



UNITED STATES OF AMERICA
FEDERAL TRADE COMMISSION
WASHINGTON, D.C. 20580

Before the Michigan Public Service Commission
Case No. U-11290
Electric Restructuring

**Comment of the Staff of the
Bureau of Economics
of the Federal Trade Commission(1) (2)**

August 7, 1998

I. Introduction and Summary

The staff of the Bureau of Economics of the Federal Trade Commission (FTC) appreciates this opportunity to respond to the invitation to comment of the Michigan Public Service Commission (MPSC) concerning electric industry regulatory reform and the June 5, 1998 "Staff Market Power Discussion Paper" (MPSC Staff Paper) in particular. Michigan is joining a growing list of states considering regulatory reforms to bring more of the benefits of competition (lower prices, improved service, and innovation) in the electric industry to its citizens and businesses.

The FTC is an independent administrative agency responsible for maintaining competition and safeguarding the interests of consumers. The staff of the FTC often analyzes regulatory or legislative proposals that may affect competition or the efficiency of the economy. In the course of this work, as well as in antitrust research, investigation, and litigation, the staff applies established principles and recent developments in economic theory and empirical analysis to competition issues.

The staff of the FTC has a longstanding interest in regulation and competition in energy markets, including proposals to reform regulation of the electric power and natural gas industries. The staff has submitted numerous comments concerning these issues at both the federal and state levels.(3) Moreover, the FTC regularly reviews proposed mergers involving electric and gas utility companies.

In the transition to retail competition, the MPSC may wish to consider several competition policy themes. The first involves the issue of horizontal market power in generation. The MPSC Staff Paper presents a broad overview of factors likely to affect market power as Michigan moves toward retail competition in the electric industry. The factors cited in the MPSC Staff Paper are all potentially significant.(4) Based on these factors, the MPSC Staff Paper concludes that Michigan may face significant market power problems as it introduces retail competition. Further, the MPSC staff has identified and elaborated on some key elements in evaluating and remedying such market power. We comment positively on each of these remedy elements in Section II of this FTC Staff Comment.

The MPSC also may wish to supplement two important aspects of the MPSC Staff Paper by developing a more detailed market power assessment with the aid of computer simulation models, and by considering structural remedies (including divestiture of generation assets) as part of its discussion about introducing retail competition in Michigan if existing generation market power is substantial. The MPSC Staff Paper provides a reasonable basis for proceeding with a detailed analysis of generation market power facing Michigan customers and sets the stage for consideration of structural remedies. In particular, the MPSC Staff Paper already (1) identifies computer simulation modeling as a new tool to assist the MPSC in assessing generation market power, and (2) identifies restructuring through divestiture of generation assets to multiple owners as the most effective remedy for generation market power.

We agree. We note that FERC and several states are considering use of computer simulation models. We also note that other states, such as California, Maine, and New York, have adopted structural measures (including divestiture) to assure that their citizens and businesses receive the full benefits of increased competition. These benefits include lower prices, improved quality, and access to new technology and services.

In addition, the MPSC may wish to guard against one unintentional consequence of stranded cost recovery which could create artificial incentives to deter entry and potential economic distortions in consumers' future energy purchasing decisions. These issues are discussed in Section III of this comment.

II. Remedial Steps Identified in the MPSC Staff Paper

The MPSC Staff Paper identifies seven remedial steps that the staff believes will facilitate effective retail competition in Michigan's electric industry. Each of the identified steps has merit, although additional steps also may prove to be important. We comment on each of the seven suggested remedies below.

Remedy Proposal 1: Establish a clear separation of regulated business operations from generation and other competitive enterprises, and assure [MPSC] access to utility and relevant affiliate books and records.

Reforms in the electric industry are in large part motivated by changes in generation and transmission technology that make competition in generation more feasible. Functional separation⁽⁵⁾ of the regulated from the competitive segments of traditionally vertically integrated utilities may be a plausible first step in introducing competition. As we described in our attached Open Access Comment to FERC, however, functional separation may turn out not to be sufficient because it leaves in place the incentives to discriminate and cross-subsidize in an industry in which detection and documentation of violations may be difficult.

Remedy Proposal 2: Conduct an independent objective study, on an expedited time line, of the current transmission transfer capabilities, to include assessment of bottlenecks and expansion upgrade opportunities.

A detailed market power study that incorporates computer simulation analysis of transmission conditions and prospective new transmission facilities is likely to be important in assessing the extent of generation market power. The MPSC also may wish to include consideration of new generation facilities in the same assessment. Because new generation and new transmission capacity may be reasonable substitutes for each other, the most cost-effective solution to generation market power may not involve new transmission capacity exclusively. In particular, new natural gas generation technology increasingly allows small-scale generation to be much more efficient than was true in the recent past.

As the MPSC Staff Paper indicates, computer simulation models of generation and transmission, which may facilitate analysis of market power issues, recently have become more widely recognized and tractable.⁽⁶⁾ State and federal agencies, as well as utilities, are making use of these models in long-range planning, policy development, and operations. Our experience in evaluating the PacifiCorp/Peabody merger illustrates the potential usefulness of computer simulation models for the analysis of market power and potential structural remedies.⁽⁷⁾ For example, by simulating various price increases by individual generators or groups of generators and their effect on pricing in the relevant market(s), computer models assist in identifying relevant geographic markets in a merger analysis or ascertain whether an entity is engaging in anticompetitive behavior.

The MPSC may wish to consider using such computer simulation models to help it assess in more detail existing generation market power and potential structural remedies for such market power. In particular, the MPSC may wish to assess generation market power under a variety of load conditions within the state and a variety of supply conditions, including transmission congestion in nearby states.

The MPSC also may wish to consider the impact of technical changes on market power. With rapid technical change, there is an important potential distinction between current market power problems that are transitory and those that are likely to persist despite new technology and new institutions.

A good example is the effect of changing technology on entry conditions.⁽⁸⁾ Technological and regulatory changes over the past decade have tended to make entry into electricity generation markets less difficult. Entry into generation markets can take two principal forms. The first is new or expanded generating capacity within the existing product and geographic market.⁽¹⁰⁾ The second is enhanced access to existing generating capacity by virtue of new or expanded transmission capacity. Increased transmission capacity, which may permit additional suppliers to compete, frequently enlarges the relevant geographic market and consequently tends to reduce concentration in the relevant market(s), even if no additional generation capacity is installed.

A second example of the likely effects of technological change on competition is time-of-day metering for consumers, as well as for additional businesses. Consumers and businesses may well shift their use of electricity to take advantage of lower rates during off-peak periods and to minimize their use of electric power during peak periods.⁽¹¹⁾ Hence, as retail prices come to more closely reflect transmission congestion conditions, demand peaks and troughs are likely to be moderated. Reductions in peak power consumption could reduce transmission congestion and associated localized market power in generation.

To avoid imposing remedies that may soon be outmoded by new technology (and to avoid failing to anticipate impending market power problems), the MPSC may wish to study and consider both present market power and alternative future market power scenarios based upon varying assumptions about the state of technology, competition, and regulation. Further, it may wish to facilitate the emergence of competitive supplies of electricity by reviewing existing regulations and procedures governing new or increased transmission capacity and generation to ensure that they are not unnecessarily restrictive, costly, or time-consuming.

Remedy Proposal 3: Create a large and truly independent ISO with full participation by Michigan utilities.

We concur that large (*i.e.*, regional), properly constituted ISOs may be effective in addressing some market power issues and in improving reliability. If Michigan becomes involved in forming a regional ISO, it may wish to consider four danger signs warning of risks to competition in the ISO formation process: (1) the ISO is too small; (2) there is no plan for generation restructuring; (3) the ISO is not sufficiently independent; and (4) the ISO plan does not effectively deal with transmission congestion.⁽¹²⁾

ISO Warning Sign Number One: The ISO is too small. One disadvantage of an ISO with limited geographic scope is that it may not encompass enough generating firms to mitigate generator market dominance problems. ⁽¹³⁾ With very few, if any, exceptions, a single state is too small for an ISO. An ISO that includes only one utility's service territory warrants even closer scrutiny. In contrast, several participants at FERC's April 1998 ISO Policy Conference testified that reliability and competition concerns might lead to consolidation into as few as three ISOs to cover all forty-eight contiguous states.

ISO Warning Sign Number Two: There is no plan for generation restructuring even when there is a potential generation market dominance problem. As a general proposition, a market power monitoring office within the ISO may not be a good substitute for up-front divestiture of generation capacity if market power is present. Several states, including California, have confronted the generation market dominance issue directly and required divestitures of key generation capacity in conjunction with forming an ISO. Because antitrust laws alone may not be a sufficient enforcement tool for addressing existing market power created under past regulation, the MPSC, other state public utility commissions, and FERC may be in the best position to address this aspect of restructuring as part of the ISO formation process.⁽¹⁴⁾

ISO Warning Sign Number Three: The "I" part of the ISO is missing or weak. Independence is a keystone of successfully launching competition through an ISO. For competition to develop, current and prospective industry

participants need to have trust in the objectivity of the ISO. For example, if incumbent vertically integrated utilities can veto expansions of the transmission grid, or limit who may use the grid, the ISO's independence is likely to be at risk.⁽¹⁵⁾

ISO Warning Sign Number Four: The ISO plan does not effectively deal with transmission congestion.⁽¹⁶⁾ Failure to deal effectively with the transmission congestion problem can threaten system stability, present opportunities for generators to create or protect generation market power, and reduce the overall efficiency of the transmission grid. Other states that have considered this problem have included transmission congestion pricing systems in their restructuring programs.⁽¹⁷⁾

In addition to competition warning signs, the MPSC may wish to consider the potential benefits of a large ISO from a reliability perspective. Although the issues of competition and reliability are commonly discussed separately, the two overlap in consideration of the appropriate size of an ISO. As discussed above, large ISOs can alleviate generation market dominance concerns by broadening the relevant geographic market. Large ISOs can have a similarly salutary effect on reliability difficulties, by increasing the number and diversity of generation and transmission reserves. In addition, a large ISO will have incentives to strengthen transmission links throughout its operating area in order to avoid transmission bottlenecks. This, coincidentally, will enhance the ISO's ability to bring reserve capacity to bear from different areas to meet reliability problems in a particular area.

Remedy Proposal 4: Require that all direct access contracts be filed with the MPSC and publicly disclosed until such time as a vibrant spot market emerges or is created.⁽¹⁸⁾

Although a transitional provision of this type is understandable in the context of existing conditions in Michigan, where discriminatory behavior may be suspect, in the longer term the MPSC may wish to consider the potentially anticompetitive uses that have been made of bid information in some industries. For example, it may be easier for a collusive group to monitor compliance with a collusive price agreement if bid information is publicly disclosed rather than kept confidential.

Remedy Proposal 5: Create the necessary structural and institutional mechanisms, including the required legal authority, where needed, to establish effective regulatory oversight that will be essential to the creation of a properly functioning competitive market for electricity in Michigan.

The MPSC may wish to consider structural remedies to address existing market power. Moreover, even if the MPSC determines not to pursue structural remedies in the near future, the MPSC still may wish to assure that it has the authority to take such steps, should they prove advisable later.

Market power in generation is one obstacle to obtaining the potential price, quality, and innovation benefits of retail competition. It may be difficult to determine how to address an existing market power problem in the shift to retail competition. Opting to impose new rules and regulations to curtail market power is one potential solution. For reasons articulated in our attached February 1998 comment to FERC on market power monitoring and mitigation proposals from the New England Power Pool (NEPOOL),⁽¹⁹⁾ Michigan may wish to avoid relying exclusively on such behavioral rules. We summarize the drawbacks to relying exclusively on a behavioral approach in four points. First, it is likely to be difficult to detect and document the exercise of market power in many instances (NEPOOL Comment at 5). The need to balance supply and demand in electricity markets continuously and precisely makes electricity trades vulnerable to subtle and short-lived anticompetitive actions that are likely to go undetected because monitoring is complex and costly. Second, behavioral rules for market power mitigation will not eliminate incentives to exercise market power (*id.* at 6). Third, market power monitoring and mitigation rules create a risk that competitive behavior will be misidentified as anticompetitive behavior, thus chilling competition and increasing administrative and litigation costs (*id.* at 5). Fourth, focusing on behavioral remedies may divert attention from structural remedies that have the potential to address market power with greater certainty and lower costs to consumers (*id.* at 6).

Remedy Proposal 6: *Establish a "code of conduct" governing the relationship between utility companies and their affiliates.*

Affiliate codes of conduct, like functional separation, are likely to be a reasonable first step, but not necessarily a sufficient step toward effective competition. A variety of competitive concerns can arise in affiliate relationships. Favoritism toward affiliates in purchasing decisions and cross-subsidization of affiliates are among the most prominent.

Full divestiture of affiliate firms is an attractive alternative to a code of conduct because it directly alters incentives. Vertical divestiture, however, also may entail lost economies of vertical integration as well as various other costs or delays. A potentially effective initial step in such circumstances may be to require formal bidding on prospective transactions with affiliates in order to establish an arm's-length relationship between the parent and affiliate.

Cross-subsidization raises potential concerns that the most efficient suppliers in unregulated markets will be forced out by higher-cost firms affiliated with a regulated firm. One example of improper cross-subsidization is the use of the logo of the regulated parent firm by unregulated affiliates. This novel form of cross-subsidization may create incentives for the regulated firm to overinvest in reputation-building activities. In addition, use of the regulated firm's logo by affiliates also may raise issues of deceptive advertising that the MPSC may wish to address.⁽²⁰⁾

Remedy Proposal 7: *Require the development of a detailed implementation strategy to significantly increase the availability of competitive supply sources to direct access customers from suppliers other than Detroit Edison and Consumers Energy or their affiliates.*

In order for the MPSC to implement retail competition smoothly on a statewide basis, the MPSC reasonably may need to look beyond the plans for retail competition submitted by the two large investor-owned utilities in the state. The plans for retail competition by all of the owners of distribution and transmission capacity are likely to be important.

III. Stranded Cost Recovery Implementation Concerns

The stranded cost recovery processes may (1) lead to incentives to establish artificially low prices to deter entry; (2) distort electricity purchase decisions if stranded cost recovery entails energy usage charges; and (3) discourage mitigation efforts of firms with stranded costs if all gains from mitigation are passed on to customers.

The MPSC's stranded cost recovery plan, which uses proceeds from auctioning distribution access rights during peak demand periods to new retail sellers of electricity, is an innovative step toward reducing concerns about competition and efficiency in implementing stranded cost recovery.⁽²¹⁾ This system establishes stranded costs recovery obligations that are a function of the bid price for peak distribution capacity and the quantity of capacity reserved. The total obligation of a winning bidder does not vary with the actual utilization of such capacity. Hence, the obligation is not sensitive to future electricity purchases and is less likely to produce distortions in future electricity purchases than an excise tax approach.⁽²²⁾ Under an excise tax approach, stranded cost recovery fees would be based on electricity use.

In Michigan, an excise tax approach employing fees on electricity consumption may be applied later in the transition to competition if the bidding process does not raise sufficient funds to pay for stranded costs. The MPSC may wish to consider additional steps that would help it avoid having to turn to an excise tax approach in this circumstance.⁽²³⁾

IV. Conclusion

Horizontal market power warrants close attention from the MPSC as it moves to secure the benefits of retail electric competition for the state's citizens and businesses. Detailed study of existing generation market power, including use of computer simulation models, may assist the MPSC to draw appropriate conclusions about the extent of generation

market power facing Michigan customers. In conducting such a market power analysis, the MPSC may wish to distinguish between present market power and likely future market power, since technological and institutional changes may materially alter generation market power. If a detailed study raises substantial generation market power concerns, the MPSC may wish to adopt structural remedies to supplement or replace behavioral rules. A carefully formed ISO may be one attractive structural mechanism through which to implement retail competition and enhance wholesale competition. One criterion for an effective ISO is likely to be significant geographic size, with numerous generating facilities and firms. A large ISO of this type is apt both to alleviate generation market power and to enhance reliability.

Respectfully submitted,

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1. This comment represents the views of the staff of the Bureau of Economics of the Federal Trade Commission. They are not necessarily the views of the Federal Trade Commission or any individual Commissioner.
2. This comment represents the views of the staff of the Bureau of Economics of the Federal Trade Commission. They are not necessarily the views of the Federal Trade Commission or any individual Commissioner. Inquiries regarding this comment should be directed to John C. Hilke (303-844-3565).
3. The staff of the FTC has previously commented on electric power regulation to the Federal Energy Regulatory Commission (FERC) in Docket No. PL98-5-000 (May 1, 1998)(ISO Policy Comment), Docket Nos. ER97-237-000 and ER97-1079-000 (February 6, 1998)(New England Power Pool (NEPOOL) Comment), Docket No. RM96-6-000 (May 7, 1996), Docket Nos. RM95-8-000 and RM94-7-001 (August 7, 1995) (Open Access Comment). The staff of the FTC has submitted comments to various state agencies, including the Louisiana Public Service Commission, Docket No. U-21453 (stranded costs) (August 3, 1998); West Virginia Public Service Commission, Case No. 98-0452-E-GI (July 15, 1998); Commonwealth of Virginia, Joint Subcommittee Studying Electric Industry Restructuring, SJR-91 (July 9, 1998); the Public Utility Commission of Texas, Project Number 17549 (affiliate transactions) (June 19, 1998); the Maine Department of the Attorney General and Public Utilities Commission, "Interim Report on Market Power in Electricity" (May 29, 1998); the Louisiana Public Service Commission, Docket No. U-21453 (market power) (May 15, 1998); the California Public Utilities Commission, Docket Nos. R.94-04-031 and I.94-04-032 (August 23, 1995); and the South Carolina Legislative Audit Council (February 28, 1994). The FTC staff also has commented to FERC about reform of natural gas regulation. See, e.g., the FTC staff comment on alleged anticompetitive practices of pipeline marketing affiliates, Docket No. RM87-5-000 (1987).
4. The factors identified in the MPSC Staff Paper include: two firms with large market shares; longstanding market relationships with suppliers and customers; longstanding presence in the state and established relationships with state governmental institutions; possession of important customer information, including demographics and demand usage patterns; extensive vertical integration, which provides simultaneous ownership and control of generation, transmission and distribution facilities; limited transmission interconnection availability, especially during peak usage periods; and the potential to use revenue from captive or regulated business operations to subsidize competitive ventures. We have not independently verified these factors.
5. In functional separation or functional unbundling, a vertically integrated firm remains under the same ownership, but rules are imposed that are intended to cause different divisions of the firm to operate independently and without bias.

6. FERC's Inquiry Concerning the Commission's Policy on the Use of Computer Models in Merger Analysis; Notice of Request for Written Comments and Intent to Convene a Technical Conference, 63 Fed. Reg. 20392 (1998).

7. Federal Trade Commission, "Analysis of Proposed Consent Order to Aid Public Comment in In the Matter of PacifiCorp et al.," FTC File No. 971-0091, at 4 (February 18, 1998)(<http://www.ftc.gov/os/9802/index.htm>). The FTC withdrew from the proposed consent order as of June 30, 1998 because PacifiCorp withdrew from the merger ([www.ftc.gov/ opa/9807/petapp39.98.htm](http://www.ftc.gov/opa/9807/petapp39.98.htm)).

8. The competitive implications of market concentration are affected significantly by entry conditions. If entry is likely, timely, and sufficient to undermine efforts to exercise market power, then market concentration may not have adverse implications for consumers.(9)

9. DOJ/FTC Merger Guidelines, Section 3.

10. Future generation technology developments may include economical micro-generators that would further ease concerns about the minimum efficient scale of entry. See, for example, Stuart F. Brown, Here Come the Pint-Size Power Plants , Fortune 64C-64P (1996); Thomas R. Casten, Electricity Generation: Smaller Is Better, 8 Elect. J. 65-72 (1995); Clyde Wayne Crews, Jr., Electric Utility Reform: The Free Market Alternative to Mandatory Open Access, Competitive Enterprise Institute at www.electricity-online.com/crews.html (1998).

11. At present, most residential consumers have few incentives to curtail consumption during peak usage periods (when generation and transmission costs are highest) because retail rates do not reflect these cost conditions and there is no way to distinguish consumption in peak hours from consumption in off-peak hours. Time-of-day metering will provide more consumers with more accurate signals of the cost of providing service and will allow consumers for the first time to change their patterns of electricity use to reduce their electricity bills.

12. Additional guidelines on formation of ISOs have been issued by FERC in Order No. 888, FERC Stats. & Regs. (CCH) ¶31,036 (April 24, 1996) (Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities), and Order No. 889, FERC Stats. & Regs. (CCH) ¶31,594 (April 24, 1996) (Open Access Same-Time Information System and Standards of Conduct).

13. Another disadvantage may be that it does not provide enough diversity in generation (with respect to number and type of generators) to optimize system reliability.

14. Recent Administration proposals respond to this concern by giving FERC authority to require divestiture of generation assets by generating firms that have market power in the context of retail competition. ("Comprehensive Electricity Competition Plan," March 26, 1998 (<http://www.hr.doe.gov/electric/plan.htm>).)

15. See James Baker Jr., Bernard Tennebaum, and Fiona Wolf, Governance and Regulation of Power Pools and System Operators: An International Comparison, 382 World Bank Technical Papers (1997) (a report on international comparisons of ISO governance systems written in part by FERC staff).

16. "Transmission congestion" refers to conditions in which transmission lines are being used to full capacity and additional transmission efforts between a generator and load reduce the efficiency of other transmissions on the transmission grid. Transmission congestion is most likely during peak demand (load) periods.

17. A variety of transmission congestion pricing systems have been approved by FERC for use by ISOs, and the MPSC may wish to compare the effects of the different systems as more experience is gained. California, for example, opted for a "zonal transmission pricing" approach, albeit with very large zones. Zonal pricing assumes that there are no transmission constraints within the zone and, accordingly, sets a single price within the zone. The Pennsylvania, [New] Jersey, Maryland (PJM) ISO has chosen to address transmission congestion problems with

much more narrowly defined pricing zones. PJM's approach is termed "locational marginal pricing" or "nodal pricing." Locational marginal pricing is a transmission pricing system that attempts to take full account of transmission loop flows. Loop flows are a complication of the physics of electricity (electricity follows the path of least resistance) that results in transmission congestion arising in places and at times that are counter to the intuitive, traditional view of transmission as a point-to-point delivery of electric energy. Locational marginal pricing assesses congestion charges based on the transmission congestion caused throughout the transmission system by a particular transaction.

18. A "direct access contract" is an electricity supply contract between two parties: a generator on one side and a distributor, marketer, or final customer on the other. In this context, the MPSC staff seeks to ensure the disclosure of the terms, prices, and conditions of direct access contracts between incumbent utilities and their customers (affiliates, in particular).

19. The concerns expressed in the NEPOOL Comment were generalized in our May 1, 1998 ISO Policy Comment to FERC. The NEPOOL Comment and the ISO Policy Comment can be accessed through the FTC's website (<http://www.ftc.gov/be/advofile.htm>).

20. Our comment to the Public Utility Commission of Texas, which elaborates on these points, can be accessed through the FTC's website (<http://www.ftc.gov/be/advofile.htm> (V980013)).

21. The descriptive information here is derived from company submissions and from discussions with MPSC staff.

22. Because the stranded cost recovery fees are applied on quantity of capacity at peak load periods won at auction, the Michigan bid process may reduce bidding on these peak-demand distribution rights.

23. Fuller exposition of these aspects of stranded cost recovery is contained in our comment to the Louisiana Public Service Commission, which can be accessed through the FTC's website (<http://www.ftc.gov/be/advofile.htm> (V980018)).