC formally ended its campaign, only 25 registered holding companies remained. Over 80 percent of the utilities and subsidiaries that were formerly a part of the massive holding company structures had been divested. In the words of Leonard S. Greenberger

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<sup>15</sup> Hempling, 1995.

<sup>16</sup> Hempling, 1995.

(Associate Editor of Public Utilities Fortnightly), "Today's utility structure can trace its birth primarily to this 17-year diversification festival."<sup>17</sup>

Another important piece of legislation passed during the Roosevelt era was the Federal Power Act (FPA) of 1935. The FPA was enacted primarily to cover the regulatory gap created by the Supreme Court decision in the Attleboro case. In that decision, the court held that Massachusetts could not regulate a wholesale power sale in interstate commerce (electricity bought from Rhode Island by Attleboro) because such regulation put an undue burden on interstate commerce. Recognizing that this decision meant there was no agency with the authority to regulate such transactions, Congress passed the FPA.

The FPA created the Federal Power Commission, the predecessor to the Federal Energy Regulatory Commission (FERC). The FPA focused on price regulation of sales for resale in interstate commerce, including: pricing, terms, and conditions of transmission service rates in interstate commerce; approval over power pooling; and authority to order interconnection. This created the current dual scheme of federal and state regulation of electric rates.

During that same general time frame, two other significant industry developments were also occurring. The first was part of Roosevelt's New Deal effort to expand public electric power and economic development to areas not being reached by the utility holding companies, through the major hydroelectric power projects of the federal power administrations. As a base of comparison, in 1921 privately owned

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<sup>17</sup> Greenberger, 1991.

utilities were providing 94 percent of total generation, versus only 6 percent by public power. From 1933 to 1941, however, half of all new capacity was provided by federal and other public power installations, resulting in a doubling of public power's share of generation by 1941.<sup>18</sup>

The second major development was the Rural Electrification Act of 1936 which established the Rural Electrification Administration (REA). In the mid 1930s, many homes, farms and ranches in rural areas were still without lights, indoor bathrooms, refrigerators or running water because it was too expensive and unprofitable for the investor-owned utilities that served the cities to stretch their lines into the countryside. The REA provided assistance and loans to local organizations to provide electricity in rural areas, and by 1941 the proportion of farm homes with electric service tripled.<sup>19</sup>

From the 1940s through the mid 1960s, the electric industry experienced a period of growth, prosperity and institutional stability. Production cost factors were declining, demand was steadily increasing, and the industry was taking advantage of economies of scale to deliver reliable service at low cost. By most accounts, this was the "golden age" of the electric utility industry.

However, from the mid 1960s through the 1970s, the industry was buffeted by a series of adverse events. The Northeast Blackout of 1965 raised concerns about reliability; the Arab Oil Embargo of 1973-74 resulted in large increases in fossil fuel prices; the 1979 accident at Three Mile Island led to higher costs, regulatory delays,

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<sup>18</sup> EIA, 1996.

<sup>19</sup> EIA, 1996.

and greater uncertainty regarding nuclear power; and high inflation in general caused utility power plant construction costs to soar.

The problem of high prices resulting from these power plants was compounded by excess capacity. As a result of a recession in the early 1980s and demand side efficiency improvements in the late 1980s, customer demand for electricity lagged far behind the projections of the 1970s. Furthermore, competitors were beginning to intrude into the electric utility dominance of the generation market. This trend toward competition received an initial boost from the Public Utility Regulatory Policy Act (PURPA) of 1978.

Congress passed PURPA in response to the serious energy problems of the 1970's (often referred to as the period of the "energy crisis"). In order to lessen dependence on expensive foreign oil, avoid repeating the 1977 natural gas shortage, and to control consumer costs, Congress encouraged the development of alternative non-utility generation sources called Qualifying Facilities (QFs) with certain engineering requirements and transmission rights. PURPA required utilities to purchase power from QFs at a price not to exceed the utility's avoided cost and to sell backup power to QFs. States were required to implement PURPA.

In addition to that legislation, other factors were also adding to the pressure for competition. New technologies, such as combined cycle and fluidized bed systems, allowed smaller new plants to be brought on line at costs below those of the large plants of the 1970s and earlier. The new technologies promised shorter construction times, lower capital costs, increased reliability, and relatively smaller environmental impacts. The oil cartel had collapsed by the 1980s resulting in an oversupply of

low-priced oil, helping to drive down fuel prices. Also, technological advances in transmission made transmission of electric power over long distances at higher voltages economically possible. It became technically feasible for utilities with lower cost generation to reach previously isolated systems where customers had been captive to higher cost local generation.

The interest in ownership of generation exempt from regulation was strong, and other non-traditional power producers who could not meet the QF criteria began to build new capacity to compete in bulk power markets, without the PURPA benefits. These IPPs usually did not own any transmission or distribution. While utilities became more reluctant to invest in new generating facilities under cost of service regulation, they also became increasingly interested in participating in this new generation sector. They organized affiliated power producers (APPs) with no assets in utility rate base, built or obtained the rights to generations and sought to sell this power into their own service territories and the territories of other utilities.

However, the PUHCA ownership restrictions and PURPA limitations inhibited these new entities from entering the generation business. Also, these entities needed transmission service to compete in electricity markets. With ineffective authority in the FPA and no authority to repeal or amend PUHCA, the FERC encouraged the development of IPPs, APPs, and emerging power marketers by authorizing market-based rates for their power sales on a case-by-case basis and supporting more widely available transmission access. A generating utility allowed to sell its power at market-based rates could move more quickly to take advantage of market opportunities than those laboring under traditional cost of service tariffs, which had procedural delays

to get tariff approvals and changes. Market-based rates helped to develop competitive bulk power markets.

When the FERC approved market-based rates, it required that the seller and any of its affiliates lack market power, or mitigate any market power they might have.<sup>20</sup> The major concern of the FERC was whether the seller or its affiliates could limit competition and thereby drive up prices. A key question was whether the seller or its affiliates owned or controlled transmission facilities in the relevant service area and therefore, by denying access or imposing discriminatory terms or conditions on transmission service, could foreclose other generators from competing.

As entry into wholesale power generation markets increased, the ability of customers to gain access to the transmission services necessary to reach competing suppliers became increasingly important. In addition, beginning the late 1980s, to mitigate their market power, public utilities seeking FERC approval of mergers, consolidations, or blanket approval of market-based rates for generation filed "open access" transmission tariffs of general applicability. The Commission applied its market rate analysis to investor owned utilities (IOUs), as well as IPPs, APPs, and marketers, and allowed IOUs to sell at market-based rates only if they opened their transmission systems to competitors.<sup>21</sup>

In response to the competitive developments and the lack of transmission access, Congress enacted the Energy Policy Act (EPACT) of 1992. A goal of the Act

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<sup>20</sup> 888, p 26

<sup>21</sup> 888, p 27

was to promote greater competition in bulk power markets by encouraging new generation entrants called EWGs<sup>22</sup> and by expanding FERC's authority under sections 211 and 212 of the FPA to approve applications for transmission services.

If the FERC, upon application, determines that an entity is an EWG, that entity is exempt from PUHCA. This allowed IPPs and APPs to develop projects as EWGs, free from the ownership restrictions of PUHCA or the PURPA QF limitations. As amended by EPACT, the changes in sections 211 and 212 give FERC broad authority to order transmitting utilities to provide wholesale transmission on a comparable and non-discriminatory basis.

Since 1992, FERC has issued several major rulemakings addressing open access transmission, stranded costs, transmission pricing, merger guidelines, and information sharing.<sup>23</sup> All public utilities owning, controlling, or operating transmission lines are now required to file non-discriminatory open access tariffs that offer others the same transmission service they provide themselves. The intent of these orders is to bring lower cost power to electric consumers, ensure continued reliability of the electric power industry, and provide open and fair electric transmission services by public utilities.

B. The Current Situation: The Good, The Bad,  
and the Partially Competitive

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<sup>22</sup> Exempt Wholesale Generators. An EWG is any person determined by the FERC to be engaged directly, or indirectly through one or more affiliates, and exclusively in the business of owning and/or operating, all or part of one or more eligible facilities and selling electric energy at wholesale.

<sup>23</sup> See FERC, 1994-1997.

As of the late 1990s, most traditional indicators would suggest that the circumstances of electric utilities are improving considerably. For example: (1) the high cost power plants of the 1970s and 1980s are gradually becoming depreciated, which leads to reduced revenue requirements; (2) excess capacity is shrinking; (3) demand growth is increasing somewhat; and (4) fuel costs are low and relatively steady. These signs would tend to suggest a more stable future and gradually declining rates under the current regulatory paradigm.

These desirable economic developments have been significantly augmented by competitive pressure in the power generation market, enabled by FERC implementation of the Energy Policy Act discussed above. However, the pace and magnitude of economic improvement under current regulation have not been sufficient to meet the demands of certain key market actors who are increasingly intent on reducing costs. As a result, the prospect of major industry restructuring and retail competition (where customers can pursue "customer choice" for their power supply) presents the greatest challenge yet for the electric utilities. Lower prices, customized services, technological improvement and service innovation are among the benefits all customers hope to reap through restructuring.

The primary factors driving the push toward electric industry restructuring include the following:

(1) **Power is available "in the market" at a price well below the embedded cost based rates of many utilities.** Part of this is due to the fact that the marginal cost of new supply (typically based on natural gas fueled combined cycle generating plants) is less than the embedded cost of higher priced older (chiefly nuclear) generating plants.

Part of it is based on the present ability in some areas to acquire power at even less than natural gas plant long-run marginal cost, from utilities that currently have excess generation capacity, who are willing to sell power at a price just above fuel and operating cost.

(2) **There are large regional and inter-utility variations in electric rates**, due to variability in the costs of prior investments (chiefly related to the extent of each utility's prior investment in nuclear plants) and to a lesser extent, regional differences in fuel costs, purchased power obligations and regulatory factors.

(3) **There is a presumption that, in general, exposing monopoly utility companies to the competitive forces of the market would produce cost reductions in overall operations**, apart from the basic structural cost discrepancies addressed in factors (1) and (2) above. In addition, competitive forces are expected to produce additional benefits through market innovation and technology improvement.

(4) **There is an aggressive and growing "independent" power industry**, born and raised through the era of QFs and, more recently, EWGs, which is eagerly pursuing the ability to sell power directly to customers.

(5) **There is currently a general political orientation toward deregulation and a recent history of experience deregulating other industries** such as telecommunications, airlines, and natural gas. While advocates and critics disagree about the relative "success" of those endeavors, most industry observers believe that, overall, economic results have been favorable. The fact that these experiences have occurred creates momentum toward deregulating the electric industry.

The combination of the above factors has resulted in a situation where certain

customers (particularly large commercial and industrial firms) are vigorously advocating for their right to buy cheaper available power rather than be required to buy from their local utility company. Economic development interests are likewise vocal supporters. Independent power producers are joining in the push because they would like access to retail customers. Finally, policymakers are intrigued by the possibility of competition producing beneficial cost reductions and product innovation.

In the next section, this paper will describe how electric restructuring has been proposed to address current problems in the electric industry, and examine some of the market power obstacles that may exist to restructuring, along with mitigation options to address them.

### C. Restructuring: A Proposed Solution

Restructuring of the electric industry by introducing competition in generation is a proposed solution to many of the currently perceived problems of the industry. It is felt that a properly designed competitive framework could bring benefits in the areas of cost reductions, new service options, and technological innovation, while preserving, where appropriate, desirable features of the current system.

A good example of the intended objectives of restructuring is provided by the National Association of Regulatory Utility Commissioners (NARUC) "Principles to Guide the Restructuring of the Electric Industry."<sup>24</sup> The ten principles NARUC adopted are as follows:

**! Network Integrity.** The safety, reliability, quality and sustainability of

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<sup>24</sup> Adopted by NARUC on July 25, 1996, and published in the NARUC Bulletin, August 5, 1996.

electric service should be maintained or improved in a restructured electric industry.

- ! **Universal Service.** Universal service at reasonable rates, including adequate protections for low-income customers, should be maintained.
- ! **Customer Choice.** Customers should have the opportunity to make informed choices among electricity providers and services.
- ! **Consumer Protection.** Consumers should be protected from anti-competitive behavior, undue discrimination, poor service and unfair billing and disconnection practices.
- ! **Public Participation.** Industry restructuring policies should be developed in public processes with participation open to all.
- ! **Shared Benefits.** All classes of customers should benefit from improvements due to structural changes in the industry.
- ! **Public Benefits.** The public benefits of energy efficiency, renewable resource technologies and research and development should be maintained through existing or new mechanisms.
- ! **Environment.** Structural changes to the electric industry should maintain or improve the quality of the environment.
- ! **Stranded Costs.** Existing commitments of utilities arising from past decisions made pursuant to historical regulatory and legal principles should be addressed in a fair and reasonable manner by states.
- ! **State Responsibilities.** States and state commissions should determine retail electric policies, including restructuring policies.



IV. MARKET POWER RELATED OBSTACLES TO  
RESTRUCTURING SUCCESS IN MICHIGAN TODAY:  
COMPARING THE MICHIGAN MARKETS TO THE  
THEORETICAL REQUIREMENTS FOR COMPETITIVE  
MARKETS

A. Introduction

Deregulation of the electricity industry cannot be viewed in the same manner as the development of a totally new product or industry, in which all market entrants start basically from the same position. On the contrary, the transition from a regulated monopoly to a competitive industry will bring with it a variety of complicating factors which require active intervention.

As Selwyn explains, it is difficult to sculpt competitive markets out of a previously regulated industry structure, because during the transition incumbents will use every effort to consolidate existing market advantages and even gain new ones.<sup>25</sup> Incumbent firms will begin the transition towards competition from a position of strength; having a captive customer base. In order for competition to occur, customers will have to make concerted efforts to change.<sup>26</sup> Most probably, customers choosing another utility supplier will pay something for stranded costs in order to be able to do so.

Value, in the electric utility industry, comes from the ability of a firm to assemble all of the various hardware, software, and service components (labor, capital,

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<sup>25</sup> 1994, p. 21.

<sup>26</sup> In a recent example of the power of incumbency, complaints were filed against Central Illinois Light Company (CILCO) in its residential retail wheeling pilot program, when 96% of the participants selected CILCO's affiliate, QST Energy Inc. The complaint, later settled, claimed that the utility's sister company unfairly used its ties to the utility in the pilot roll out. See, Schuler, 1997.

raw materials, fuel, information, etc.) that make up electric services, and deliver the products to the customer. The existing electric utility monopolies in the U.S., even with all of their faults, have been reasonably successful at doing that: The U.S. electric system was, for several decades, the envy of most of the world.

In terms of its structural characteristics, the electric utility industry is, in large part, an infrastructure network. Networks generally reflect a few common features: (1) high minimum investment thresholds are needed in order to compete in the industry; (2) there are significant economies of scope and joint production, which include (a) major savings in reserve requirements, and (b) a potential for achieving high load and diversity factors; and (3) there is a promise, as the size of the network increases, that new services can be added at low incremental cost.<sup>27</sup> The idea of restructuring is to try to break away the generation and merchant (marketing, billing, metering, etc.) pieces and let them be subject to competition, while maintaining many aspects of the regulated monopoly system for the remaining transmission and distribution functions. As a starting point for analysis, it is worth considering how restructuring can help to retain as many of the positive features and benefits of the network industry type as possible, while adding new benefits as a result of competition.

Within the traditional monopoly electric utility industry, there are four major sources of competition.<sup>28</sup> All four of these have helped to force the issue of utility industry restructuring. First, there is competition for industrial location decisions. This is

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<sup>27</sup> Trebing & Wilsey, 1994.

<sup>28</sup> Joskow & Schmalensee, 1983.

especially true for locations in fringe areas, where customers literally have a choice of more than one utility company. Large industrial companies may be able to shift production from one facility to another, too. Next, there is franchise competition. Although local governments are able to switch franchises or award multiple franchises, for several decades the convention has been to award only one franchise and then never change it. Recently, however, with the impending arrival of retail competition, more attention has been focused on the local government franchise authority. A third type of competition is yardstick competition. That means utilities can be compared to one another, even though their service territories are not identical. Any time one utility would get too far out of line from others, both customers and other utilities would notice, and there would be significant pressure for the deviant utility to conform to industry standard behavior.

In addition, as the industry becomes more competitive, there will be five other major sources of competition: (1) potential entrants; (2) suppliers with bargaining power; (3) buyers with purchasing power; (4) the threat of substitutes; and (5) intra-industry competition amongst rival firms.<sup>29</sup> The strength of these forces, however, will depend in large part upon the ease of entry and how many rival firms will be participating in the market.<sup>30</sup>

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<sup>29</sup> Porter, 1985, Chapter 1.

<sup>30</sup> The theory of "contestable markets" holds that monopoly power "can be disciplined by the potential for new firms to offer a product at a lower price." The necessary precondition for that theory to apply, however, is that there must be easy, even "ultra-free" market entry. See: Shepard, William G., The Economics of Industrial Organization (Third Edition), Englewood Cliffs, NJ: Prentice Hall, 1990, pp. 282-285.

In spite of all these various types of competitive pressures, there has been a long history of perverse incentives in the monopoly utility business. In a perfectly functioning market, a producer would continually strive to minimize costs in order to maximize profits, but there have been, and are likely to continue to be, many distortions of that principle. This next section takes a look at these several sources of competition, and relates them to the features of competitive markets, in a preliminary look at the situation in Michigan today.

#### B. Checking for Features of Competitive Markets

##### 1. Too few buyers and sellers meet in an open marketplace.

The potential competitive Michigan market can be characterized as one with a small number of sellers (power producers). With respect to buyers (utilities, and direct access customers), there is a relatively small number of large buyers with significant market influence, and then a large number of small customers. Utilities seeking to protect their own interests will want to segment markets, into price sensitive versus captive customers. Special contracts have already played a role, whereby utility companies have locked up customers, thus postponing the advent of a competitive market for large percentages of utility sales.

The transition from monopoly provider to competitor may occur gradually, under various proposals to phase in competition over a fairly long period of time. That being the case, many theorists recommend relaxing regulatory constraints gradually, as they are replaced by competitive systems. During the transition, it is likely that incumbents will be serving both competitive and captive retail customers at the same time. Often, the incumbent has existing contracts with its largest customers, which can be used to

block competitors from entering the market. These issues also raise the specter of opportunities for abuse, including the cross-subsidization of competitive customers by captive customers.

Competition between producers is also guided by the same kind of "invisible hand" as competition among consumers and producers. The relationships between competing producers can be guided by oligopoly power, just as easily as they can be directed towards true competition. Strategic planners learn to define competitors as either "good" or "bad", and try to make certain that the firm's behaviors do not do too much harm to any of the "good" competitors.<sup>31</sup>

Trebing's definition of workable competition is that there should be at least four viable firms, who together represent no more than about 40 percent of the market.<sup>32</sup> In Michigan today, however, the market is dominated by just two large companies, who together represent more than 80 percent of the market.

## 2. There are significant externalities and subsidies.

A discussion of externalities and subsidies, and possible remedies for them, is beyond the scope of this paper. It should be noted, however, that many researchers have generally agreed that externalities, especially environmental pollution, are a serious concern. Additionally, a panoply of U.S. and even state government subsidies distort energy prices. These include a wide variety of special tax breaks, resource depletion allowances, nuclear accident liability limits, social programs (low income

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<sup>31</sup> Porter, 1985, Chapter 6.

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programs, DSM, etc.), and so on.<sup>33</sup> These are issues that should be studied more.

There is a need to craft policies that increase competition in ways that are environmentally neutral. There is also a need to explore subsidies to determine which might seriously interfere with competition, as opposed to those which may provide benefits worth preserving in some manner.

3. There are significant barriers to entry for electric power generation.

The costs associated with market entry and exit in today's power generation market do not present a significant deterrent to competition. Recent experience has shown that smaller natural gas facilities (especially gas-fueled combustion turbines and combined cycle gas-fired facilities) can be brought on line relatively quickly and economically. However, unless the transmission grid is effectively opened up, market entry or exit cannot be accomplished quickly or easily enough. Furthermore, based upon recent growth projections, it appears that new generation capacity will be added slowly. In a system with approximately 20,000 MW of capacity, growing at a rate of 2 percent per year, the need is for about 400 MW per year, plus retirements, or the equivalent of about one new power plant (or, more likely, a cluster of smaller units), every few years. Therefore, unless divestiture of generation assets takes place, it may be many years before new competitors can achieve significant inroads into the local Michigan market.

4. The factors of production are relatively lumpy and immobile.

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<sup>33</sup> Roodman, 1996.

The electric transmission grid can become a significant bottleneck, preventing movement of available existing power supplies as well as inhibiting the siting and operation of new power plants. The incumbents own the transmission network, which is effectively the "toll road" across which other sellers must transport their product to market. There are a variety of ways to limit or restrict use of lines by others, thus limiting competition. Transmission bottlenecks could be a very powerful force impeding competition.<sup>34</sup> This problem is especially acute for Michigan, because its geography is peninsular and transmission access to outside markets is quite limited at the present time. Limited transmission access, and especially peak-load transmission constraints, may make it difficult for customers to shop around for power.

Transmission and generation are both complements and at least partial substitutes. A great deal of information and minute-by-minute coordination is needed in order to optimize generation, transmission, and distribution. Unlike any other industry, individual generators on a transmission grid cannot direct their power to individual customers. Therefore, control over transmission information becomes critically important, and could be a significant source of market power.

In addition, under the ideal forms of competitive markets, any "switching costs" for customers should be minimal. The easier, cheaper, and faster it is for customers to switch from one provider to another, the more effective competition can be. Competition can move forward only very slowly, if customers get to make a decision about suppliers only once every few years, or if the transaction costs of switching are

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<sup>34</sup> Joskow & Schmalensee, 1983, pp. 36, 41, 63-65.

too high.

5. There is not perfect information.

Economic theory says that for markets to function properly, information cannot be a constraint. But today, neither customers, nor competitors, nor regulators have full information about the present and future market for electric power. Governments have typically taken on a primary role in information provision, and often require certain information disclosure standards. Prominent recent examples of the role of government in assuring ample information provision in the field of electric regulation include the Open Access Same-Time Information System (OASIS). In OASIS, the FERC requires transmission owners to provide information about available transmission capacity, prices, etc. This will enable wholesale customers to obtain ready access to non-discriminatory transmission service. Another example is the new promotion of the concept of consumer labeling for electricity, which will assist small retail customers.<sup>35</sup> In a similar vein, many states require significant information disclosure under their transmission and distribution planning programs. As Dahl points out, there is ample empirical evidence from real markets to show that inefficiencies, distortions, or outright manipulations are often the result of lacking, poor, or misleading information.<sup>36</sup> "Since market knowledge is worth money," he says, "it is often concealed or controlled." Dahl also laments the recent trend towards increasing privatization of information, and expresses his concerns about equitable access to information, including the ability of

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<sup>35</sup> NARUC, 1996.

<sup>36</sup> Dahl, 1996, pp. 11-12, 77-83.

democratic institutions to maintain access to necessary information. Clearly, the general issue of information and its role in the emerging electric utility marketplace is one that deserves further study in Michigan.

As of today, few residential and small business and commercial customers are informed enough about markets for electric power to make sound decisions. Information failures in markets for electric services could be a significant problem, especially because under the long standing monopoly service customers have had no meaningful experience evaluating service options and providers. As the market evolves, smaller customers will be in need of information about provider selection criteria. In recognition of this, the leading states in the movement toward restructuring have included specific requirements for their regulatory commissions to establish consumer education efforts, to help ensure that customers will be able to make appropriate choices in a competitive market.<sup>37</sup>

An additional area of concern is the question of what information should be available to power suppliers and marketers. The incumbent firm has a great deal of information on customers demographics and usage patterns. As Vine reports, it is often true that the incumbent utility has such detailed information about customers that the utility knows more about their energy use profile than even the customers themselves.<sup>38</sup> Customer privacy and secrecy -- and what information can and should be

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<sup>37</sup> For example, all three of the first states to pass restructuring legislation (California, Pennsylvania, and Rhode Island) included requirements for consumer education in the enacted legislation.

<sup>38</sup> Vine

shared by utilities with potential competitors -- are vitally important issues that need to be addressed in the course of restructuring.

Another valuable kind of information to the competitive electric power industry will be data (and especially geographic information systems) about transmission and distribution loadings, demand forecasts, and the like. Joskow & Schmalensee explain that the logical result of deregulation is that there will be contractual arrangements between generators and transmission (or transmission and distribution) companies.<sup>39</sup> They call this situation "complete vertical integration by contract rather than by ownership", and explain:

"If any deregulation proposal is to lead to efficient outcomes, a mechanism must be created for coordinating individual distribution company decisions to contract for generation capacity so that the overall mix of plant, plant locations, and total capacity results in a least-cost system. There are important system economies associated with generation and transmission capacity investment that may not be taken into account in decentralized decision making by numerous distribution companies and generating companies that are interconnected with the transmission pooling entity. Some way must be found to make individual incentives and decisions consistent with the overall economics of the system; potential externality problems must be dealt with. Any such coordination system should also be consistent with a truly competitive bulk power supply market."

Incomplete access to such information on the part of potential competitors will be especially problematic for an industry like the electric generation business, where responses to market signals involve rather long lead times and large capital investments. This is another important information need that should be explored, and

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<sup>39</sup> 1983, Chapter 10.

somehow provided for, in the plans for restructuring. The regulatory agency will need to possess all of the tools necessary to be sure it can obtain all relevant information, including affiliate transactions, market information, and growth forecasts. Decisions should be made about which pieces of information need to be made available to potential competitors and to the public at large. Information is especially critical during the transition period.

#### 6. Other Problem Areas

Another potential problem area is that the competitive electric power industry might provide too little investment in long-term research and development and new technologies with benefits that are difficult to capture by a competitive firm.

An important goal for policy formulation is to try to make certain that new policies are neutral, and do not artificially block these kinds of new technologies. There may be a need for the state and federal governments to take on an increased role, or at least increased oversight of research, development and demonstration. Proposals for research and development to be supported by system benefits charges have already been included in restructuring programs in other states and are being considered in proposed federal legislation.<sup>40</sup>

#### C. Assessing Market Power in Michigan

The primary quantitative means of analyzing market power involve the use of two different kinds of indexes, called the Hirschman-Herfindahl Index (HHI), and

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<sup>40</sup> States with system benefits charges include Arizona, California and Washington. The charges have also been instituted in some European jurisdictions, including the U.K. See, for example, System Benefits Charge, The Regulatory Assistance Project, Issuesletter, September, 1995.

Landes-Posner Index. The primary applications for HHI techniques involve calculating a single number, which represents aggregate market concentration.<sup>41</sup> This is done either for a particular market as a whole, or for just one or two firms (especially when prospective mergers are being considered). The Landes-Posner Index provides a somewhat more detailed analysis of market conditions.<sup>42</sup> Its indexing system incorporates measures of market share, along with the elasticity of market demand and market entry conditions.

Though the Landes-Posner Index is somewhat more capable of determining when market concentration may be of serious concern, the HHI is used more frequently. In large part, that is because the HHI is relatively simple to calculate, and the underlying data is often readily accessible. The HHI is regularly used in both U.S. Department of Justice (DoJ) and FERC analyses of mergers.

As Chessler has pointed out, directly analyzing the market behavior of firms is exceedingly difficult, and market power is dynamic.<sup>43</sup> This alternative would require studying a whole series of behaviors by market participants, in order to ascertain whether and to what extent market power exists. For example, researchers might

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<sup>41</sup> HHI is equal to the sum of the squares of market share, measured in percent. Each firm's market share, in percent, is squared and then the total for the industry is reported. A pure monopoly would involve one firm having 100% of the relative market, for an HHI score of  $100^2$ , or 10,000. HHI approaches zero as the number of competitors increases and their market share decreases. For example, in a market with 100 firms, each holding 1% of the market, the HHI would equal 100. HHI's higher than 1800 are generally considered to be indicative of market power problems. If a single firm holds more than about 40% of a market, then the HHI for that single firm would be large enough to warrant market power concern. (That is, the square root of 1800 is 42.4.)

<sup>42</sup> Landes & Posner, 1981.

<sup>43</sup> 1996, pp. 17-18.

study profitability, competitive behavior, and innovative behavior. It is generally thought that firms in a competitive market will tend towards normal (average) rates of return on investments, and will demonstrate certain levels and kinds of competitive and innovative behavior. If there are serious deviations from those norms, then market power is suspected. There are significant difficulties, however, in specifying the markets to be analyzed, and then obtaining ample and reliable information about the behaviors to be studied. Therefore, there is a tendency for researchers (especially when the purpose is to obtain information for formal hearings) to rely upon simple indices of market structure, such as HHI, as a surrogate for much more complicated measures of actual market behavior.

In spite of the relative ease of creating an HHI for a given industry structure, there are a wide variety of complicating factors that apply to both HHI calculations and analysis.<sup>44</sup> Normative market structure analysis includes at least: defining the appropriate geographic markets; identifying the number and size of participating or potentially participating competitors; identifying, quantifying, and analyzing barriers to entry (legal, regulatory, and economic); and analyzing the pricing and marketing behavior and practices of firms already in the market.<sup>45</sup> Sometimes it is difficult or controversial to decide just what market is being studied (i.e. what product is being sold) or where to draw the geographic boundaries for the analysis.<sup>46</sup> Furthermore, in the

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<sup>44</sup> Felder & Peterson, 1997.

<sup>45</sup> Chessler, 1996.

<sup>46</sup> For example, in considering the competitive market for electric power sales in Michigan, should the relevant question be what capacity is available at any price, what potential  
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field of utility regulation, the relevant market may be expanded or constrained by transmission capacity availability. Transmission constraints can limit the suppliers that can realistically compete, and markets may vary significantly depending on the load conditions studied (i.e., on-peak, shoulder, and off-peak hours).<sup>47</sup>

Markets are generally categorized in one of six different major types, depending on the degree and kind of competition present.<sup>48</sup> The types range from pure competition at one extreme to pure monopoly at the other. The list includes: pure competition, monopolistic competition, loose oligopoly, tight oligopoly, dominant firm, and pure monopoly. State and federal regulators usually raise concerns about market power somewhere in the middle of this list, somewhere between loose and tight oligopoly. FERC has adopted DoJ guidelines for the review of utility mergers.<sup>49</sup> The guidelines generally establish a correspondence between an HHI which approaches 1800 and a tight oligopoly market structure. The guidelines define a low concern as an HHI total below 1000, medium concern for HHI between 1000 and 1800, and significant concern for HHI above 1800.<sup>50</sup>

The Michigan market, today, is characterized by significant market

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<sup>46</sup>(...continued)

competitors can offer market-rate power to large utility customers for the next 5-10 years, how much market-rate power can be made available during summer peak load periods, etc.?

<sup>47</sup> FERC, 1996, pp. 82-109.

<sup>48</sup> Chessler, 1996, p. 5.

<sup>49</sup> FERC, 1996.

<sup>50</sup> DOJ and FERC are concerned both with the absolute measure of HHI and the change in HHI that would occur if a proposed merger is approved.

concentration, which is clearly suggestive that market power would be a problem if deregulation happened suddenly, without adequate regulatory and competitive safeguards being effectively put into place. According to the traditional measures of HHI, the Michigan market is highly concentrated. cursory analyses of HHI's for Michigan indicate totals well over the threshold of concern, whether measured in terms of capacity, number of customers, or total sales. Table 1 shows basic HHI data for Michigan electric generating capacity today. Table 2 depicts a representative HHI for Michigan in the not-too-distant future, under the best-case scenario that competition is opened up and there is a total of 5000 MW of available transmission interconnect capability.

As Table 1 illustrates, with CECO controlling about 37 percent of the market, and DECO 44 percent, the combined HHI for the two companies is over 3300, which would be interpreted as a signal that market power is a significant concern. The analysis shown in Table 2 assumes the very optimistic estimate that there is 5000 MW of import capability<sup>51</sup> available for outside competitors to compete for sales in Michigan, and estimates that 20 different firms might vie to sell generation over those transmission interconnections. Changes in either of those major assumptions could affect the aggregate HHI somewhat.<sup>52</sup>

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<sup>51</sup> Even though nominal import capability is estimated to be about 5000 MW, during times of peak load in recent years nearly all the available transmission capacity has been in use. Therefore, the 5000 MW estimate could prove very optimistic. See, for example, The Detroit Edison Company; MPSC Case No. U-11290 Informational Filing on Implementation of the Staff's Report; March 7, 1997, Chapter 7.

<sup>52</sup> Depending upon the assumptions used regarding CECO's control of MCV, affiliated  
(continued...)

As Chessler explains, in both economics and anti-trust law, a special concern for geographic markets for any commodity has been defined where more than 90 percent of consumption is produced locally and 90 percent of production is consumed locally.<sup>53</sup> That situation has been true for almost all instances in the regulated monopoly electric industry. While relevant geographic markets for other commodities are practically determined by shipping costs, that same function for electricity is determined by transmission. That makes transmission capability a primary concern, among a host of others, in completing market power analyses. For example, it would be helpful to know how large a geographic area would need to be considered before the HHI drops below 1800. Such an analysis might help to determine how much additional transmission capability would have to be made available to ensure that effective competition could take place.

These HHI analyses conclusively show that there is a legitimate market power concern in Michigan today and the concern will continue into the future even as competition gets started. Additional analyses are warranted, to take into consideration the possible effects of enlarging the geographic areas to be studied (e.g. ECAR, other possible regional transmission group areas, etc.). In addition, it could be helpful to

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<sup>52</sup>(...continued)

NUGs, and interstate transmission capacity, Michigan's HHI varies from a low of about 2100 to as high as 4590. It makes very little difference to the aggregate HHI score whether the index measures market share based on the number of customers, total sales to customers, total sales to industrial customers, or amount of generating capacity owned. HHI's from each of these various perspectives range from about 3200 to 3500. Examining the total number of industrial customers, however, CECo dominates with a market share just shy of 70%, and the HHI rises to nearly 5000.

<sup>53</sup> 1996, pp. 19-20.

develop the more accurate and complete Landes-Posner indexes for the relevant Michigan markets. Regardless of the specific findings of various quantitative analyses of market power in Michigan, it appears certain that policy actions intended to mitigate market power concerns are warranted. This paper now turns its attention to a discussion of the anti-trust laws and federal agency decisions which largely define the parameters within which Michigan must work in shaping its competitive electric market.

Table 1: HHI Estimates of Market Concentration  
for Michigan Electric Power Capacity (1995):  
Present Scenario without Direct Access Transmission Capability

Firm/Ownership	Capacity (approximate MW)	Percent of Market	HHI
CECo (w/MCV & affiliated NUGs)	8850	37%	1360
DECo	10600	44%	1951
Other NUGs & IPPs	~ 20 firms = 1350	6%	8
All Others (including munis, coops, other utilities)	~ 20 firms = 3200	13%	44
Total Market	24000	100%	3363

Note: HHI scores depicted on this table for "Other NUGs & IPPs" and "All Others" assume that 20 different firms would comprise each of those market segments.

Table 2: HHI Estimates of Market Concentration  
for Michigan Electric Power Capacity (1995):  
Best-Case Scenario with 5000 MW of Import Capability

Firm/Ownership	Capacity (approximate MW)	Percent of Market	HHI
CECo (w/MCV & affiliated NUGs)	8850	31%	931
DECo	10600	37%	1336
Other NUGs & IPPs	~ 20 firms = 1350	5%	5
All Others (including muni's, coop's, other utilities)	~ 20 firms = 3200	11%	30
Import Capability	~ 20 firms = 5000	17%	74
Total Market	29000	100%	2378

Note: HHI scores depicted on this table for "Other NUGs & IPPs", "All Others", and "Import Capability" assume that 20 different firms would comprise each of those market segments. The estimate of 5000 MW of import capability is a best-case rough estimate for base load conditions in Michigan. During peak load periods in recent years, much of the import capability has been used. See, for example, The Detroit Edison Company; MPSC Case No. U-11290 Informational Filing on Implementation of the Staff's Report; March 7, 1997, Chapter 7.

## V. ANTITRUST LAW AND REGULATION

Federal antitrust laws were enacted to ensure that markets promote competition, and to prohibit monopoly behavior. At various times since enactment of the Sherman Act, antitrust laws have also been used to promote particular social, or populist, objectives, such as limiting business size, protecting small businesses from the actions of large corporations, and expanding entrepreneurial opportunities.<sup>54</sup> In recent years, however, the courts have taken a more narrow approach in interpreting the statutes and the "populist" objectives have largely been left to the market.<sup>55</sup> Under current standards, "...a practice is anticompetitive only if it harms the competitive process."<sup>56</sup>

Historically, antitrust cases have focused more on which business activities are permissible than on measuring and restricting market power.<sup>57</sup> With some exceptions, discussed later, antitrust laws have played only a minor role in the electric industry. There is a general agreement, however, that as the generation industry is deregulated for both retail and wholesale customers, there will be greater scrutiny of electric

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<sup>54</sup> Arreda & Turner, Antitrust Law Volume 1, (Little Brown & Co., 1978), p 8.

<sup>55</sup> Meeks, Antitrust Concerns in the Modern Public Utility Environment, National Regulatory Research Institute, (1996) pp 14-15.

<sup>56</sup> Meeks, "Economic and Legal Foundations of Antitrust and Merger Policy and Their Application to Utility Industries;" Presented at the "Antitrust, Merger Guidelines, and Regulation of Utility Consolidation Conference," sponsored by the Institute of Public Utilities, Michigan State University, November 6, 1996, citing Brunswick Corp. v Pueblo Bowl-O-Mat, Inc., 429 US 477, 973 S Ct 690, 50 L Ed 2d 701 (1977).

<sup>57</sup> Perl, Section: Symposium: Antitrust, Joint Ventures, and Electric Utility Restructuring: Measuring Market Power in Electric Generation, 64 Antitrust LJ 311 (1996).

industry activities and market power analysis under antitrust laws.<sup>58</sup> Furthermore, it is believed that there will be a greater focus on the extent of state oversight over regulated business activities.<sup>59</sup> State public utility commissions and legislators have been encouraged to consider antitrust/market power issues as they restructure the electric industry and set standards for industry behavior.<sup>60</sup>

It is accepted that there are circumstances when a business functions more efficiently as a monopoly, generally when the economies of scale are such that duplication of services is not in the public interest. In those instances, regulation has replaced antitrust law in ensuring that the business does not take advantage of its monopoly power. While it is not common for the antitrust statutes to be applied to regulated entities, the fact that these entities are regulated does not alone grant them an exemption from the standards set forth in antitrust law.

There have been occasions when the courts have heard antitrust complaints against a regulated industry and found violations. Perhaps the most notable in the electric industry was Otter Tail Power Company v US.<sup>61</sup> In its decision, the U.S. Supreme Court affirmed a lower court's finding that Otter Tail violated Section 2 of the Sherman Act by refusing to wheel power to towns whose franchises had expired and who chose to purchase power from other sources. Generally, however, a regulated

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<sup>58</sup> Trotter, Donald T.; "Antitrust Issues and Application to the Electric and Telecommunications Industries;" Presented at the 38th Annual NARUC Regulatory Studies Program, Michigan State University, East Lansing, Michigan; August 7, 1996.

<sup>59</sup> *id.*

<sup>60</sup> Macey, Daniel; "Energy Trustbusting;" Megawatts Market, Fall, 1996, p 30.

<sup>61</sup> Otter Tail Power Co. v US, 410 US 366; 93 S Ct 1022; 35 L Ed 2d 359 (1973).

industry has protection or defenses which provide immunity from such claims. The most common are the Filed Rate Doctrine and the State Action Doctrine.

The Filed Rate Doctrine, first referred to in Keough v Chicago and Northwest Railroad, provides a regulated business with protection from claims of unfair pricing if the rate has been approved by, and is on file with, the jurisdictional administrative agency.<sup>62</sup> Any claims that the rate is unreasonable must be filed with the agency following the appropriate procedures. As electric generation markets become competitive and are deregulated at both the wholesale and retail levels, the regulatory protections provided by the Filed Rate Doctrine will be eliminated.

The State Action Doctrine provides immunity to a regulated business for actions which might be considered anticompetitive, but have been appropriately approved and overseen by a state commission. First articulated by the U.S. Supreme Court in Parker v Brown in 1943, the State Action Doctrine acknowledges state sovereignty: that certain anticompetitive activities may forward particular state objectives and therefore should be immune to claims of antitrust at the Federal level.<sup>63</sup> While public utilities are not exempt from antitrust laws, many of their actions can have immunity based on

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<sup>62</sup> Keough v Chicago & N.W. Ry. Co., 260 US 156; 43 S Ct 47; 67 L Ed 183 (1922) and Square D Co. v Niagara Frontier Tariff Bureau, 476 US 409; 106 S Ct. 1922; 90 L Ed 2d 413 (1986), cited by Hochberg, Jerome A., "Interface Between Traditional Regulation and Antitrust Enforcement as the Regulator in the Energy Industry," Presented to the "Antitrust In Energy Markets" Course, Sponsored by the University of Wisconsin Law School and Wisconsin Public Utility Institute, August 27, 1996.

<sup>63</sup> Parker, Director of Agriculture v Brown, 317 US 341, 350; 100 S Ct 937; 63 L Ed 233 (1943).

application of the State Action Doctrine.<sup>64</sup> In California Retail Liquor Dealers Association v Midcal, the Supreme Court held that an action was not subject to the Sherman Act if it was (1) "clearly articulated and affirmatively expressed as state policy" and (2) "actively supervised by the State itself."<sup>65</sup> To meet the first prong of the test, the policy must be expressed by the legislature, not inferred. However, the statute does not need to "explicitly permit the displacement of competition", it is enough "if the suppression of competition is the foreseeable result" of an action authorized by the state.<sup>66</sup> The Court has also determined that the oversight cannot be cursory; but the state must "exercise ultimate control over the challenged anticompetitive conduct."<sup>67</sup> In its decision, the Court stated:

"The active supervision prong of the Midcal test requires that state officials have and exercise power to review particular anticompetitive acts of private parties and disapprove those that fail to accord with state policy. Absent such a program of supervision, there is no realistic assurance that a private party's anticompetitive conduct promotes state policy, rather than merely the party's individual interests."<sup>68</sup>

As the industry is restructured and generation is deregulated, it is anticipated that the

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<sup>64</sup> Otter Tail Power Co., *supra*.

<sup>65</sup> California Retail Liquor Dealers Assoc. v Midcal Aluminum, Inc., 445 US 97, 105; 100 S Ct 937; 63 L Ed 2d 233 (1980).

<sup>66</sup> City of Columbia v Omni Outdoor Advertising, Inc., 499 U.S. 365, 372; 111 S Ct 1344, 113 L Ed 2d 382 (1990). An example of the application of the first prong test can be found in Cantor v Detroit Edison, 428 U.S. 579, 96 S.Ct. 3110, 49 L Ed 1141 (1976), in which Detroit Edison was charged with antitrust violations for its light bulb exchange program. Even though the program was included in rates filed and approved by the Michigan Commission, the Court determined that the program did not "implement any statewide policy relating to light bulbs."

<sup>67</sup> Patrick v Burget, 486 U.S. 94, 100; 108 S.Ct. 1658; 100 L.Ed 2d 83 (1988).

<sup>68</sup> *id.* p. 101.

State Action Doctrine will become less applicable to the electricity generation sector of the industry. Actions involving transmission and distribution within state jurisdiction, which for the foreseeable future will continue to be regulated, should still be immune from antitrust claims as long as the state legislature and commission meet the Midcal standards.<sup>69</sup> One problem facing state legislatures and commissions will be the need to insure that the two-prong test is met for those regulated actions that should remain immune from antitrust claims. A second concern will be how commissions can balance the regulated and non-regulated portions of the business so that the State Action Doctrine applies where appropriate and market forces are brought to bear on the competitive portions of the industry. These tasks will be especially challenging given the "phase-in" period of retail access, when some generation is sold under traditional regulation and some in the competitive market.

Federal legislation may also impact the ability of state regulators to employ state action immunity in implementing state economic policy. During the 104th Congress, Representative Markey introduced legislation stating that immunity, including the State Action Doctrine, creates "unnecessary obstacles to competition and to prevention of anticompetitive behavior of entities with market power."<sup>70</sup> The bill, if enacted, would

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<sup>69</sup> FERC decisions do not carry the same immunity as those of state commissions. Thus, FERC decisions regarding interstate transmission will not be protected against antitrust claims.

<sup>70</sup> 104 HR 2929, Sections 2(6) and 301, introduced by Representative Markey, cited by Adelberg, Arthur W., and John Will Ongman; "The Antitrust Wild Card and Electricity Restructuring," Electricity Journal; March, 1997, Volume 10, No. 2, p 28.

have prohibited state utilities from relying on the state action exemption defense.<sup>71</sup>

Elimination of the State Action Doctrine could affect the state regulated portions of the industry, including special contracts, territorial allocations, and ratemaking.

Thus far in the 105th Congress, no bill contains similar language. However, two electric restructuring bills have been introduced which seek to retain state action immunity, both saying substantively the same thing: that nothing in the act "shall be construed to modify, impair, or supersede the applicability" of the antitrust laws or Federal court decisions "interpreting such laws."<sup>72</sup> As Congress becomes more active in the debate over electric industry restructuring, state action immunity, and more importantly, the state's ability to determine its economic policy, will deserve attention from state commissions.

#### A. Federal Antitrust Statutes

Federal antitrust laws focus on preventing anticompetitive behaviors from one business acting alone and two or more businesses acting in concert, and insuring that mergers and acquisitions do not create market power abuses. The most relevant sections of the Federal antitrust statutes are Sections 1 and 2 of the Sherman Act and Sections 2, 3, 7, and 8 of the Clayton Act.<sup>73</sup> These Federal acts are expected to be an important consideration in the state restructuring process since many of the actions which might result in abuse of market power occur in interstate commerce, and thus

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<sup>71</sup> *id.* Section 301.

<sup>72</sup> 105 HR 1230, Section 11, introduced April 8, 1998 by Representative Delay, and 105 HR 655, Section 108, introduced February 10, 1997 by Representative Schaefer.

<sup>73</sup> 15 USC 1 *et seq.*

fall under Federal jurisdiction. Thus, as components of the industry are deregulated and lose immunities provided by the Filed Rate and State Action Doctrines, more activities of the electric industry will be subject to the scrutiny of Federal statutes.

Contracts, combinations, and conspiracies in restraint of trade are prohibited by Section 1 of the Sherman Act, as well as portions of the Clayton Act.<sup>74</sup> Because a literal interpretation would label most competitive business transactions a violation of Section 1, the Courts have determined that the restraint must be "unreasonable."<sup>75</sup> While a Section 1 violation requires the actions of two businesses, the Courts have determined that the collaborations are not prohibited if occurring between two subsidiaries of the same parent company.<sup>76</sup> Prohibited agreements need not be in writing; with sufficient evidence, implied joint actions can be determined to be a violation.<sup>77</sup>

Actions which generally might be found in violation of Section 1 include horizontal price fixing arrangements between competitors; including price floors, price ceilings, and agreements on price formulas; resale price maintenance agreements between producers and distributors; tying arrangements; group boycotts; refusals to deal; some types of joint ventures; vertical restraints; and territorial allocations or

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<sup>74</sup> "Every contract, combination in the form of trust or otherwise, or conspiracy, in restraint of trade or commerce among the several States, or with foreign nations, is declared to be illegal..." (15 USC 1) Also, see Meeks, Trotter, and Adelberg for additional discussion.

<sup>75</sup> Meeks, "Antitrust Concerns," *supra*. p 14.

<sup>76</sup> *id.* p 13.

<sup>77</sup> *id.*

market division agreements.<sup>78,79</sup> Exceptions have been made by the courts when the agreement facilitates the activity of the market. This is considered a "reasonable" restraint.<sup>80</sup>

Competition will invite opportunities for collusion by members of joint ventures attempting to keep other competitors from participating equally in the market. In the restructured electric utility industry, unless the pools and transmission groups are structured to offer fair access to all, have fair pricing structures, and mitigate market power to the greatest extent possible, it is believed that Section 1 claims will increase. While the FERC has jurisdiction over approving the operation of the power pools and transmission groups, this approval does not carry with it immunity to claims of antitrust violations. Immunity is granted only when Federal legislation requires entities to carry out a particular action that might result in attainment of market power.

Monopolization and attempts to monopolize are generally prohibited by Section 2 of the Sherman Act.<sup>81</sup> The Courts have determined that monopolization involves two

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<sup>78</sup> *id.* and Szymanski, Paul A., "Competition, Antitrust, and the Specter of the Marketplace, A Primer for State Commissions," Massachusetts Department of Public Utilities, 1994, p 5.

<sup>79</sup> Section 7 of the Clayton Act (15 USC 18) also deals with joint ventures, and Section 3 of the Clayton Act (15 USC 14) deals with vertical restraints.

<sup>80</sup> In his presentation to at the Institute of Public Utilities, Meeks cites National Collegiate Athletic Ass'n v Board of Regents of Univ. Of Oklahoma, 468 US 85 (1984) as an example of a network being found to be essential to the market, and BMI v Columbia Broadcasting Sys. Inc., 441 US 1 (1979) as an example of a situation in which the agreement facilitated the functioning of the market.

<sup>81</sup> "Every person who shall monopolize, or attempt to monopolize, or combine or conspire with any other person or persons, to monopolize any part of the trade or commerce among the several States, or with foreign nations, shall be deemed guilty of a felony..." (15

(continued...)

actions; (1) possession of monopoly power in a relevant market, and (2) the commission of one or more prohibited actions intended to strengthen, protect, or maintain a monopoly position or to expand the monopoly power into another market.<sup>82</sup> While the action of monopolizing is a violation of Section 2, the courts have recognized that monopolies can occur through legal product growth and development with no intent of monopolizing. Therefore, monopolies -- in and of themselves -- are not violations of Section 2. Prohibited monopolization behaviors might include predatory pricing or price squeezes, boycotts or refusals to deal with a competitor, and tying arrangements.<sup>83</sup> While the Otter Tail decision in 1973 was followed by new claims of Section 2 violations for refusal to wheel electricity, it is anticipated that wholesale open access will reduce those claims.<sup>84</sup> However, there may be greater scrutiny of transmission related actions and transactions occurring as the result of joint ventures.

Section 7 of the Clayton Act deals with monopoly and oligopoly behaviors by preventing or conditioning mergers and acquisitions that would result in a concentration of market power.<sup>85</sup> This act covers both horizontal and vertical mergers as well as joint

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<sup>81</sup>(...continued)  
USC 2)

<sup>82</sup> Meeks, "Economic and Legal Foundations" *supra*. pg.10.

<sup>83</sup> *id.*

<sup>84</sup> Copeland, David S.; "Symposium: Antitrust, Joint Ventures, and Electric Utility Restructuring: Requiring Transmission Access by Electric Utilities: The Shifting Roles of Regulation and Antitrust." 64 Antitrust LJ 291.

<sup>85</sup> "No person engaged in commerce or in any activity affecting commerce shall acquire, directly or indirectly, the whole or any part of the stock or other share capital and no person subject to the jurisdiction of the Federal Trade Commission shall acquire the whole or an part of  
(continued...)

ventures. The Hart-Scott-Rodino Antitrust Improvement Act of 1976 requires pre-merger notification to the DoJ.<sup>86</sup> Thus, violations are rare because problems can be worked out before the merger occurs. Generally, when a merger involves regulated businesses, enforcement agencies are able to negotiate changes or condition approval so as to resolve market power concerns. The DoJ and the Federal Trade Commission (FTC) developed merger guidelines which provide direction to potential merging companies.<sup>87</sup> The FERC recently revised its own merger guidelines to be consistent with those of the DoJ/FTC.<sup>88</sup>

The number of energy company merger applications to regulatory agencies has been increasing steadily for the last several years, and most observers of the industry anticipate a continuation of that trend. While it is difficult to project into the future, when the flurry of mergers subsides and the "steady state" is reached, estimates suggest that there will be only twelve to forty giant energy providers in the country.<sup>89</sup> Unless transmission systems are significantly expanded to allow for long distance transmission, competition may be limited.

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<sup>85</sup>(...continued)  
the assets of another person engaged also in commerce....where...the effect of such acquisition may be substantially to lessen competition, or tend to create a monopoly..."(15 USC 18)

<sup>86</sup> 15 USC 1311-1314.

<sup>87</sup> "US Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines," issued April 2, 1992, 57 FR 41,552 (1992).

<sup>88</sup> "Federal Energy Regulatory Commission Policy Statement Establishing Factors the Commission Will Consider in Evaluating Whether a Proposed Merger Is Consistent with the Public Interest," issued December 18, 1996, 77 FERC 61,263, (1996).

<sup>89</sup> LCG News; "1996, A Year of Energy Utility Mergers; More to Come;" December 26, 1996.

Section 2 of the Clayton Act, the Robinson-Patman Act, prohibits price and promotional service discrimination.<sup>90</sup> To make a claim under this section, the complainant must demonstrate that “(1) a commodity of (2) like grade and quality was (3) sold to two different buyers (4) in interstate commerce (5) at different prices (6) where the effect may be substantially to lessen competition.”<sup>91</sup> A major question regarding the possible application of this act is the definition of “commodity.” Natural gas is considered a commodity, telephone service is not.<sup>92</sup> It is as yet unclear how electricity will be defined. In this application, the commodity must be sold *in* interstate commerce, not just *affect* interstate commerce.

Claims under Federal antitrust laws can be pursued by the Antitrust Division of the DoJ; the FTC; State Attorneys General suing on behalf of the citizens of the state; or a private party claiming injury from the alleged violation, including affected customers and potential or actual competitors who have been injured by the action.<sup>93</sup> Antitrust cases not settled generally are heard in Federal Court, although those involving purely intrastate issues can be heard in state courts. Damages awarded in a

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<sup>90</sup> “(a) It shall be unlawful for any person engaged in commerce...either directly or indirectly, to discriminate in price between different purchasers of commodities of like grade and quality where either or any of the purchases involved in such discrimination are in commerce...one where the effect of such discrimination may be substantially to lessen competition or tend to create a monopoly in any line of commerce, or to injure, destroy, or prevent competition with any person who either grants or knowingly receives the benefit of such discrimination, or with customers of either of them...”(15 USC 13(a))

<sup>91</sup> Carstensen, Peter; “Outline of Antitrust Law and the Deregulated Utility,” Presented to the “Antitrust In Energy Markets” Course, Sponsored by the University of Wisconsin Law School and Wisconsin Public Utility Institute, August 27, 1996.

<sup>92</sup> Meeks, “Antitrust Concerns,” *supra*. p 18.

<sup>93</sup> Meeks, “Antitrust Concerns,” *supra*. p 12.

suit brought by a private person are three times the amount of the claimed injury.

#### B. State Antitrust Statutes

While most antitrust claims are heard in Federal courts, there are some occasions when the questioned arrangement is purely intrastate in nature. Michigan's antitrust legislation, the "Michigan Antitrust Reform Act" is based on the Uniform State Antitrust Act (USAA) developed by the National Conference of Commissioners on Uniform State Laws.<sup>94</sup> These statutes mirror Federal laws, however they provide less detail. Most states have similar antitrust statutes, based on the USAA, for continuity and consistency.

#### C. The Federal Energy Regulatory Commission

As the electric generation industry moves through the transition from a regulated industry to one operating in the competitive market, there are two primary issues before the FERC which deal with market power. The FERC has taken action to open access to the transmission lines, enabling competing generators to access non-discriminatory transmission service equally when delivering power to wholesale customers. The FERC is in the process of reviewing open access transmission tariffs filed in July, 1996. Additionally, the FERC is employing its revised merger policy in reviewing the numerous merger applications filed in the last few years.

For the past several years, the FERC has focused attention on capturing the efficiency potential of a competitively-priced bulk power market. In doing so, the FERC has moved away from maintaining traditional cost-based ratemaking, in which

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<sup>94</sup> MCL 445.771 - 445.778.

monopoly power is curbed by regulatory oversight, to creating a competitive generation market. One major obstacle to reaching the FERC's objective of a competitive bulk power market is the exclusive ownership of the transmission lines by the public utilities, giving transmission owners the ability to limit or deny use of the lines to competitors or to charge monopoly rents to those using the system.<sup>95</sup>

While it is understood that in a market, antitrust laws serve as the controlling factor, the key element in making the market effective is that transmission will continue -- at least for the foreseeable future -- to be a monopoly subject to regulation. A complicating factor is that many utilities will continue to have a vertical structure and will own generation sold in the wholesale and retail markets, as well as transmission. Opening transmission services through use of non-discriminatory open access tariffs is the key to unlocking the competitive generation market. But, an open access tariff alone will not eliminate abuse of market power.

The EAct enabled the FERC to directly order wheeling.<sup>96</sup> Prior to EAct, the FERC was limited in its ability to open access to transmission services and thus create a fully competitive bulk power market. To accomplish this end indirectly, the FERC conditioned approval of other applications on the utility's agreement to mitigate market power by filing open access tariffs.<sup>97</sup> The FERC used this indirect method of opening

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<sup>95</sup> Public Service of Colorado, 58 FERC 61,322 at 62,038, (1992 ), cited by Kelliher, p 548.

<sup>96</sup> 16 USCA 824j-l.

<sup>97</sup> Copeland speculates that, post EAct, Federal courts will be less responsive to claims of "refusal to wheel" suits under Section 2 of the Sherman Act, (such as Otter Tail), that in a Section 2 case involving a Federally regulated utility, there must be a specific intent to

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access in a variety of merger and market-based rate orders when the applications suggested the existence of market power.<sup>98</sup>

Once the FERC's authority to order access was expanded by EAct, the FERC moved more aggressively, issuing Notices of Proposed Rulemaking (NOPR) for both stranded cost recovery and open access tariffs, which resulted in final rules in Order 888 and, on rehearing, Order 888-A.<sup>99</sup> These orders provided details on how open access tariffs for transmission owning public utilities would be structured and how any resulting stranded costs would be recovered. In these orders, the FERC acknowledged that open access tariffs alone would not necessarily mitigate potential market power abuses. Among other points, the FERC determined:

- ! Public utilities must offer non-discriminatory open access transmission service, including firm and non-firm point-to-point service, network service, and certain ancillary services to all wholesale customers and that the utility must take service from itself under the same tariff.<sup>100</sup>

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<sup>97</sup>(...continued)

monopolize while only a general intent is required for non-regulated utilities, citing City of Groton v Connecticut Light and Power Co., 662 F 2d 921, 931-32, US Court of Appeals, Second Circuit (1981).

<sup>98</sup> For example, see Entergy Services Inc., 59 FERC 61,369 at 62,418 (1992) provides an example of conditioning approval of market-based rates, and Utah Power and Light, Co., 45 FERC 61,095 at 61,269 (1988), provides an example of conditioning approval of a merger. Both cited by Kelliher, Joseph T., Pushing the Envelope: Development of Federal Electric Transmission Access Policy; 42 Am UL Rev 543, 564 & 559.

<sup>99</sup> "Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities," (Order 888), issued April 24, 1996, 18 CFR Parts 35 and 385, and, on rehearing, "Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities," (Order 888A), issued March 4, 1997.

<sup>100</sup> *id.* Order 888, p 159.

- ! Information regarding transmission availability must be made available on the Open Access Same-Time Information System (OASIS).<sup>101</sup>
- ! Public utilities must functionally unbundle wholesale generation and transmission, noting that if functional unbundling is not an effective deterrent to market power abuses, the FERC will consider other more stringent alternatives such as requiring the transfer of transmission operations to an Independent System Operator (ISO).<sup>102</sup>
- ! Transmission owning utilities should follow specific principles for the development of voluntary ISOs, focusing on non-discriminatory management of the ISO and operational independence from the transmission owners.<sup>103</sup>
- ! Public utilities should be able to recover legitimate, prudent, and verifiable stranded costs for all wholesale contracts signed prior to the publication of the NOPR on July 11, 1994.<sup>104</sup> The FERC will use the "revenues lost" method of calculating stranded costs, which, it says, takes mitigation of stranded costs into account.<sup>105</sup>

At this time it is unclear how the standards will be applied.

The FERC is also in the initial stages of approving transmission and power sales agreements for utilities in the process of restructuring. Most notable are the applications for approval of the Power Exchange (PX) and ISO filed by Pacific Gas and Electric, San Diego Gas and Electric, and Southern California Edison (called the California companies), the first such plans to be reviewed by the FERC.<sup>106</sup> In reviewing

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<sup>101</sup> *id.* p 183.

<sup>102</sup> *id.* p 186.

<sup>103</sup> *id.* p 280.

<sup>104</sup> *id.* p 510.

<sup>105</sup> *id.* p 599.

<sup>106</sup> "Joint Application for Authority to Sell Electric Energy at Market-Based Rates Using a Power Exchange," (ER96-1663-000) and Joint Application for the Authorization to Convey

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the applications for power pools, ISOs, and similar entities, the FERC has indicated that it will consider the issue of market power. In its review of the California companies' restructuring proposals, the FERC found problems with the companies' market power studies, determining that the companies underestimated the market power they would retain in the competitive market.<sup>107</sup> The FERC Order stated:

"Based on our examination...we find that these studies contain some assumptions that appear to be incorrect based on our understanding of actual operations, and analytic techniques that define inappropriately large geographic markets with very low concentrations."<sup>108</sup>

The FERC identified aspects of the market power analysis that indicated market power might be greater than the utilities reported, including:

- ! The companies' determination of the operating limits of various transmission paths did not consider congestion resulting from generation and load conditions.
- ! The companies' determination of relevant geographic market did not adequately include transmission costs, transmission losses, or costs of ancillary services required for long-distance transportation.

The FERC concluded that the companies might have a greater level of market power than the studies indicate. However, rather than order the companies to revise the market power study, the FERC determined it would be more beneficial to focus on mitigation of market power. The FERC scheduled a technical conference for January 17, 1997, to consider mitigation of market power and ordered the companies

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<sup>106</sup>(...continued)

Operational Control of Designated Jurisdictional Facilities to an Independent System Operator," (EC96-19-000), filed April 29, 1996.

<sup>107</sup> "Order Providing Guidance and Convening a Technical Conference," Docket No. ER96-1663-000, 77 FERC 61,265, December 18, 1996.

<sup>108</sup> *id.* p 46.

to address market power mitigation in the Phase II filing due March 31, 1997.<sup>109</sup> The FERC also required the ISO to file a detailed monitoring proposal, including what criteria it would use for identifying the exercise of market power and what steps would be taken to mitigate it.<sup>110</sup> The Phase II filing reportedly proposes, among other things, limiting the Bonneville Power Administration's ability to exercise horizontal market power by restricting Bonneville's ability to bid all power into the PX and the use of a pricing mechanism that would be used during the transition.<sup>111</sup>

As the industry moves toward competition and energy companies attempt to position themselves for the future, applications for mergers between regulated electric utilities, utilities and marketers, and electric companies and natural gas pipelines/distributors are increasing at unprecedented rates.<sup>112</sup> It appears that "Btu" companies offering full service energy products will be the wave of the future. While the trend may slow slightly this year as regulators deal with the resulting jurisdictional, ratemaking, and antitrust questions, more large mergers are anticipated.

Under Section 203 of the Federal Power Act, no public utility can sell, lease, or

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<sup>109</sup> Video tapes of this technical conference, as well as others conducted by the FERC to review the California restructuring proposal, are available from the Electric Division, Jurisdictional Issues Section.

<sup>110</sup> The Phase II filing was filed at the FERC March 31, 1996. A summary has been requested for the MPSC. (The complete filing is said to weigh 125 pounds.)

<sup>111</sup> Electricity Daily, Volume 8, No. 61, 1 April 1997.

<sup>112</sup> Saunders, Barbara; "US Gas/Electric Megamergers May Slow as New Policies Tested," Oil and Gas Journal; February 3, 1997, p 19.

dispose of facilities directly or indirectly without FERC approval.<sup>113</sup> If the FERC finds that the proposed merger will be “consistent with the public interest” the merger will be approved.<sup>114</sup> The standard for review by the FERC, therefore, is the public interest; antitrust issues are included only in determining public interest. Conceivably, the FERC could approve a merger with antitrust concerns if the merger, overall, is in the public interest. The FERC can approve, deny, or condition the approval as necessary. As the industry moves from regulation to competition, it will be important for merger decisions to be made as quickly as possible, with applicants having a clear understanding of the standards the FERC will use in reviewing the application.

On December 18, 1996, the FERC issued a revised merger policy statement which, the FERC believes, reflects and responds to the changes occurring in the electric industry.<sup>115</sup> The FERC’s stated purpose in revising the policy, which mirrors the DoJ/FTC’s “Horizontal Merger Guidelines,” is to “ensure that mergers are consistent with the public interest, and to provide greater certainty and expedition in its analysis of merger applications.”<sup>116</sup>

Prior to revising the policy, the FERC had considered six standards in reviewing a merger application:

- the effect of the proposed merger on competition,

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<sup>113</sup> 16 USCA 824b.

<sup>114</sup> 16 USCA 824(a).

<sup>115</sup> Policy Statement Establishing Factors The Commission Will Consider in Evaluating Whether A Proposed Merger Is Consistent With The Public Interest, Docket No. RM96-6-000, 77 FERC 61,263.

<sup>116</sup> *id.* p 1.

- the effect of the proposed merger on the applicants' operating costs and rate levels,
- the reasonableness of the purchase price,
- whether the acquiring utility has used coercion on the to-be-acquired utility to accept the merger,
- the impact of the merger on the effectiveness of state and federal regulation, and
- the contemplated accounting treatment.<sup>117</sup>

The revised merger policy retains only three standards:

- the effect of the proposed merger on competition,
- the effect of the proposed merger on rates, and
- the effect of the proposed merger on regulation.<sup>118</sup>

In determining the effect of the proposed merger on competition, the FERC will employ the DoJ/FTC Guidelines as an analytical framework. Included in the analysis will be a determination of whether new market entry will be likely, whether there will be market concentration, and whether the merger will result in adverse competitive effects. Applicants will need to provide information on the relevant products, geographic markets for customers and sellers, and market concentration using the HHI.

In reviewing the effects on rates, the FERC will require applicants to propose measures that will provide rate protection for customers. These measures could include "hold harmless" provisions, rate freezes, or "open seasons" for existing wholesale customers. The FERC will encourage applicants to build consensus with other parties

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<sup>117</sup> Commonwealth Edison Co., 36 FERC 927 (1966).

<sup>118</sup> "Policy Statement," *supra*. p 6.

prior to filing the application.

The FERC's policy adopts steps to protect regulatory authority. Regarding the possible shifting of forums to the SEC, resulting from the formation of registered holding companies, the FERC will require applicants to either abide by its policies regarding affiliate transactions or the proposed merger will be set for hearing.<sup>119</sup> In assessing the proposed merger's effect on state regulation, the FERC will rely on each affected state commission's authority to approve, deny, or condition the merger as appropriate to protect the state's interests. If, however, the state lacks the authority to do so, it can notify the FERC and the merger can be set for hearing at the FERC to determine whether the merger will negatively impact the state. To date, there have been no such requests.

One of the first indications of how the FERC intends to apply the new guidelines was disclosed in its approval of the Baltimore Gas and Electric/Potomac Electric Power Company merger to form Constellation Energy.<sup>120</sup> In approving the merger, the FERC rejected concerns raised by its staff that the merger would result in market power at wholesale. The FERC did however, agree with staff that the merger could result in abuse of market power if retail competition is introduced in the applicants' service territories. The case record indicated that Constellation would "control 100 percent of the market for firm energy and between 80 and 88 percent of the market for non-firm

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<sup>119</sup> Ohio Power Co. v FERC; 954 F 2d 779 (1992).

<sup>120</sup> "Baltimore Gas and Electric Company and Potomac Electric Power Company, Opinion and Order Authorizing Proposed Merger," Docket Nos. EC96-10-000 and ER96-784-000, issued April 16, 1997.

energy" if retail competition were introduced.<sup>121</sup> According to the merger policy, however, the FERC has said it would not become involved in retail issues unless the affected state(s) does not have authority and requests FERC intervention in retail issues. In this case, both the Maryland and District of Columbia public utility commissions said they were capable of addressing retail market power issues, and the FERC has deferred the retail market power issue to them.

State commissions and the FERC are feeling their way through their new relationship evolving from the transition to competition. How they will work together to address market power concerns is unclear. The jurisdictional line between the FERC and state commissions is murky at best. As the electric industry is deregulated, and especially during the transition, there will be many occasions when the FERC and state commissions are in conflict over jurisdictional issues. The FERC has offered assistance to state commissions lacking the authority to address specific concerns. For example, the FERC claims both it and states have jurisdiction over legal authority to address recovery of stranded costs resulting from retail wheeling.<sup>122</sup> The FERC has said that, if a state commission does not have authority to address stranded costs resulting from retail wheeling, the FERC will address it.<sup>123</sup> In the same manner, as has been discussed, the FERC will investigate the impact of a merger on retail competition only if the

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<sup>121</sup> *id.* p 15.

<sup>122</sup> Order 888A, *supra.* p 668. Note, many states dispute this claim.

<sup>123</sup> *id.* P 678.

affected state lacks authority and requests assistance.<sup>124</sup> Whether or not this relationship will work cooperatively to address market power concerns remains to be seen.

D. The Department of Justice

The Antitrust Division of the DoJ, with the FTC, plays a central role in antitrust enforcement and merger review at the Federal level. The DoJ has indicated, both formally and informally, its interest in market power issues resulting from restructuring the electric industry. In its formal comments in response to the FERC's "MegaNOPR," the Antitrust Division focused on four major points:

- ! The disintegration of vertically integrated utilities may be unnecessary; operational unbundling could provide enough distance between the operation and dispatch of generating facilities and the operation of the transmission system to ensure that transmission market power cannot be used to distort the generation market.<sup>125</sup>
- ! The DoJ agrees that open access and operational unbundling will "encourage competition in generation and provide new alternative sources of supply for purchases of wholesale power..."<sup>126</sup> However, merely opening markets does not assure that markets are competitive; there is still a need to look at market concentration.<sup>127</sup> Before allowing market-based rates, the DoJ urged the FERC to analyze generation markets rather than assuming they are competitive.
- ! Transmission pricing and availability will be a determining factor in

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<sup>124</sup> Policy Statement, *supra*. p 62.

<sup>125</sup> Comments of the U.S. Department of Justice In the Matter of Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities, Recovery of Stranded Costs by Public Utilities and Transmitting Utilities; Proposed Rulemaking and Supplemental Notice of Proposed Rulemaking, Docket Nos. RM95-8-000 and RM94-7-001, filed August 7, 1996.

<sup>126</sup> *id.* p 2.

<sup>127</sup> *id.* p 8.

whether the most efficient generation resources are realistically available in the market. Transmission pricing policies should not be a deterrent to the efficient functioning of the competitive electric market. DoJ also supports the development of a secondary resale transmission market.<sup>128</sup>

- ! DoJ recommends that recovery mechanisms for stranded costs be designed to avoid distortions of the competitive generation market, and urges the FERC not to use transmission adders to recover stranded costs. It believes such adders would distort price signals and customer decisions.<sup>129</sup> Instead, it recommends a lump sum charge. In addition, DoJ finds that all savings from mitigation should not be applied to reducing customer costs. Doing so would be a disincentive to utilities' efforts to mitigate stranded costs, ultimately impacting the development and innovation of the market. DoJ believes it might be more effective to split the savings between the utility and the customer.

While electric utility mergers are reviewed primarily by the FERC and affected state commissions, DoJ and FTC also investigate proposed mergers.<sup>130,131</sup> As previously discussed, under the Hart-Scott-Rodino Act, parties to mergers and acquisitions exceeding a certain size must provide specific information to the DoJ and FTC prior to completion of the transaction. This advance information, along with an opportunity to obtain follow-up information, allows the DoJ and the FTC an opportunity to negotiate changes in the merger agreement without the necessity of a formal challenge. If necessary, the DoJ can seek a preliminary or permanent injunction in Federal court to stop the merger. In recent years, the DoJ has taken a less active role

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<sup>128</sup> *id.* p 2.

<sup>129</sup> *id.* pp 14-15.

<sup>130</sup> The Securities and Exchange Commission also has authority to review proposed electric utility mergers to assure compliance with applicable securities laws, however, in recent years has not played an active role in these investigation.

<sup>131</sup> For an extensive discussion of mergers, see Frankena, Mark W., and Bruce M. Owens; Electric Utility Mergers: Principles of Antitrust Analysis; Praeger; Westport, Conn.; 1994.

in the review of electric utility mergers, serving as an "Interested Party" in FERC's merger proceedings rather than conducting a separate proceeding.

DoJ has also begun investigations into potential anticompetitive behavior among public utilities by issuing a number of Civil Investigation Demands (CIDs), which are similar to subpoenas, during the past two years. For example, CIDs have been issued to several Texas utilities as part of an investigation into the possible use of transmission tying arrangements in violation of the Sherman Act.<sup>132</sup> At least one of the Texas cases will be heard in Federal court to determine if the state action immunity applies to these transactions. While DoJ has indicated the CIDs are, in part, a means to keep track of changes in the industry, some may result in formal action.

While it is unclear what role DoJ will play during the transition to a competitive electricity industry, staff of the DoJ have suggested informally that the Department will be watching the transitions occurring in the electric industry for possible antitrust violations. While the DoJ's focus in the past has been on vertical relationships, it is anticipated that open access tariffs and the resulting changes in the customer–seller relationship will reduce market power concerns in that arena.<sup>133</sup> Focus will likely shift to horizontal relationships among companies. Cited as potential problem areas are:

- Bid rigging,
- Decisions among competitors to manipulate the market by restricting generation output to boost prices, and

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<sup>132</sup> "Judge Rejects HI Petition," Electric Utility Week, March 26, 1996.

<sup>133</sup> Comments by Jade Eaton, cited in "DoJ Hints at Antitrust Nuances;" Electrical World; September, 1996; Vol. 210, No. 9, p 5. Authors of this report do not agree that open access tariffs and customer–seller relationships will reduce market power concerns; witness the California proposal and FERC's identification of the potential for market power abuses.

- Use of franchise areas not clearly determined by state law and territorial protection.

DoJ has indicated its willingness to work with states in investigating and litigating, if necessary, charges of antitrust violations. As has been discussed, the investigative process is time-consuming and complex, and generally beyond the scope of duties of many state commissions or state attorneys general. The extensive experience of DoJ staff could be a valuable asset to state commissions attempting to open a competitive electric industry. Since most antitrust investigations are initiated by a business complaint, it is likely that the first test for antitrust law in a deregulated electric industry will be a complaint from a large utility, non-utility generator, or marketer. As for now, DoJ appears to be taking a "wait and see" approach.<sup>134</sup>

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<sup>134</sup> Macey, *supra*, p 30.



## VI. REVIEW OF OTHER STATES' ACTIONS REGARDING MARKET POWER

This review was able to identify and obtain written materials from a total of nine states which have either passed legislation or issued regulatory commission orders calling for electricity industry restructuring. The following material summarizes the manner in which each of those states addressed the issue of market power.

### A. California

The state of California has certainly been a pioneer, perhaps the most identifiable leader, in the expanding nationwide examination of electric industry restructuring. As such, its experience is worthy of careful consideration.

According to the California Public Utilities Commission (CPUC), market power has been an absolutely crucial issue to address in its restructuring efforts. In the "Preferred Policy Decision" announcing its restructuring policy the CPUC stated:

"We introduce competition to the California electricity market with the conviction that it will deliver desirable market characteristics that have not been delivered by the regulated market regime of the past. But because competition is the foundation of this restructuring, we must be concerned that market power could undermine this foundation and negate the benefits of competition. This concern has served as a screening device in our review of policy options and the choices reflected in today's decision. This concern also compels us to take additional steps to ensure that market power does not impede development of a competitive electricity market in California....The mere existence of market power can undermine our goals for electric restructuring and should be avoided." ("Preferred Policy Decision", D95-12-063, December 20, 1995, p. 90, 91)

Indeed, it would be difficult to overstate the level of concern by the CPUC regarding this issue. In a recent news article about California's market power efforts,

Commissioner Bilas of the CPUC was quoted as stating:

"The effort underscores our recognition that market power mitigation is central to electric restructuring in California. Perhaps it's the single most important issue."<sup>135</sup>

While the landmark restructuring legislation in California (AB 1890 of 1996) leaves most of the details to the CPUC, it does echo the basic concern about market power:

"There is a need to ensure that no participant in these new market institutions has the ability to exercise significant market power so that operation of the new market institutions would be distorted."<sup>136</sup>

In response to these concerns, the CPUC has taken steps to pursue aggressive market power mitigation strategies. In its recent "Status Report on Market Power to the California Legislature", the CPUC described the extent of those efforts:

"From the very beginning of its electric restructuring initiative, the CPUC has been at the forefront of addressing market power issues. In its December 20, 1995, *Preferred Policy Decision*, the CPUC made clear that it 'must be particularly concerned about market power because competition is the foundation of electric restructuring.'<sup>137</sup> Thus, the CPUC fashioned both vertical and horizontal market power mitigation strategies, stating that 'restructuring mechanisms and mitigation programs are designed to eliminate or reduce market power to the greatest practicable extent.' These mitigation strategies included the establishment of independent market structures, the Independent System Operator ("ISO") and the Power Exchange ("PX"), providing for a direct access bilateral contract market and ordering the voluntary utility divestiture of at least 50 percent of Pacific Gas & Electric's ("PG&E") and Southern California Edison Company's ("Edison") fossil-fired

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<sup>135</sup> Electric Utility Week, March 31, 1997, p. 11.

<sup>136</sup> P.U. Code, Sec. 330 (1)(3).

<sup>137</sup> CPUC Status Report, p. 90.

generation assets.”<sup>138</sup>

The CPUC has been aggressive in its pursuit of the “voluntary” utility divestiture of generation. It announce an intended “incentive” to be awarded to PG&E and Edison of a 10 basis point increase in rate of return on equity for each 10% of fossil generation capacity divested.<sup>139</sup> In addition, the CPUC has taken “a vigorous role” before the FERC in its federal electric restructuring dockets to ensure that market power issues are adequately addressed. Both the FERC and the CPUC have concluded that those California utilities do have market power in generation, and that market power must be effectively mitigated before FERC can authorize the start of the proposed power exchange.<sup>140</sup> The aggressive strategy appears to be working thus far, as PG&E has filed an application with the CPUC to divest 50 percent of its fossil-fired generation and Edison has filed to divest virtually 100 percent of its California fossil-fired generation.<sup>141</sup>

#### 1. Vertical Market Power

With respect to the issue of vertical market power, the CPUC has stated:

“Our Preferred Policy Decision emphasized our concern that incumbent utilities might be able to exercise market power in the restructured environment. Market power could undermine competition and negate the benefits to be derived from the new competitive framework. We found that isolating control of transmission in the ISO and establishing an independent dispatch ordering mechanism resulting in operational unbundling are two crucial features for effective mitigation of vertical

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<sup>138</sup> CPUC Status Report, p. 1.

<sup>139</sup> Preferred Policy Decision, p. 101.

<sup>140</sup> Status Report, p. 2, 3.

<sup>141</sup> Status Report, p. 3.

market power. We continue to believe that vertical market power related to ownership of transmission can be effectively mitigated through the ISO and will carefully scrutinize the Applicants' Phase II ISO filings at the FERC to ensure that the ISO is independent and that vertical market power issues are adequately addressed."<sup>142</sup>

## 2. Horizontal Market Power

On the issue of horizontal market power the CPUC has said:

"As discussed in our Preferred Policy Decision, significant concerns regarding horizontal market power from concentrated ownership of generation units, and the resulting potential for anticompetitive behavior, may require the existing investor-owned utilities to divest themselves of a substantial portion of their generating assets. PG&E, Edison, and SDG&E have filed horizontal market power studies at the FERC which assume PG&E's and Edison's voluntary divestiture of 50% of their fossil-fired generation. This Commission is not only an active participant in this FERC proceeding, but is also committed to an ongoing examination of market power issues in its own proceedings. Because we are convinced that effective mitigation measures must be in place no later than January 1, 1998, in order to mitigate the potential exercise of market power, we have requested that the FERC schedule a series of joint technical workshops with this Commission on market power mitigation."<sup>143</sup>

### B. Maine

The position of the Maine Public Utilities Commission (MPUC) was spelled out in a report and recommended plan it issued on December 31, 1996 (Docket No. 95-462). In that recommended plan the MPUC recognized market power as a very significant concern. They developed a two-tiered approach to the issue, specifying remedies to the vertical market power problem in some detail, but proposing to conduct a further study regarding horizontal market power in 1998.

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<sup>142</sup> Decision 96-12-088, Dec. 20, 1996, p. 5.

<sup>143</sup> Decision 96-12-088, Dec. 20, 1996, p. 5.

## 1. Vertical Market Power

In addressing the vertical market power issue, the MPUC included the commonly identified remedies of supporting a “truly independent” ISO and a voluntary “regional power exchange.” However, its primary focus was on structural remedies regarding ownership of generation. The MPUC described the issue as follows:

“Market power exists when one company can gain an advantage over competitors through its affiliation with the provider of a related service. If a T&D utility is affiliated with a power provider, the T&D utility would have the incentive and the ability to use its monopoly position in the T&D market to favor its affiliate. Favoritism could take the form of ‘self-dealing’ (i.e., favoring the affiliate when purchasing services), steering customers toward the affiliate, or giving the affiliate preferential access to information or T&D services....Common ownership of power production facilities and T&D is an impediment to effective competition.”<sup>144</sup>

In response to that concern, the MPUC recommended a two-step process leading to full divestiture. By January 1, 2000, Maine’s IOUs would be required to transfer all generation related assets and activities, including all electric sales activities, “to corporations distinct from their transmission and distribution (T&D) businesses.”<sup>145</sup> By January 2006, Maine’s two largest IOUs (Central Maine Power and Bangor Hydro-Electric) would have to divest their generation assets and related functions. “The remaining T&D utilities would not be affiliated with any company that owns generating facilities of sells power.”<sup>146</sup>

The MPUC acknowledged that there were costs and risks to requiring

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<sup>144</sup> Order, Docket No. 95-462, p. 37.

<sup>145</sup> Order, p. 34.

<sup>146</sup> Order, p. 35.

divestiture, but it concluded:

“Despite the costs and risks, the benefits of CMP’s and BHE’s divestiture of their generating assets predominate. Effective competition among generation providers is critical for consumers to benefit from a right to choose suppliers. Effective competition depends, in large part, upon the T&D utility being a neutral link between power providers and customers. Ordering divestiture and prohibiting the T&D utility from selling power into the retail market are necessary to ensure the T&D utility serves as that neutral link.”<sup>147</sup>

Two additional aspects of the MPUC Order regarding the divestiture issue are especially worthy of note. The first was the discussion of why structural separation was an inferior remedy when compared to divestiture. The MPUC wrote:

“For several reasons, we believe structural separation alone is inadequate. First, structural separation would require continued regulatory oversight, which would depart from the restructuring principle that, where viable markets exist, market mechanisms should be preferred over regulation. Ensuring arms-length transactions in a competitive market would protect customers more effectively than regulating affiliate conduct. Reviewing, in the regulatory process, the details of multiple and complex affiliate transactions would be cumbersome, litigious, and expensive. Ultimately, it would protect consumers less effectively than the direct price discipline of a competitive market. Divestiture would allow competitive forces to replace regulation as the guarantor of arms-length dealing.

Second, affiliated companies’ incentives to take advantage of joint ownership of power-producing and T&D facilities are identical to the incentives in a vertically integrated utility. In fact, the incentive for abuse in the affiliate model may be greater than the incentive in the vertically integrated utility model under traditional regulation because there would be no limit on the profit from power sales. At the same time, regulators’ ability to detect and remedy such conduct would diminish. Specifically, under a subsidiary structure, there are schemes that favor the unregulated generation company at the expense of the T&D utilities’ customers. These include using capital structures to subsidize higher risk, non-regulated enterprises; “creative” accounting for shared costs; preferential access to T&D customer information and records; insufficient

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<sup>147</sup> Order, pp. 37, 38.

reimbursement to the regulated T&D utility for personnel transferred to the unregulated subsidiary; expansion, or refusal to expand, the transmission and distribution systems to the benefit of affiliated generation companies over other competitors; and preferential bundling of ancillary services. Such activities are difficult and expensive to detect and correct through regulation or anti-trust litigation."<sup>148</sup>

The second was the MPUC position regarding its authority to order divestiture.

One interesting aspect was the following:

"Some commenters suggested that mandatory divestiture may violate the takings clause of the United States Constitution. On the contrary, the United States Supreme Court found mandatory divestiture of utility assets under the Public Utility Holding Company Act (PUHCA) ~ 11(b)(1) does not violate that clause. See *North America Company v. SEC*, 327 U.S. 686 (1946). State-ordered divestiture raises no constitutional issues different from those addressed by the Court in *North America*. Moreover, although the takings clause could be implicated if forced divestiture resulted in a substantial reduction in the value of investors' holdings in the utility, the Commission would allow investors the same opportunity as they have now to recoup the value of their holdings through the stranded cost charge and the fair determination of the value of divested assets."<sup>149</sup>

## 2. Horizontal Market Power

The MPUC explicitly acknowledged the potential horizontal market power problem:

"There is a risk that some market participants may control a large enough share of the region's power supply to allow them to exert undue influence over market prices. In that event, the benefits of restructuring would not flow to consumers."<sup>150</sup>

Rather than propose specific further remedies now, however, the Commission stated that it would complete a market power study in December 1998. It indicated

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<sup>148</sup> Order, pp. 38-40.

<sup>149</sup> Order, pp. 43, 44.

<sup>150</sup> Order, p. 135.

that such a schedule would still provide ample time to recommend any necessary remedies before retail competition begins in Maine in 2000. In deferring the issue at this time, however, the MPUC underscored the importance of taking action before the onset of retail competition:

To the extent possible, opportunities for market power should be minimized before retail competition. After-the-fact anti-trust enforcement would be expensive and likely ineffective, because the unlawful exercise of market power is difficult to detect and even more difficult to prove. The Commission recommends that the Legislature direct state agencies, including the Commission, to study [the] regional power market and recommend steps to minimize market power opportunities before the date of retail access."<sup>151</sup>

#### C. Massachusetts

The Massachusetts Department of Public Utilities (MDPU) devoted an entire section of its December 30, 1996 "Electric Industry Restructuring Plan" to the issue of market power. In its discussion of the issue, the MDPU made the interesting observation that the status of utilities as longstanding, well-established entities in the community exacerbates the potential for market power. The MDPU wrote:

"The Department is committed to establishing a framework in which the potential for both vertical and horizontal market power abuse will be minimized. Some of the most challenging issues in the restructuring of the Massachusetts electric industry arise from the fact that the new retail services market is not being created de novo, but rather is emerging from a backdrop of several decades of monopoly regulation. Existing and longstanding patterns of commerce create hurdles to competition that must be overcome."<sup>152</sup>

The MDPU added a note signaling the difficulty of the task:

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<sup>151</sup> Order, p. 135.

<sup>152</sup> Order, D.P.U. 96-100, p. 67.

"Those electric companies that have enjoyed a monopoly position cannot be expected to forgo willingly the advantages that monopoly status afforded them in the past"<sup>153</sup>

The MDPU then went on to specify a number of remedies it was proposing to deal with the issue of market power.

#### 1. Vertical Market Power

As a first step, the MDPU recommended "a truly independent regional transmission system operator who will have control over the dispatch of generation and over system reliability through operation of the transmission grid."<sup>154</sup> The MDPU acknowledged, however, that it did not have the authority to mandate a regional solution, so the Department pledged to work with the other PUCs in New England to advocate before FERC for an effective ISO.

With respect to corporate structure, the MDPU clearly indicated that its preferred solution was divestiture.<sup>155</sup>

"The Department continues to encourage the voluntary divestiture of generation assets by the electric companies to protect against self-dealing and vertical market power abuse, to minimize the future regulatory burden on themselves, and to further the reality, as well as the appearance, of full and fair competition."<sup>156</sup>

However, in the absence of authority to order divestiture, the MDPU concluded

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<sup>153</sup> Order, p. 67.

<sup>154</sup> P. 68.

<sup>155</sup> Although the Commission acknowledged that it lacked authority to order divestiture, the stated preference of the MDPU appears to be having some effect. Massachusetts Electric agreed to full divestiture of its generation assets in a settlement agreement approved in late February 1997.

<sup>156</sup> Order, p. 75.

that the minimum structural change it would accept was functional separation with clear rules of conduct. It said:

“Based on comments received, the Department is firmly persuaded that the functional separation of generation, transmission, and distribution divisions within an integrated company, with clear, enforceable corporate rules of conduct to govern how the divisions interact, is the minimum acceptable approach to corporate structure for the electric companies. Moreover, each electric company that retains generation assets, and plans to sell power in the competitive marketplace, must establish a separate marketing affiliate in order to minimize the potential for the unregulated portion of the business to be subsidized or provided with a competitive advantage by virtue of its connection to a ratepayer-funded entity.”<sup>157</sup>

Even with that recommendation, the MDPU acknowledged the potential for abuse:

“...we remain sensitive to the possibility that regulated electric companies with non-regulated affiliates or divisions may engage in market power abuse, or exact subsidies from ratepayers to fund the activities of a competitive division, by affording their affiliates preferential access to information, tying the purchase of one product or service to the purchase of another, or through other anticompetitive conduct”<sup>158</sup>

And, therefore the Department issued in November 1996 a revised draft code of conduct detailing various rules designed to avoid market power abuses. The MDPU also stated it was seeking explicit authorization from the legislature to impose monetary penalties on any distribution company that violates the rules of conduct established to govern interactions between regulated and competitive divisions of the parent firm.<sup>159</sup>

## 2. Horizontal Market Power

The MDPU has adopted the principle that “there must be a sufficient number of

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<sup>157</sup> Order, p. 75.

<sup>158</sup> Order, p. 75.

<sup>159</sup> Order, p. 80.

buyers and sellers to ensure competitive behavior.”<sup>160</sup> Yet it was cautious about its ability to assure such an outcome.

“The detection of excessive horizontal market power and remedies for its abuse are elusive, because the market within which such abuse could occur has not yet been completely defined and is not yet in full operation.”<sup>161</sup>

On the other hand, the MDPU expressed some optimism that the steps it had already proposed would help provide a competitive market, and pledged to monitor the situation as the market evolved and take further actions if necessary:

“In presenting our vision of a restructured industry, we have proposed a number of steps to ensure a robust generation market, such as the creation of an ISO, policies that minimize the ability of electric companies to capitalize unfairly on their incumbent role, and the application to electric companies of rigorous corporate rules of conduct. However, as the electric services market evolves in Massachusetts, we will assess the degree to which competition exists and will take such actions as necessary to ensure that the full benefits of competition are achieved.”<sup>162</sup>

Finally, the MDPU also stated that it would be vigilant in reviewing proposed mergers:

“In addition, we plan to evaluate carefully any proposed mergers within our jurisdiction in light of the potential for market concentration on a regional basis and potential abuses of horizontal market power.”<sup>163</sup>

#### D. New Hampshire

In its “Final Plan” for restructuring, the New Hampshire Public Utilities Commission (NHPUC) defined and described market power as follows:

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<sup>160</sup> P. 80.

<sup>161</sup> Order, p. 82.

<sup>162</sup> Order, pp. 82, 83.

<sup>163</sup> Order, p. 83.

"We define market power to mean the ability of a seller, or group of sellers, to influence price for a significant period of time. Sellers with market power may reduce competition along dimensions other than price, such as product and service quality and technological innovation. Ultimately, the result of a firm's exercise of market power is a transfer of wealth from buyers to sellers or a misallocation of resources. In competitive markets, the number of individuals buying or selling a homogeneous product is so large and each participant's relative share of the market so small, that each buyer and seller believes that variations in the quantity bought or sold will have an imperceptible effect on the market. Consequently, in competitive markets, no participant can exert market power."<sup>164</sup>

For the basic market structure, the NHPUC recommended a "hybrid model", including both bilateral contracts and a power exchange. It argued that neither of those mechanisms alone would be sufficient and that each offered unique benefits. For example:

"Sophisticated and large volume consumers may receive the economic gains of lower prices through shrewd negotiations, while smaller volume consumers may benefit by purchasing from a power exchange, thus minimizing the complexity and cost of their market transactions."<sup>165</sup>

In addition:

"We believe that the ability to sell power directly to a spot market or pool distinctly benefits small producers who may find tepid demand in a purely bilateral contract market."<sup>166</sup>

The NHPUC also endorsed the importance of an independent ISO, describing its powers as follows:

"The ISO should be able to balance load with resources under its control, allocate curtailments related to transmission constraints based on market price, redispatch to relieve transmission constraints, and have under its

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<sup>164</sup> Final Plan, pp. 12, 13.

<sup>165</sup> Final Plan, p. 15.

<sup>166</sup> Final Plan, p. 15.

control sufficient assets to provide backup service if an unscheduled outage occurs."<sup>167</sup>

#### 1. Vertical Market Power

In the original "Preliminary Plan", the NHPUC discussed vertical market power concerns and "expressed skepticism that these concerns could be addressed adequately through standard cost allocation and affiliate transaction rules."<sup>168</sup> After receiving comments from various parties on the Preliminary Plan, the NHPUC's position on vertical market power became even more firm. In the Final Plan, it directed the following:

"Despite PSNH's assertions to the contrary, we believe there is an abundance of evidence that vertically integrated utilities possess the ability to discriminate against unaffiliated suppliers.<sup>169</sup> The shared ownership and control of generation, transmission and distribution assets provides both the opportunity and the incentive for management of regulated companies to favor competitive affiliated suppliers. The implementation of affiliate transaction rules insufficiently restricts the incentive to exercise market power. We believe the corporate ties between regulated and competitive functions must be severed in order to eliminate this incentive. In our view, the only way to sever these corporate ties is through divestiture. We define divestiture to mean that an existing utility may no longer provide competitive and non-competitive services. If a jurisdictional utility chooses to be a distribution company, we will require it to submit a plan by December 31, 1997 to divest its generation and aggregation/marketing functions by the end of the two year period following the initiation of competition. We also will require such utilities to sell off any right to obtain power under existing power purchase contracts."<sup>170</sup>

In addition:

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<sup>167</sup> Final Plan, p. 16.

<sup>168</sup> Final Plan, p. 19.

<sup>169</sup> At this point, the NHPUC cited Appendix C to FERC Order No. 888.

<sup>170</sup> Final Plan, pp. 20, 21.

"We note that divestiture may produce two additional benefits which promote the development of effective competition while advancing the public interest: the recognition of hidden value in generation assets which is unlikely to be reflected through the application of an administrative approach to asset valuation and the elimination of the anti-competitive effects of stranded cost charges."<sup>171</sup>

## 2. Horizontal Market Power

The NHPUC indicated that it considered horizontal market power to be an important concern, but that it needed to wait for NEPOOL to finish its market power study before addressing that issue.

"Since NEPOOL has not yet filed the required market power study, we are unable to comment on this important issue. We intend to review and offer specific comments on the market power implications associated with NEPOOL's restructuring proposal during the FERC proceeding."<sup>172</sup>

## E. New York

The New York Public Service Commission (NYPSC) in its Order on Competitive Opportunities for Electric Service, identified three basic options for corporate restructuring.<sup>173</sup> These were: (1) functional separation (separate books and records within the utility); (2) structural separation (separate subsidiaries or a holding company); and (3) divestiture (sale or spin-off of generation assets).

The Commission indicated its strong preference for divestiture, and wrote at length about its virtues:

"Critical to a movement toward a restructured industry is the need to avoid undue concentration of market power and particularly the use of monopoly power on the distribution side to unduly restrict choice on the

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<sup>171</sup> Final Plan, p. 21.

<sup>172</sup> Final Plan, p. 13.

<sup>173</sup> Opinion No. 96-12, May 20, 1996.

generation side. Divestiture of generation and energy services is a clear way to allay concerns about vertical market power and avoid anti-competitive behavior (such as cross-subsidies among affiliates in both competitive and monopoly environments, and favored treatment of affiliates). Divestiture may create a larger number of competing generating companies and ESCOs, which can result in a dynamic and aggressive market. Also, an advantage of divesting generation is that a clear market value for generating assets is established, allowing a determination of, and hence greater recovery of, strandable costs early in the process."<sup>174</sup>

Ultimately, the NYPSC stopped just short of requiring immediate divestiture, but signaled its intent to pursue that end result.

"We strongly encourage divestiture, particularly of generation assets, but do not require it immediately. Incentives for divestiture should be worked out individually for each company in conjunction with its filing."<sup>175</sup>

#### 1. Vertical Market Power

In addition to the strong language on divestiture, the Commission included the commonly called for mechanisms of an independent system operator (ISO) and a power exchange. The Commission clearly stated the importance of a truly independent ISO:

"In order to allay concerns about favoritism and market power, the owner/operator of the ISO should not own or have control over generation of its own that could unduly impact the competitive market, and should be truly independent."<sup>176</sup>

However, the Commission left it to the parties to pursue a proposed resolution to the details of the ISO and the market exchange, which were then to be submitted to the NYPSC and FERC.

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<sup>174</sup> Opinion No. 96-12, p. 59.

<sup>175</sup> Opinion, p. 60.

<sup>176</sup> Opinion, p. 63.

The NYPSC also raised one other vertical market power issue, relating to energy services, although it declined at that time to take action on any specific remedies.

“Market power concerns similar to those regarding ownership of generation are raised when a utility owns both the transmission and distribution facilities and an energy service company operating in the same service territory. Vertical integration of energy service and transmission and distribution could result in cross-subsidization of energy service company operations and provide company marketers with special access to customer and system information. These opportunities to game the system could dampen the interest of new entrants in the electric retail market. While divestiture of energy service company operations is encouraged, for now we will allow utilities to continue to provide energy services to their customers either directly or through an affiliate.”<sup>177</sup>

## 2. Horizontal Market Power

The NYPSC indicated strongly its intention to protect consumers from horizontal market power.

“While competition encourages efficiency and induces suppliers to charge prices approximating marginal costs, suppliers with dominant market power are more likely to earn excessive profits or charge prices that reflect wasteful practices. In order to ensure that electricity customers are not subject to the abuses of dominant market power, we reserve our authority to protect consumers if a supplier obtains dominant market power (Public Service Law ~ 66(12).) We will also take a variety of steps, such as the prevention of the formation of dominant market power, to protect the consumers. For example, we will exercise our authority to address stock or asset acquisitions that would lead to dominant market power. (PSL ~ 70) We also have authority under various provisions of the Public Service Law ~ ~ 69 and 108, to regulate mergers.”<sup>178</sup>

In addition, one particular area of concern the Commission identified was the

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<sup>177</sup> Opinion, p. 60.

<sup>178</sup> Opinion, p. 60.

problem of “load pockets” (i.e., when, due to transmission system limitations, some generation in a particular location must be operated to preserve system reliability). New York conducted a statewide study in 1996 and found over 30 areas considered to be load pockets. The report concluded, and the Commission concurred, that additional analysis must be done to better understand the problem and to identify the best options to remedy it.<sup>179</sup>

#### F. Oklahoma

Oklahoma recently (April 25, 1997) enacted legislation calling for the restructuring of its electric industry, although its content was very brief (ten pages total) and consequently did not get into much detail. The strategy encompassed in the legislation was to declare a goal of retail competition by July 1, 2002, and direct the Oklahoma Corporation Commission to undertake a study and recommend a restructuring framework by August 31, 2000. “Market Power” was listed among the specific issues to be examined.<sup>180</sup> The only other mention of the market power issue was in the following passage included in the “principles” to be adhered to by the Commission in developing the framework:

“Entities which own both transmission and distribution, as well as generation facilities, shall not be allowed to use any monopoly position in these services as a barrier to competition. Generation services may be subject to minimal regulation and shall be functionally separated from transmission and distribution services, which services shall remain

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<sup>179</sup> Opinion, pp. 60-63.

<sup>180</sup> Section 4 (14).

regulated.”<sup>181</sup>

#### G. Pennsylvania

Among the nine states reviewed for this report, Pennsylvania was another of the least specific in its proposed steps to remedy market power. The Pennsylvania Public Utilities Commission (PPUC), in its July 1996 “Report and Recommendation to the Governor and the General Assembly on Electric Competition”, emphasized the need to restructure the framework of the current IOUs, but adopted a strategy of flexibility among individual utility companies:

“The change to full-scale retail competition cannot occur absent restructuring the institutional framework of the current investor-owned electric service providers. Therefore, all Pennsylvania electric utilities are expected to submit to the Commission a tentative restructuring plan by April 1997. Since each utility faces different financial conditions, cost structures, generation supply and transmission capabilities, and market pressures, the commission expects that individual utility proposals will meet the needs of all stakeholders while moving marketplace restructuring forward.”<sup>182</sup>

The Commission did outline the minimum elements which the utilities were required to address, including corporate structural changes and a schedule for introducing those changes. Features to include were:

“Clearly differentiating the assets, activities, and costs related to generation, transmission, distribution, and customer service.

Participation in a power market exchange (PME) under the control of an independent system operator (ISO).

Providing an effective means for preventing anti-competitive behavior which has the potential to arise with shared ownership of generating and

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<sup>181</sup> Section 4 (4).

<sup>182</sup> Report, p. 12.

transmission assets.”<sup>183</sup>

#### 1. Vertical Market Power

The primary mechanisms specifically addressed regarding vertical market power were the need for an independent system operator and a power market exchange. Beyond that, utilities were simply told to address the structural changes necessary to “clearly differentiate” generation, transmission, distribution and customer service in their required filings; and to provide “an effective means for preventing anti-competitive behavior.” Determining the specific market power remedies used in Pennsylvania will require awaiting the results of Commission rulings in response to those filings.

#### 2. Horizontal Market Power

The PPUC report, and the subsequent Pennsylvania legislation (HB1509), essentially focused on the need and authority of the PPUC to monitor and conduct investigations into potential market power abuses. This included things like assuring that the Commission could obtain documents and testimony from any electric supplier; could refer potential violations to the Attorney General, the DoJ, the SEC, or FERC; could intervene in any subsequent proceedings; and shall consider market power concerns in any proposed merger or acquisition before the PPUC.

#### H. Rhode Island

The lead role on restructuring in Rhode Island was taken by the legislature, which passed HB8124 in 1996.<sup>184</sup> This legislation specified several different levels of

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<sup>183</sup> Report, p. 13.

<sup>184</sup> 1996 R.I. ALS 316.

action to mitigate market power.

### 1. Vertical Market Power

The primary market power remedy utilized was to require structural separation of generation, transmission and distribution into separate affiliates, and to establish a whole series of "standards of conduct" governing the behavior of employees of an electric distribution company regarding information and communication with affiliates and requiring separate books of account and access for Commission inspection.<sup>185</sup> The legislation also sets up a "Retail Electricity Licensing Commission" to license suppliers and to facilitate the creation of an ISO and a voluntary power exchange.<sup>186</sup>

In addition, the legislation provided a form of back-up protection from market power abuse by the distribution companies by requiring, through 1998, that any earned returns greater than 1.5 percent above currently allowed rate of return be 100 percent credited to customers, through a refund factor.<sup>187</sup>

### 2. Horizontal Market Power

The legislation provided an additional interesting remedy that has the potential to affect both vertical and horizontal market power. It requires every wholesale power supplier receiving "contract termination fees" (essentially their term for stranded cost recovery compensation) to perform a type of "market valuation" through the divestiture of 15 percent of their interest in generating facilities. Furthermore, the requirement is tie-barred to requirements faced by the utility in any other state. If the power supplier is

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<sup>185</sup> Title 39, Sec. 1(27).

<sup>186</sup> Title 39, Sec. 1(27).

<sup>187</sup> Title 39, Sec. 1(27).

required to dispose of more than 15 percent of its interest in generation by any other state, that level of requirement shall apply in Rhode Island as well.<sup>188</sup>

#### I. Vermont

In Vermont there are two public agencies involved in utility matters: The Department of Public Service (DPS) which is more of a policy and advocacy organization, and the Vermont Public Service Board (VPSB) which is the quasi-judicial regulatory agency. The Vermont DPS expressed its concern about market power in a May 1996 technical report:<sup>189</sup>

"The primary impetus for restructuring the electric industry is the belief that competition can lead to lower prices and better service for all Vermont consumers. The keystone in the new environment is an open, fully competitive market for electricity in which producers can sell power at wholesale or retail. It is critically important to establish safeguards to assure that no particular company or group can dominate all or any part of the market, abuse market power through price fixing, charge predatory prices, set up barriers to entry, or in any way stifle competition.

Existing utilities have a competitive advantage over non-utility generators because they are vertically integrated, and because under cost of service regulation, they are usually able to recover their costs. As a result, a utility may be able to act in ways that favor its own generation assets over other options, even though the latter may be more economical. In order to assure that Vermont consumers have an opportunity to enjoy the potential benefits of a restructured and truly competitive market for electricity, the DPS recommends that utilities divest their generation assets and retail operations so that they are no longer affiliated."<sup>190</sup>

The Vermont Public Service Board (VPSB) in its Order on Electricity

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<sup>188</sup> Title 39, Sec. 1(27).

<sup>189</sup> Restructuring the Electric Utility Industry: Competition, the Consumer and the Environment.

<sup>190</sup> Technical Report, p. 5.

Restructuring identified certain actions to mitigate market power.<sup>191</sup> The specific actions called for focused on vertical market power.

### 1. Vertical Market Power

As an initial requirement, the VPSB called for a regional independent system operator and a power exchange.

“For the regional generation market to operate fairly and effectively in a new competitive environment, it is essential that transmission facilities be controlled by a truly independent system operator (‘ISO’), which will maintain overall system reliability, assure equal access to the grid, and take actions to prevent the exercise of market power by dominant providers. The ISO should also have responsibility for transmission pricing and planning. We also propose the establishment of a regional power exchange to provide a short-term spot market for energy services and other services necessary to support system reliability by the ISO.”<sup>192</sup>

As for corporate structure, the VPSB stopped short of full divestiture, and ordered functional separation of generation and distribution into separate corporate subsidiaries, together with strict rules of conduct.

“[We will] require Vermont’s largest investor-owned utilities to divide their generation and distribution functions into separate corporate subsidiaries. This ‘functional separation’ of the companies into wholly-owned subsidiaries, with associated rules determining how they interact with each other, will prevent owners of essential bottleneck facilities (in this case, the wires) from exploiting those facilities to the advantage of their competitive affiliates. We do not propose full corporate divestiture at this time.”<sup>193</sup>

### 2. Horizontal Market Power

The Vermont DPS, in its Technical Report, had the following to say regarding

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<sup>191</sup> Docket No. 5854, Dec. 30, 1996.

<sup>192</sup> Order Overview, p. 10.

<sup>193</sup> Order Overview, p. 8.

horizontal market power:

"In addition, it is important to address 'horizontal' market power issues in the generation sector. Even if utilities were to divest all of their generation assets, there would still be a risk that a newly formed Genco might have a large market share, and could price its output higher than it would if the market was made up of a greater number of smaller Gencos. Therefore, in addition to the need for divestiture, regulators must ensure that Gencos do not exercise market power, such as through mergers that may create 'mega-gencos'."<sup>194</sup>

J. It is apparent from this review that these states which have taken early action on restructuring have had serious concerns about the market power of existing utility companies in their jurisdictions, and have taken a variety of actions intended to mitigate that market power. In the next section, this report takes a closer look at some of the market power related problems and pitfalls that could jeopardize the success of electric industry restructuring in Michigan.

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<sup>194</sup> Technical Report, p. 5.

## VII. IMPLICATIONS FOR ELECTRICITY INDUSTRY RESTRUCTURING

It is expected that the electric industry restructuring will result in greater efficiencies only if the generation market is truly competitive. However, most analysts agree that restructuring brings with it the very realistic potential for abuse of market power (and resulting increased prices) as well as an increase in litigation over antitrust violations. The concerns are exacerbated because in most instances, the proposed structures are new. Without previous experience with the proposed structures, such as PXs and ISOs, it can be difficult to identify all the ways in which market power could be abused or the system gamed to create unfair advantages. The resolution appears to involve three steps:

- First, carefully structure those aspects of the industry over which regulators and legislators have control to avoid the potential for abuse of market power in both the industry structure and the market process. This proactive approach is the most critical; once abuse of market power occurs, it is difficult to mitigate and reverse not only the actions, but also the anticompetitive message that has been sent. Since the Federal and state deregulation issues are interrelated, a proactive approach involves playing an informed, active role at the Federal level, as well as within the state.
- Second, carefully monitor the market to insure unforeseen abuses do not occur. This is one role for the "new" commission. As has been discussed previously, competition does not happen naturally and the trend is to move toward a monopoly or oligopoly. If competition is to produce the desired objectives, there must be oversight to ensure the market operates fairly.
- Third, if abuse does occur, take swift action to correct it. This is the least attractive option; it is the most costly and time consuming, and generally involves extensive litigation. In addition, the market has already been harmed by the time the abuse occurs, and that harm is difficult to rectify after the fact.

At this point in the restructuring process, it is important to limit the ways in which market power could be abused. While the FERC has jurisdiction over wholesale activities, it remains important for states to take an active, visible position on the wholesale issues since those decisions will impact state programs. The following issues raise red flags as being potential problems for state commissions and deserving of additional consideration.

A. Stranded Costs

The issue of stranded cost recovery remains one of the major roadblocks to industry transition and perhaps one of the greatest problems facing state regulators. The FERC has determined that electric utilities should have the opportunity to recover all legitimate, prudent, and verifiable wholesale stranded costs for contracts signed prior to July 11, 1994.<sup>195</sup> Additionally, the FERC has reaffirmed its decision to use a "revenues lost" formula for determining the level of recovery for wholesale transactions, and has determined that costs will be recovered through an adder on the transmission charges.<sup>196</sup> However, the FERC is only in the early stages of reviewing the first stranded cost filings. Therefore, there is little information on how it plans to apply these standards.

The recovery of stranded costs brings with it the opportunity for abuse of market power. At the retail level, problems can result primarily if the amount of

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<sup>195</sup> "Notice of Proposed Rulemaking: Recovery of Stranded Costs by Public Utilities and Transmitting Utilities," Docket No. RM94-7-000, issued July 11, 1994. In this NOPR, FERC put all wholesale sellers and buyers on notice that any provisions for recovery of stranded costs would need to be included in future contracts.

<sup>196</sup> Order 888A, *supra*. p 747.

stranded cost approved for recovery is too high. Abuse could occur in two ways:

- Over-recovery could enable the incumbent utility to improve its financial position in relation to market entrants, preventing the entrants' ability to compete fairly in the market. The recovered funds could be used to reduce price below market value to elastic customers or offer below market prices to potential customers, while captive customers' rates could increase.
- The threat of excessive stranded cost payments could discourage customers from leaving the service of the incumbent utility and prevent potential competitors from participating in the market.<sup>197</sup>

If it is determined by the state commission that a specific level of stranded cost recovery is appropriate, it can be argued that under-recovery of those costs by an incumbent, especially a small incumbent, might jeopardize its position in the market while benefiting the position of large entrants. While the possibility of this scenario may be remote, it should nonetheless be considered when considering if and to what degree stranded costs should be recovered.

The actual recovery mechanism poses another problem for regulators at both the state and Federal level. In the Cajun v FERC, the U.S. Court of Appeals for the District of Columbia raised questions regarding the FERC's approval of Entergy's open access tariff, which included a stranded cost charge tied to transmission services.<sup>198</sup> The Court also criticized the FERC for not holding an evidentiary hearing on this issue. Parties to the case agreed that Entergy's market power in generation resulted primarily from its "bottleneck monopoly" in transmission. This type of situation, the Court said,

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<sup>197</sup> Teichler, Stephen L.; "Generation, Deregulation, and Market Power: Will Antitrust Laws Fill the Void?" Fortnightly, October 15, 1996, p 14.

<sup>198</sup> Cajun Electric Power Cooperative, Inc. v FERC; 28 F 3d 173 (1994).

creates a classic tying arrangement, illegal under the Sherman Act. The FERC had found that Entergy's market power would be mitigated by implementation of Entergy's open access transmission tariff. However, the Court stated:

"It follows that the question of whether Entergy's recovery of stranded investment cost precludes mitigation of its market power must be faced squarely by the Commission at this juncture. The provision of procedures to determine stranded investment cost on a case-by-case basis at a later date is no answer if the provision has a present anticompetitive effect. Assurances that stranded investment cost is legitimate, verifiable, and accurately calculated do not in themselves resolve whether the imposition of such production-related costs on transmission services precludes the mitigation of Entergy's market power.... What is inescapably before the Commission at this juncture is its validation of the concept of stranded investment, because -- not surprisingly really -- its view on this matter may itself dictate market structure. The Commission must address whether the TST's (transmission service tariff) provision of a process for recovery of stranded investment costs is itself a deal killer that, perhaps ironically, precludes genuine open access to Entergy's transmission system. In short, the question that must be asked now is whether the TST allows for 'meaningful access to alternative suppliers.'"<sup>199</sup>

The Court's decision has been interpreted in various ways. Some suggest it is merely the fact that the FERC failed to hold an evidentiary proceeding that raised concerns with the Court. Others believe the Court found more wide-ranging problems with tying the recovery of stranded costs to transmission charges, an interpretation with greater implications for industry restructuring. The FERC expresses confidence, however, that the Court's decision does not preclude it from adding stranded costs to transmission charges.

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<sup>199</sup> *id.* p 176.

The Cajun case, for the purpose of this analysis, is a moot point, but it is far from clear how the recovery of stranded costs on transmission charges, once implemented, will be handled by the Courts. It is anticipated that the FERC's application of its stranded cost recovery mechanism eventually will be challenged by non-utility generators, marketers, and/or customers. If those parties succeed in their challenges, Congressional action would be required to reinstate the transmission charge mechanism for wholesale, and possibly retail, stranded cost recovery.

#### B. Joint Ventures

Interconnections and coordination agreements among public utilities have increased reliability and improved the economic and operational efficiency of utilities for many years. Such arrangements in a non-competitive environment posed few antitrust concerns and courts have allowed joint ventures when they advanced procompetitive ends.

In a competitive environment, properly structured pools and ISOs are viewed as a means to mitigate market power. However, because both require an exchange of information, collaboration on the part of the members, and the sharing of information on strategic planning and coordination, they invite the opportunity for collusion, price fixing, and restraint of trade against non-participating competitors. These are violations of Section 1 of the Sherman Act.

While the DoJ supports the development of pools and regional transmission arrangements, it warns that joint ventures must be carefully structured and scrutinized to ensure that the exchange of information does not prevent non-members from participating in the pool. The FERC has jurisdiction over the structure of both power

pools and ISOs. However, the fact that the FERC has such jurisdiction does not mean state commissions ought not to play a role in the decision process wherever possible. Many state commissions, perhaps California most visibly, are actively involved in the FERC review process. The decisions the FERC makes will impact retail competition. The FERC's approval of these ventures, as well as other restructuring components, does not carry the same immunity that state regulatory approval can bring under the State Action Doctrine.<sup>200</sup>

The two prominent joint ventures in the restructured electric industry are the PXs and ISOs. Most agree that, as a step towards avoiding market power abuses, they should be operated separately. These joint ventures are discussed in the next two sections.

### C. Power Pools

Power pools, a specific type of joint venture, are not new; they have been encouraged in PURPA and there are many throughout the country, each operating with varying degrees of "tightness."<sup>201</sup> In the regulated environment, pools have allowed utilities to improve reliability and jointly balance operations, loads, and purchases. As the industry becomes more competitive and generation is deregulated, pools will allow the development of larger, centralized spot markets for bulk power.<sup>202</sup> There are several

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<sup>200</sup> Macey, Daniel; "Energy Trustbusting;" Megawatts Market; Fall, 1996, p 30.

<sup>201</sup> Atwood, James R.; Symposium: Antitrust, Joint Ventures, and Electric Utility Restructuring: Antitrust, Joint Ventures, and Electric Utility Restructuring: RTGs and Poolcos; 64 Antitrust LJ 323.

<sup>202</sup> *ibid.*

models for poolcos. In most, generators would bid power into the pool and buyers (generally distribution companies) would bid to purchase the power from the pool.

Pools are viewed by many, including the DoJ, as an important component of a competitive wholesale electric generation market; not as a participant in the market, but as a marketplace, similar to the New York Stock Exchange.<sup>203</sup> Anne Bingaman, former Director of the Antitrust Division, has said:

*"We see a Poolco, with proper safeguards in place and under appropriate market conditions, as a potentially efficient allocator of electric energy, in effect de-integrating the industry by economically separating production from transmission and distribution."*<sup>204</sup> (emphasis added)

The primary criticism of the Poolco model involves the concern that although a market is created, it is not necessarily a competitive market. The pool model invites opportunity for leveraging by participating generators.<sup>205</sup> For example, if there are too few generators selling into the pool, primarily due to transmission constraints, those sellers would be able to take advantage of pricing mechanisms to raise the price. This could be a significant problem in states like Michigan have market concentration and transmission constraints. Some generating companies might possess enough market power in a region to allow them to raise the bids above competitive prices. This occurred recently in Great Britain's generation market, which had only two power

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<sup>203</sup> *ibid.*

<sup>204</sup> Cited in Atwood.

<sup>205</sup> Kroll, Richard A., and Heidi Rosen; "Leveraging -- The Key to Exercise of Market Power in a Poolco," Tellus Institute, Boston, A: June 25, 1996, p. 1.

producers.<sup>206</sup> Therefore, it is important that those bidding into the pool do not possess market power for that pool, or that any market power has been satisfactorily mitigated. Additionally, other factors impact the competitiveness of the pool and should be considered during pool development. Market shares of incumbent utilities, entry conditions, and transmission constraints could indicate the need to increase the geographic size of the pool.<sup>207</sup>

Open and sufficient transmission will be a mitigating factor. Some suggest that the use of bilateral contracts would be another method to introduce additional competitive opportunities into the market and thus help mitigate the market power that a large seller could use on the pool.<sup>208</sup> These contracts would allow retail and wholesale customers to make direct financial arrangements with generation suppliers, thereby allowing greater customer options. However, these contracts present a potential problem. Depending on how the contracts are negotiated, large customers might be able to lock in the most attractive generation agreements, in essence, "cream skimming." Smaller customers with less purchasing power could be left with purchases from the pool that might be less attractive, particularly if the pool is dominated by a couple of large suppliers.

While the FERC holds jurisdiction over approval of pools, the issue is important to state commissioners since retail customers will be served, directly or indirectly, from

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<sup>206</sup> Atwood, *supra*.

<sup>207</sup> Brennam, Timothy J., Karen L. Palmer, Raymond J. Kopp, Alan J. Krupnick, Vito Stagliano, and Dallas Burtaw; A Shock to the System. Resources for the Future; Washington, D.C. 1996.

<sup>208</sup> Rosen and Kroll, *supra*. p 2.

pools, and for the next several years, at least some of them will be captive retail customers of the incumbent utility. Therefore, state commissions would benefit from taking an active role in the formation of the pools and ensuring that any potential for abuse can be mitigated.

The FERC is in the process of reviewing the first applications for pools that would function in a competitive market, most notably, the PX proposed by the three largest California electric utilities, discussed previously, as well as the one proposed by most members of the PJM pool.<sup>209</sup> It appears that the FERC is not assuming that an open access transmission tariff and a pool will alone be enough to mitigate market power in generation. As the FERC proceeds with review of the California companies' Phase II filing, it should become more apparent what the FERC will require before approving a PX.

#### D. Independent System Operators

Transmission access is a key to a competitive electric generation market. Most agree that, at least for the foreseeable future, transmission will be a monopoly. Ownership of that monopoly must not allow the owner to exert market power over competing generators. Like pools, ISOs are viewed as a mitigating factor for market power in the ownership of transmission systems. However, as with pools, the structure of the ISO will be a determinant in its ability to mitigate market power.

In Order 888, FERC recognized that many utilities are exploring the ISO concept, especially tight power pools that are considering restructuring proposals. FERC did not

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<sup>209</sup> The FERC held a technical conference on the PJM filing on May 9, 1997. The video tapes are available from the Jurisdictional Issues Section.

require any utility to form an ISO at the time of Order 888, but they wished to encourage properly structured ISOs and therefore offered guiding principles. In Order 888-A, FERC reaffirmed its commitment to ISOs as an effective way to comply with the comparability requirement of open access transmission service. In that same order the FERC also refused to modify its ISO principles. They are:

1. ISO governance should be structured in a fair and non-discriminatory manner.
2. The ISO and its employees should have no financial interest in the economic performance of any market participant, and should adopt and enforce strict conflict of interest standards.
3. The ISO should offer non-discriminatory open access to a transmission system according to a single, unbundled, grid-wide tariff for all eligible users.
4. An ISO should have a well-defined primary responsibility to ensure short term reliability of grid operations and comply with NERC and regional reliability council standards.
5. An ISO should control the operation of interconnected transmission facilities within its region.
6. An ISO should identify and relieve constraints on the system, with efficient trading rules set by its governing body.
7. The ISO should have incentives for efficient management and administration, and should procure such services in the competitive market.

8. An ISO's pricing policies should promote the efficient use of and investment in generation, transmission, and consumption. It may also conduct studies to identify operational problems or appropriate expansions.
9. An ISO should make transmission system information publicly available electronically (per FERC's requirements) on a timely basis.
10. An ISO should develop mechanisms to coordinate with neighboring control areas.
11. An ISO should establish an alternative dispute resolution process to resolve disputes.

As stated previously, the FERC is reviewing the California companies' Phase II filing, which should contain comments on how the ISO plans to identify and mitigate market power concerns. One question which arose in earlier filings is how the constrained interconnections with other states will be handled. As additional information is made available on the filing, as well as FERC's response to the Phase II filings, FERC's expectations will become clearer.

#### E. Transmission Capacity

The issue of transmission capacity weaves its way through most, if not all, deregulation issues. Open access transmission is viewed as a key to the operation of a competitive electric market; so is sufficient available transmission capacity.

Transmission can raise market power concerns in at least three areas:

- Bottlenecks in the transmission system, especially at the interconnections, will limit market access to new buyers and sellers, and are seen as clear evidence of market power for the transmission owner.

- It is unlikely that transmission owners will expand existing transmission systems to eliminate bottlenecks without sufficient incentives.
- Even with the development of an ISO, market power may continue to be a concern if the operation of the ISO is not truly independent from the transmission owners and/or if sufficient constraints exist to prevent sellers and buyers from making transactions.

A clear understanding of transmission system operations is crucial information to assess the geographic market in a market power analysis.

#### F. Mergers and Acquisitions

Section 7 of the Clayton Act states that mergers and acquisitions are prohibited from substantially lessening competition, raising prices, or reducing service. As has been discussed previously, while the FERC plays the major role in reviewing mergers, DoJ also reviews mergers and provides comments to the FERC. DoJ provides these comments on mergers:

- Mergers and acquisitions can increase market power in the generation sector, enabling the firm to raise prices above that of the market and reducing output. There is greater chance of collusion to maximize joint profits.
- Large firms can exercise a greater degree of control over the transmission network, preventing competition, especially if the ISO is improperly structured
- The company could gain monopsony power through greater ownership of the distribution network.<sup>210</sup>

States without jurisdiction to approve or deny mergers will be dependent on the FERC to ensure retail market power issues are considered in the evaluation of a merger. However, there are steps state commissions can take to ensure that mergers and

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<sup>210</sup> Boomsma, David J.; "Horizontal Market Power and Mergers in a Changing Electric Power Industry," Proceedings of the Tenth NARUC Biennial Regulatory Information Conference; Columbus, OH; September 11-13, 1996.

acquisitions are not anti-competitive:

- Any analysis of a merger or acquisition is based on a determination of product and geographic markets which reflect reality. However, determination of each requires a detailed analysis. State commissions can prepare themselves to make these determinations and participate significantly in the FERC's review of the merger.
- In defining a product market, there is little clarity in determination of acceptable product substitutes. For example, there are instances when natural gas is an effective product substitute for electricity and instances when it would not be an effective substitute. Such determinations should be given special attention.
- Defining the geographic market is dependent on a number of factors, most notably transmission availability, especially at interconnections, and transmission cost. Merely having interconnections means little if those interconnections are unable to support sufficient transactions to mitigate market power resulting from the merger. Transmission constraints and their duration and location, as well as their costs, contribute to the determination of geographic market. State commissions should be clearly familiar with the actual functioning of the transmission system to provide input during the review of a proposed merger.

#### G. Special Contracts

Special retail contracts have been recognized as a transitory method for a utility with excess capacity entering the competitive era to retain valuable load and thereby protect existing investment in generation plant. Many state commissions have approved special rate contracts when the utility's customer has competitive options, thus avoiding a situation in which the remaining captive customers absorb what otherwise might be stranded costs. Some of these contracts, however, are designed to lock customers in to long-term commitments, forestalling competition and discouraging new entrants from entering the market.

The pricing in some contracts may be considered predatory or discriminatory and a violation of the Robinson-Patman Act. In such instances, as a prerequisite for these contracts receiving immunity granted by the State Action Doctrine, approval

should be based on a clearly articulated policy of the state and reviewed and approved on a case-by-case basis by the state commission.<sup>211</sup> While these contracts are subject to state review and have been encouraged in general by state agencies, they may not always be approved on a contract-by-contract basis. Accordingly, unless special contracts are approved individually, they may not satisfy the second prong of the test for state action immunity, which requires active supervision by the appropriate regulatory agency.

#### H. Cross-subsidization

Since retail competition is most likely to be phased-in over a period of years, incumbent utilities will continue to serve captive retail customers (for whom generation is technically still a monopoly market) while simultaneously competing for the business of those retail customers already participating in the market. This situation provides an opportunity, even an incentive, for utilities to subsidize competitive activities with revenues from captive customers. Such cross-subsidization has occurred between regulated utilities and their affiliates. It is completely in a utility's self-interest to lower prices for competitive customers and recoup the costs of these discounts from captive customers.

Traditionally it has been difficult to identify costs that have been shifted to the regulated utility from the non-regulated affiliate, if a commission does not have access to affiliate books and records. It can be argued that all generation market participants

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<sup>211</sup> Serota, James I.; Symposium: Antitrust, Joint Ventures, and Electric Utility Restructuring: Increasing Competition in the Electric Utility Industry and Decreasing Consumer Welfare: An Antitrust Paradox; 64 Antitrust LJ 303 (1996).

are able to subsidize generation costs with proceeds from other affiliated business activities; however, in most cases, the customers subsidizing the activity have the option to select a new provider with lower prices. In a phase-in situation, the captive customers that would be subsidizing their utility's competitive activities would not have that option. Use of alternative ratemaking options, such as performance-based ratemaking with no cost-of-service baseline, unless carefully structured, could exacerbate this problem. Some utilities have argued that phasing in retail competition will more effectively mitigate potential stranded costs. However, the opportunity to cross subsidize should be a consideration during the industry transition.

#### I. Territorial Allocations

The allocation of territories is a violation of Section 1 of the Sherman Act, except when those allocations are immune from claims of antitrust violations based application of the State Action Doctrine, that is, when the allocation method is the result of an affirmative state policy overseen by the state regulatory commission. As the generation market becomes competitive and retail customers are granted choice, questions arise about the use of traditional franchises.

In Michigan, the State Constitution grants local units of government the authority to control the use of their streets and to grant utilities the franchise to conduct business within the local government's boundaries.<sup>212</sup> If all generators are

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<sup>212</sup> "No person, partnership, association or corporation, public or private, operating a public utility shall have the right to the use of the highways, streets, alleys or other public places of any county, township, city or village for wires, poles, pipes, tracks, conduits or other utility facilities, without the consent of the duly constituted authority of the county, township, city or village...without first obtaining a franchise from the township, city or village." Article 7, Section 19

considered public utilities and thus are required to obtain a Certificate of Convenience and Necessity from the Commission, it appears they will also need franchise approval from the local unit of government.<sup>213</sup> Since franchise approval is a clearly stated policy of the Legislature, state action immunity would appear to protect the franchise holders from claims of Sherman Act violations. However, the granting of franchises also raises the potential for anti-competitive behavior, immune or not. This issue warrants further study.

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<sup>213</sup> "No public utility...shall render any service for the purpose of transacting or carrying on a local business either directly, or indirectly, by serving any other utility..so engaged in such local business...until such public utility shall first obtain from the commission a certificate that public convenience and necessity requires or will require such construction, operation, service, or extension." MCL 460.502 *et seq.*

### VIII. MITIGATING MARKET POWER

Confronting the litany of concerns about market power leads directly to the theories of workable competition and second best markets.<sup>214</sup> The theory of workable competition recognizes a pragmatic goal for policy makers: It may be impossible for policy makers to ensure perfect competition, but some form of competition sufficient to protect and enhance the public interest ought to be achievable.

It should be apparent from the preceding text of this paper that competitive markets for electricity are not going to result from simply deregulating the existing regulated monopolies. The best hope for establishing and maintaining competitive markets is to establish an appropriate mix of regulation and competition, which -- it is hoped -- will lead to workable competition.

#### A. Basic Options For Mitigating Market Power

After a review of numerous scholarly texts and trade journals, as well as recently enacted legislation and regulatory orders from other states, a number of options for mitigating market power in the electric industry were identified. The following is a list of these basic market power mitigation actions. It should be noted that because the concepts of vertical market power and horizontal market power are closely intertwined, and because many mitigation options address both of those aspects of market power, no attempt was made to differentiate the main market power focus (vertical or horizontal) of the listed options. This should not be a hindrance since, in practical terms, many of the most desirable mitigation options help alleviate both

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<sup>214</sup> Chessler, 1996; Kuttner, 1997.

types of market power. After presenting the overall list, this report will present its conclusions and recommendations regarding market power in the Michigan electricity industry.

#### Market Power Mitigation Options

- **Clear separation of generation from transmission and distribution.** This can theoretically be accomplished through different mechanisms, including:
  - functional separation (separate books and records within a utility, with rules of conduct);
  - structural separation (separate subsidiaries or a holding company, with rules of conduct); and/or
  - divestiture (sale or spin-off of generation).
- **Clear separation of other regulated and non-regulated activities.** (e.g., sales marketing, competitive services, etc., separated from the distribution function).
- **Establishing an effective regional transmission grid with a truly independent system operator,** to ensure access to all on comparable, non-discriminatory terms.
- **Creating a totally independent, neutral, power exchange.**
- **Creating a mechanism to ensure information access** (i.e., to ensure that all suppliers have easy, non-discriminatory access to necessary customer and transmission/distribution system information).
- **Creating authority and access to review books and records of utilities and relevant affiliates** where necessary, to monitor and prevent cross-subsidization.
- **Providing consumer education and strong consumer protection mechanisms** to educate customers in how to effectively function in a competitive electricity marketplace and to have in place a mechanism to investigate and remedy improper trade practices.
- **Expanding the transmission system, where necessary, to alleviate bottlenecks and increase options by ensuring sufficient access for**

**generation suppliers.** This could include both increasing capacity of the existing network as well as expanding the geographic range of the grid.

- **Requiring or facilitating divestiture of some or all existing utility generation capacity,** to create more local competitive suppliers and to break the vertical anti-competitive link.
- **Establishing a strong merger policy which will prevent undesirable increases in market power.**
- **Developing policies and oversight structures, including the authority to levy penalties, to ensure access and prevent collusion in the power exchange.**
- **Developing strict anti-predatory pricing measures, including the authority to enforce them with penalties.**

## IX. CONCLUSION AND RECOMMENDATIONS

In order for competition to effectively achieve the goal of a more efficient electricity market, opportunity for the abuse of market power must be mitigated to the greatest extent possible. By all accounts, the most productive means of doing this is to structure the transition in such a way so as to avoid or minimize the potential for abuse from the outset, rather than try to correct market power problems after abuses have already occurred. This issue is of considerable importance because Michigan's regulated utilities currently possess significant market power. This stems from such factors as their:

- ! large market share in generation;
- ! longstanding market relationships with suppliers and customers;
- ! longstanding presence in the state and with state government;
- ! possession of extensive important customer information, including demographics and demand patterns;
- ! extensive vertical integration, which provides simultaneous ownership and control of generation, transmission, and distribution;
- ! limited interconnection availability; and
- ! potential to use revenues from captive customers to subsidize competitive market ventures.

Given this level of market power, mitigating steps will need to be taken if true and robust market competition is to be established. As has been said, complex as the issues are, it is more effective to deal with market power during the transition to a competitive retail market than to try to rectify the problems after the fact, generally through protracted, costly litigation.

In considering market power mitigation options, it is important to acknowledge that this review is only an interim step in what must be an ongoing investigation and discussion of market power issues. Therefore, this paper can only offer initial observations and suggestions, rather than firm conclusions on specific mitigation strategies. That stated, however, the information gathered in this review (including the observation of approaches taken by other leading states and the positions taken thus far by FERC) suggests that the following actions would be important elements of an overall market power mitigation strategy in Michigan:

A. Recommended Market Power Mitigation Actions

(1) **Achieve a clear separation of regulated business operations from generation and other "competitive" enterprises.** This is absolutely essential if a competitive market is to succeed. The most effective solution would be to arrange for the actual divestiture of at least a significant portion of existing utility generation. If this is not feasible, then, at a minimum, there needs to be a carefully designed structural separation with clear rules and strong regulatory oversight, in order to prevent cross subsidization or other market power abuses.

(2) **Create a truly independent regional transmission system operator (ISO).** Most national observers appear to believe that this is an absolutely essential element of any acceptable restructuring plan, in order to ensure full access to the grid at fair and non-discriminatory terms and prices.

(3) **Establish an independent, neutral, power exchange.** This is also regarded as a crucial step in creating a properly functioning competitive power market.

(4) **Conduct an objective study, on an expedited time line, of the current**

**transmission system capabilities, including an assessment of the need for upgrades or expansion.** This should include the development of an ongoing structural mechanism to ensure that the required transmission system improvements will be completed when needed.

**(5) Create the necessary structural mechanisms, and seek legal authority where needed, for the important new areas of regulatory activity and oversight that will be essential to ensure a fair and properly functioning competitive market.** This would include the capability to monitor and enforce rules of conduct in areas such as open access to the grid, cross-subsidization, predatory pricing, and collusion, and to take necessary action on various public and consumer protection issues.

#### B. Need For Ongoing Study

There is a vast amount of information available on market power that is relevant to the restructuring of the electric industry, and each day (as state commissions and legislatures and the FERC issue decisions) more insights become available. A wealth of information from others with experience in the industry is appearing in trade and law journals and books, as well as being made available at conferences. Although this paper touches on most issues being raised, it provides only an overview of the presently available information. The authors strongly recommend that there be an ongoing, organized, staff investigation and study of the issues raised in this paper so that the current foundation of information can be further developed and expanded.

In addition to the importance of an overall broadly focused monitoring of market power issues, however, there would seem to be a need for some more narrowly focused staff implementation teams. Most, if not all, of the five market power

mitigation action areas recommended above will require much further concentrated staff effort to develop effective implementation strategies and specific action steps. To cite one example, even though approval and oversight of ISOs and PXs are within the FERC's jurisdiction, the decisions made by the FERC will play a crucial role in how retail competition will develop in Michigan. The Michigan Commission and staff need to develop an understanding of how the ISO and PX operate, the options for structuring the operations and transactions, how the FERC is reviewing those plans already filed, how the potential for market power can be resolved, and what intervention strategy staff wishes to pursue before FERC.

To cite another example, a Staff team could be assembled to explore the new regulatory oversight and enforcement roles that are going to be necessary to make competition work in an acceptable manner (e.g., item 5 above) and to identify potential structural mechanisms and legislative action that may be necessary to achieve those objectives. Similarly, Staff should have a key role in conducting the study of transmission system capabilities recommended in item 4 above, and in planning for the effective and enforceable separation of regulated utility operations from generation and other competitive business activities.

Clearly, there is much information to be obtained and much work to be done if the electric industry in Michigan is truly going to be transformed into an effective competitive market.

## REFERENCES

Adelberg, Arthur W., and John Will Ongman. "The Antitrust Wild Card and Electricity Restructuring," The Electricity Journal. March, 1997, Vol. 10, No. 2, p. 28.

Areeda, Phillip, and Donald F. Turner. Antitrust Law, Volume 1. Boston: Little Brown and Company, 1978.

Areeda, Phillip, and Herbert Hovenkamp. Antitrust Law: 1996 Supplement. Boston: Little Brown and Company, 1996.

Atwood, James R. "Symposium: Antitrust, Joint Ventures, and Electric Utility Restructuring: RTG's and Poolcos," Antitrust Law Journal. 64 Antitrust L.J. 323 (1996).

Bauer, Johannes. "Understanding the Working of Markets." Presentation prepared for the 38th NARUC Annual Regulatory Studies Program, East Lansing, Michigan, July 31, 1996.

Blank, Larry. "Key Antitrust Pricing Issues For Regulated Industries With Emerging Competition," NRRI Quarterly Bulletin. Summer 1996, Vol. 17, No. 2, p. 279.

Boomsma, David J. "Horizontal Market Power and Mergers in a Changing Electric Power Industry," Proceedings of the Tenth NARUC Biennial Regulatory Information Conference. Columbus, Ohio: September 11-13, 1996.

Brennan, Timothy J.; Karen L. Palmer; Raymond J. Kopp, Alan J. Krupnick; Vito Stagliano; and Dallas Burtaw. A Shock to the System. Washington, D.C.: Resources for the Future, 1996.

Carstensen, Peter. "Outline of Antitrust Law and the Deregulated Utility --

Overview", Presented at "Antitrust in Energy Markets." University of Wisconsin Law School and Wisconsin Public Utility Institute, Madison, Wisconsin, August 28, 1996.

Carstensen, Peter. "Applications of Antitrust Law to Conduct," Presented at "Antitrust in Energy Markets." University of Wisconsin Law School and Wisconsin Public Utility Institute, Madison, Wisconsin, August 28, 1996.

Chessler, David. Determining When Competition is "Workable": A Handbook for State Commissions Making Assessments Required by the Telecommunications Act of 1996. Columbus OH: National Regulatory Research Institute, NRRI 96-19, July 1996.

Copeland, David S. "Symposium: Antitrust, Joint Ventures, and Electricity Utility Restructuring: Requiring Transmission Access by Electric Utilities: The Shifting Roles of Regulation and Antitrust;" Antitrust Law Journal. 64 Antitrust L.J. 291 (1996).

Dahl, Arthur L. The Eco Principle: Ecology & Economics in Symbiosis. Atlantic Highlands NJ: Zed, 1996.

Daly, Herman E. Beyond Growth: The Economics of Sustainable Development. Boston MA: Beacon, 1996.

Daly, Herman E. Steady-State Economics, Second Edition. Washington DC: Island Press, 1991.

Ehrlich, Paul R., and Anne H. Ehrlich, Betrayal of Science and Reason: How Anti-Environmental Rhetoric Threatens Our Future. Washington DC: Island Press, 1996.

Electric Utility Week. "Justice Attorney: Antitrust Probes Could Result in 'Dramatic' Action," June 17, 1996.

Electrical World. "Washington Report -- DOJ Hints at Antitrust Nuances," Volume 210, No. 9, 1996, p. 5.

Energy Information Administration, U.S. Dept. of Energy, "The Changing Structure of the Electric Power Industry: An Update." December 1996.

Energy Report. "Separate Transmission Ownership From Control, DoJ Urges," Pasha Publications, Vol. 23, No. 34, September 4, 1995.

Fairman, James F. "The Franchise Bottleneck," The Electricity Journal. Vol. 8, No. 4, May, 1995, p. 28.

Fang, Jeffrey M., and Paul S. Galen. Issues and Methods in Incorporating Environmental Externalities into the Integrated Resource Planning Process. Golden CO: National Renewable Energy Laboratory, NREL/TP-461-6684, November 1994.

FERC. Docket No. RM93-19; Inquiry Concerning the Commission's Pricing Policy for Transmission Services Provided by Public Utilities Under the Federal Power Act; Issued October 26, 1994; 69 FERC ¶ 61,086 (1994).

FERC. Docket No. RM94-20-000; Inquiry Concerning Alternative Power Pooling Institutions Under the Federal Power Act; Notice of Inquiry; Issued October 26, 1994; 69 FERC ¶ 61,090 (1994).

FERC. Docket Nos. RM95-8-001 and RM94-7-002; **Order No. 888**; Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities; Issued April 24, 1996; 61 FR 21,540 (May 10, 1996), FERC Stats. & Regs. ¶ 31,036, clarified, 76 FERC ¶ 61,009 and 76 FERC ¶ 61,347 (1996).

FERC. Docket No. RM95-9-001; **Order No 889**; Open Access Same-Time Information System and Standards of Conduct; Issued April 24, 1996; FERC Stats. & Regs. ¶ 31,037, 61 FR 21,737 (1996). Since issuance of Order 889, FERC has issued

two additional orders. See Open Access Same-Time Information System and Standards of Conduct, Order Issuing Revised OASIS Standards and Protocols Document, 76 FERC ¶ 61,243, 61 FR 50,116 (1996). See Open Access Same-Time Information System and Standards of Conduct, Order Granting Request for Extension of Time, 76 FERC ¶ 61,305 (1996).

FERC. Docket No. RM96-11; Capacity Reservation Open Access Transmission Tariffs; Notice of Proposed Rulemaking; Issued April 24, 1996; 75 FERC ¶ 61,079 (1996).

FERC. Docket No. RM96-6-000; Policy Statement Establishing Factors the Commission Will Consider in Evaluating Whether a Proposed Merger is Consistent With the Public Interest; Issued December 18, 1996; 77 FERC ¶ 61,263 (1996).

FERC. Docket Nos. RM95-8-001 and RM94-7-002; **Order No. 888-A**; Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities; Issued March 4, 1997; 78 FERC ¶ 61,220 (1997).

FERC. Docket No. RM95-9-001; **Order No 889-A**; Open Access Same-Time Information System and Standards of Conduct; Issued March 4, 1997; 78 FERC ¶ 61,221 (1997).

Felder, Frank A.; and Steve R. Peterson, "Market Power Analysis in a Dynamic Electric Power Industry," Electricity Journal, Vol. 10, No. 3, pp. 12-19.

Frankena, Mark W., and Bruce M. Owens. Electric Utility Mergers. Westport, Connecticut: Praeger Press, 1994.

Garland, Merrick B. "Antitrust and State Action: Economic Efficiency and the

Political Process," Yale Law Journal. 96 Yale L.J. 486 (1987).

Graniere, Robert J., and Robert E. Burns. Mergers and Acquisitions: Guidelines for Consideration by State Public Utility Commissions. Columbus, Ohio: NRRI 96-35, 1996.

Greenberger, Leonard. "The PUHCA: Busting the Trusts", Public Utilities Fortnightly, March 15, 1991, pp. 20-23.

Hempling, Scott. "Electric Utility Holding Companies: The New Regulatory Challenges", Land Economics, August 1995, pp. 343-353.

Hempling, Scott. "Electric Utility Mergers: Distinguishing the Desirable from the Undesirable." Presented at the "Antitrust, Merger Guidelines, and Regulation of Utility Consolidation" Conference presented by the Institute of Public Utilities, Michigan State University held in Washington, D.C., November 6-7, 1996.

Hochberg, Jerome A. "The Future Direction of Antitrust Enforcement and Its Role in a Deregulating Energy Industry," Presented at "Antitrust in Energy Markets." University of Wisconsin Law School and Wisconsin Public Utility Institute, Madison, Wisconsin. August 28, 1996.

Hochberg, Jerome A. "Interface Between Traditional Regulation and Antitrust Enforcement as the Regulator in the Energy Industry." Presented at "Antitrust in Energy Markets." University of Wisconsin Law School and Wisconsin Public Utility Institute, Madison, Wisconsin. August 28, 1996.

Joskow, Paul L. and Schmalensee, Richard. Markets for Power: An Analysis of Electric Utility Deregulation. Cambridge MA: MIT, 1983.

Kelly, Suedeen, and Robert E. Burns. "The Antitrust State Action Doctrine and

Its Potential Role in Assuring Consumer Protection in a More Competitive Utility Environment," NRRI Quarterly Bulletin; Vol. 17, No 3, Fall 1996, p. 395..

Kuttner, Robert. Everything for Sale: The Virtues and Limits of Markets. New York: Knopf, 1977.

Landes, William M. and Richard A. Posner (1981, March). "Market Power in Antitrust Cases," Harvard Law Review, Vol. 94, No. 5, pp. 937-996.

Legato, Carmen D. "Electric Mergers: Transmission Pricing, Market Size, and Effects on Competition," Public Utilities Fortnightly. June 1, 1996, Vol. 134, No. 11, p. 23.

Macey, Daniel. "Energy Trustbusting," Megawatts Market, Fall, 1996, p. 28.

Meeks, James E. "Antitrust Concerns in the Modern Utility Environment," Columbus, Ohio: NRRI 96-12, 1996.

Meeks, James E. "Economic and Legal Foundations of Antitrust and Merger Policy and Their Application to Utility Industries," Presented at the "Antitrust, Merger Guidelines, and Regulation of Utility Consolidation" Conference presented by the Institute of Public Utilities, Michigan State University held in Washington, D.C., November 6-7, 1996.

MPSC Staff. Staff Report on Electric Industry Restructuring. Lansing MI: Michigan Public Service Commission, December 19, 1996.

NARUC. Resolution on Consumer Labeling for Electricity. (1996).

Ottinger, Richard. "Getting at the True Cost of Electric Power," Electricity Journal, Vol. 3, No. 6, July 1990.

Ottinger, R.L., Wooley, D.R., Robinson, A., Hodas, D.R., and Babb, S.E.

Environmental Costs of Electricity. New York: Oceana, 1990.

Perl, Lewis J. "Symposium: Antitrust, Joint Ventures, and Electric Utility Restructuring: Measuring Market Power in Electric Generation," Antitrust Law Journal, 64 Antitrust L.J. 311 (1996).

Pierce, Richard J. Jr. "Antitrust Policy in the New Electricity Industry," Energy Law Journal. Vol. 17, No. 1, 1996.

Porter, Michael E. Competitive Advantage: Creating and Sustaining Superior Performance. New York: Macmillan, 1985.

Regulatory Assistance Program, "Market Power," Presentation prepared for the 38th NARUC Annual Regulatory Studies Program, East Lansing, Michigan, July, 1996.

Rokach, Joshua Z. "Antitrust in the Electric Utility Industry: Regional Transmission Groups," Journal of Law and Commerce. 14 J.L. & Com. 39 (1994).

Rosen, Richard A. and Heidi L. Kroll. Leveraging - The Key to the Exercise of Market Power in a Poolco" Boston: Tellus Institute, 1996.

Saunders, Barbara. "US Gas/Electric Megamergers May Slow as New Policies Tested," Oil and Gas Journal. February 3, 1997, p. 19.

Selwyn, Lee L. "Market Failure in 'Open' Telecommunications Networks: Defining the New 'Natural Monopoly'," Utilities Policy, Vol. 4, No. 1, January 1994, pp. 21-30.

Serota, James I. "Symposium: Antitrust, Joint Ventures, and Electric Utility Restructuring: Increasing Competition in the Electric Utility Industry and Decreasing Consumer Welfare: An Antitrust Paradox," Antitrust Law Journal. 64 Antitrust L.J. 303 (1996).

Shepherd, William G. "Anti-Competitive Impacts of Secret Strategic Pricing in the Electricity Industry," Public Utilities Fortnightly, February 15, 1997, Vol. 135, No. 3, p. 24.

Stewart, David O. "Opening the Gates: Recent Rulings May Spawn Litigation," ABA Journal. 78 Oct. ABA J. 52 (1992).

Szymanski, Paul A. "Competition, Antitrust, and the Specter of the Marketplace Police: A Brief Primer for Regulators," Massachusetts Department of Public Utilities, 1994.

Teichler, Stephen. "Generation, Deregulation, and Market Power: Will Antitrust Laws Fill the Void?" Public Utilities Fortnightly. October 15, 1996, Vol. 134, No. 19, p. 34.

Tonn, Bruce, Eric Hirst, and Douglas Bauer. Public-Policy Responsibilities in a Restructured Electricity Industry. Oak Ridge TN: Oak Ridge National Laboratory, ORNL/CON-420, June 1995.

Tonn, Bruce, and Martin Schweitzer. Public-Policy Responsibilities in a Restructured Electric Industry: An Analysis of Values, Objectives, and Approaches. Oak Ridge TN: Oak Ridge National Laboratory, ORNL/CON-428, March 1996.

Trebing, Harry M., and Michelle F Wilsey. "The Limits of Deregulation: Part B," Utilities Policy, v4, n1, January 1994, pp. 3-4.

Trebing, Harry M. Emerging Market Structures in Utility Industries: Adapting Regulation to Tight Oligopoly. Lecture Outline Presented at the NARUC Advanced Studies Program]. East Lansing, MI: Institute of Public Utilities, Michigan State University, January 1996.

Trotter, Donald T. "Antitrust Issues and Applications to the Electric and Telecommunications Industries," Presented at the 38th Annual NARUC Regulatory Studies Program, Michigan State University, East Lansing, Michigan. August 7, 1996.

Turetsky, David. "Mergers: Bigness Complex or International Competitiveness?" Presented at the "Antitrust, Merger Guidelines, and Regulation of Utility Consolidation" Conference presented by the Institute of Public Utilities, Michigan State University held in Washington, D.C., November 6-7, 1996.

Vine, Edward. "Confidential Data in a Competitive Environment: Setting a Regulatory Agenda," Electricity Journal, Vol. 10, No. 3, pp. 62-69.

Werden, Gregory J. "Identifying Market Power in Electric Power Generation," Presented at "Competitive Positioning Strategies for Achieving and Surviving Competitive Generation." Washington, D.C., November 29, 1995.

Wise, Michael O. "Symposium: Antitrust, Joint Ventures, and Electric Utility Restructuring: Overview: Deregulation and Antitrust in the Electric Power Industry," Antitrust Law Journal. 64 Antitrust L.J. 267 (1996).