Before the
United States of America
Federal Energy Regulatory Commission

Electricity Market Design and Structure:) Docket RM01-12-0oTkT Tj -34.5 -15 TD -0.1451
1

[1] This comment represents the views of the staff of the Bureaus of Economics and Competition and the Office of the General Counsel of the Federal Trade Commission. They are not necessarily the views of the Federal Trade Commission or any individual Commissioner. The Commission has, however, voted to authorize the staff to submit these comments.

Before the
United States of America
Federal Energy Regulatory Commission

Electricity Market Design and Structure:	**)**	**Docket RM01-12-000**
Strawman Discussion Paper for Market	**)**	
Power Monitoring and Mitigation	**)**	

Comment of the Staff of the
Bureaus of Economics and Competition and the Office of the General Counsel
of the Federal Trade Commission[1]

I. Introduction and Summary

The staff of the Bureaus of Economics and Competition and the Office of the General Counsel of the Federal Trade Commission (FTC or Commission) appreciates this opportunity to present its views concerning the Federal Energy Regulatory Commission's (FERC) strawman discussion paper on market power monitoring and mitigation in wholesale electricity markets.[2] The discussion paper presents principles that may be used to guide FERC's monitoring efforts and to form the basis for the design of market power mitigation measures.

We agree with most of the principles and policy preferences expressed in the discussion paper. One of the principles the Commission has articulated to ensure that consumers benefit from electricity

---

[1] This comment represents the views of the staff of the Bureaus of Economics and Competition and the Office of the General Counsel of the Federal Trade Commission. They are not necessarily the views of the Federal Trade Commission or any individual Commissioner. The Commission has, however, voted to authorize the staff to submit these comments.

[2] The discussion paper was released by FERC in conjunction with the Market Monitoring and Mitigation Panel of its February 2002 technical conference on Market Structure and Design. These comments also apply to the Market Power Monitoring and Mitigation section of the FERC Working Paper on Standardized Transmission Service and Wholesale Electric Market Design released March 15, 2002.

restructuring is the need to reduce substantial and durable horizontal market power in electricity markets.[3] Our comment focuses on (1) clarifying the definition of market power, (2) advantages of structural remedies compared to behavioral remedies for market power, (3) the special problem of load pockets and the potential need for additional market power mitigation measures in those areas, and (4) the importance of demand side participation in addressing horizontal market power concerns in electric power markets.

The FTC is an independent administrative agency responsible for maintaining competition and safeguarding the interests of consumers. In the electric power industry, the staff of the FTC often analyzes regulatory or legislative proposals that may affect competition or the efficiency of resource allocation in addition to its review of proposed mergers involving electric and gas utility companies. 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 Commission has issued two Staff Reports (July 2000 and September 2001) on electric power industry restructuring issues at the wholesale and retail levels. The July 2000 FTC Staff Report established a policy framework for increased competition in wholesale and retail electric power markets.[4] The September 2001 FTC Staff Report reviewed those features of state retail competition

---

[3] *See* Letter of the Federal Trade Commission to House Commerce Committee Chairman Thomas Bliley, Analysis of H.R. 2944 (Jan 14. 2000) (Bliley Letter).

[4] FTC Staff Report: Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform (Jul. 2000), available at <http://www.ftc.gov/be/v000009.htm>. This report compiles previous comments that FTC Staff had provided to various state and federal agencies. For example, FTC Staff has commented to FERC on electric power regulation in Docket No. RM99-2-000 (regional transmission organizations) (Aug. 16, 1999); Docket EL99-57-000 (Entergy transco proposal) (May 27, 1999); Docket RM98-4-000 (merger filing guidelines) (Sept. 11, 1998); Docket

plans that have provided benefits to consumers and those that have not. It also provided recommendations as to whether states had sufficient authority to implement successful retail competition programs.

No. PL98-5-000 (ISO Policy) (May 1, 1998); Docket Nos. ER97-237-000 and ER97-1079-000 (New England ISO) (Feb. 6, 1998); Docket No. RM96-6-000 (merger policy) (May 7, 1996); Docket Nos. RM95-8-000 and RM94-7-001 (open access) (Aug. 7, 1995). The FTC staff comments are available at <http://www.ftc.gov/be/advofile.htm>.

[5] FTC Staff Report: Competition and Consumer Protection Perspectives on Electric Power Regulatory Reform, Focus on Retail Competition (Sep. 2001), available at <http://www.ftc.gov/reports/index.htm>.

[6] FTC Staff Comment on Docket No. MR01-10-000 (Dec. 20, 2001).

[7] FTC Staff Comment on Docket No. MR02-1-000 (Dec. 21, 2001).

[8] FTC Staff Comment on Docket No. EL01-118-000 (Jan. 5, 2002).

[9] Memorandum of Agreement Between the Federal Trade Commission and the Antitrust Division of the U.S. Department of Justice Concerning Clearance Procedures for Investigations (Mar. 5, 2002), available at <http://www.ftc.gov/opa/2002/02/clearance/ftcdojagree.pdf>.

II. Principles Underlying the Market Power Discussion Paper

The purpose of FERC's paper is to stimulate discussion that can guide the design of market power monitoring efforts and market power mitigation measures in wholesale electricity markets. The proposal recognizes that clarity in future regulation and mitigation policies is critical to well-functioning wholesale electricity markets.

One of the underlying assumptions of the discussion paper is "that sufficient competition can exist in generation supply as long as certain structural conditions are present."[10] In "well-developed" markets FERC indicates that additional market power mitigation should be unnecessary. The discussion paper does not specifically define "well-developed" markets, but it is our understanding that elements of such markets may include elements likely to contribute to increased competition such as price-responsive demand, an effective regional transmission organization that uses locational marginal pricing or some other pricing system to address the problem of transmission congestion, and market monitoring.[11]

The discussion paper also expresses a general preference for *ex ante*

---

[10] Discussion Paper at 1.

[11] Whether markets are competitive also will depend on seller concentration, the ability of sellers to increase output, and entry conditions.

restructuring. For well-developed markets, the proposal suggests that intrusive regulation should be unnecessary, although it indicates that behavioral regulation, such as offer caps,[12] may still be appropriate in certain circumstances.

The discussion paper explains that withholding of output should be the focus of *ex post* market power assessments, and urges minimization of *ex post* refunds and similar forms of mitigation. The discussion paper further seeks to distinguish high market prices due to scarcity from those due to market power. It also directs any examination of market power to be focused on significant and sustained exercises of market power as opposed to insubstantial and transient exercises of market power.

We agree with the central observation in the discussion paper that *ex ante* clarity of the rules that will govern wholesale electricity markets and mitigation policies is absolutely essential.[13] Clarity of any behavioral and structural mitigation policies that FERC may apply is critical for making long-term investments in new generation and transmission, which — as the California experience has shown — are essential for supply adequacy and well-functioning wholesale power markets. We continue to foresee difficulties in delineating feasible behavioral remedies that will achieve this clarity in the eyes of market participants. The preference for structural remedies expressed herein is based, in part, upon our view that *ex ante* structural remedies are best able to pass this essential "regulatory clarity" test.

Although the discussion paper appropriately emphasizes *ex ante* structural remedies for market

---

[12] An offer cap requires that a seller of electricity bid into a wholesale market at no more than a specified price, but the seller receives the market clearing price for any of its electricity that is dispatched if the market clearing price exceeds the offer cap.

[13] Discussion Paper at 7.

power rather than *ex post* penalties or behavioral rules, well-developed market institutions (such as those FERC currently contemplates encouraging through its standard market design regulatory proceeding[14]) alone may be insufficient to address all existing market power concerns in generation.[15] This is, in part, because state and federal regulators assumed that rate and service regulation would remain in place indefinitely and thus may have assumed there was no need for antitrust scrutiny of mergers to restrain the growth of horizontal market power. Load pockets[16] with concentrated ownership of generation and entry impediments may be subject to significant market power problems even if they have well-developed market institutions. Consequently, FERC may wish to monitor and mitigate market power in load pockets differently in some respects from the manner in which it monitors and mitigates market power in other areas of the country. We discuss this proposal below, and also

---

[14] We reiterate the concern highlighted previously that FERC may wish to establish a benchmark concerning efficient operations of RTOs. Whenever a newly independent institution emerges, there is a risk that independence will devolve into indifference to the quality of service, the pace of innovation, and changes in customer preferences. RTOs are unlikely to be an exception. To avoid traveling down such a path, FERC may wish to identify minimum efficiency incentives that will characterize RTOs. For example, efficiency may be enhanced by providing a mechanism for displacing management and the board of directors if either or both fail to operate and manage the RTO efficiently or fail to respond to customer preferences. *See* FTC Staff Comment to FERC on Regional Transmission Organizations, Docket No. RM99-2-000 (Aug. 16, 1999) at 28-30, available at <http://www.ftc.gov/be/v990011.pdf>.

[15] *See, e.g.*, FTC Staff Comment to the Arkansas Public Service Commission, In the Matter of a Generic Proceeding to Establish Filing Requirements and Guidelines Applicable to Market Power Analysis, Docket No. 00-048-R (Apr. 13, 2000); FTC Staff Comment to FERC on Revised Filing Requirements, Docket No. MR98-4-000 (Sep. 11, 1998).

[16] A load pocket is refer to a geographic area within which at least some electricity must be generated because transmission congestion prevents exclusive reliance on suppliers from outside the area. An area may be a load pocket during some high demand hours but not be a load pocket during other hours.

offer suggestions relating to other issues in the discussion paper.[17]

III. Definition of Market Power

FERC has defined market power as "the ability to raise market price above the competitive level."[18] As the term is used in antitrust and industrial organization economics, market power to a seller "is the ability profitably to maintain prices above competitive levels for a significant period of time."[19] When a seller has market power, competition also may be reduced on dimensions other than prices, such as product quality, service, or innovation.[20] Two explanations of this definition are in order. First,

---

[17] One additional concern we have is the discussion paper's characterization of natural gas pipelines as natural monopolies. This characterization may not fully describe the natural gas transportation market in the United States. An industry is a natural monopoly if it is less expensive for a single firm to serve the entire market. Empirical research employing data from the Texas intrastate gas transmission industry has suggested that gas transmission is not inherently a natural monopoly in many markets. *See, e.g.*, Jerry Ellig and Michael Giberson, "Scale, Scope, and Regulation in the Texas Gas Transmission Industry," 5 *J. of Reg. Econ.* (Mar. 1993). Even in interstate transmission, most origin and destination markets are served by multiple pipelines, and the number of competitors increases further if one includes nearby potential competitors that could enter a market by constructing a spur within two years. Edward Gallick, *Competition in the Natural Gas Pipeline Industry* (1993). Since the mid-1980s, FERC itself has encouraged expansion of the interstate gas transmission network even when such expansion leads to pipe-on-pipe competition. Regulatory scholars suggest that the facts of these cases show that interstate gas transmission is moving away from a natural monopoly model. *See*, *e.g.*, Jerry Ellig, "Why Do Regulators Regulate? The Case of the Southern California Gas Market," 7 *J. of Reg. Econ.* 293 (1995); Harry G. Broadman and Joseph P. Kalt, "How Natural is Monopoly? The Case of Bypass in the Southern California Gas Market," *Yale J. on Reg.* 447 (1989).

[18] Discussion Paper at 1.

[19] *See* § 0.1, Market Definition, Measurement and Concentration, United States Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines, issued Apr. 2, 1992, *revised* Apr. 8, 1997.

[20] *Id.*

the focus on profitability refers to whether an "action is in the actor's economic interest,"[21] not whether the individual act, in and of itself, is profitable. This broader focus is consistent with the basic framework of economic analysis, which emphasizes profit maximization as the objective of private firms. Second, in the context of electricity markets in which demand and supply conditions vary over short periods of time, the "significant period of time" concept can reasonably be interpreted, for example, as a set of demand and supply conditions that recur in a similar form over time, even when the periods are not contiguous.

In electric power wholesale markets, a firm with market power may withhold generation that otherwise would be supplied to the market. Reducing the quantity supplied may be accomplished unilaterally or in coordination with other suppliers. Firms also could reduce supply to a market by creating transmission congestion.[22] Thus, a principal suggested clarification to the discussion paper is to include monitoring to detect generation or transmission decisions that add to transmission congestion as a means to exercise market power.[23] In some circumstances, increased output by a generator may

---

[21] *Id.*

[22] Over a longer time horizon, other actions by sellers may tend to preserve or enhance market power. Firms with existing market power may have incentives, for example, to preserve transmission bottlenecks, discourage real-time pricing and other forms of demand-side participation in markets, and block or delay interconnection of new generators. Other techniques that raise the costs of other suppliers may also allow a firm to exercise market power. In our December 20, 2001, comment on standards of conduct for transmission providers, *supra* note 6, we described the potential anticompetitive effects of raising fuel prices paid by other electric power suppliers that the FTC examined in various recent investigations (*e.g.*, the Matter of PacifiCorp and The Energy Group PLC).

[23] To the extent that market monitoring of output withholding closes off one method of exercising market power, suppliers may have incentives to exercise market power through other techniques that are more difficult to detect and that may be more socially costly. Inducing transmission congestion may be one such technique.

create loop flows that, in turn, create transmission congestion and reduce the ability of generators in other areas to sell into a load pocket. This may create or enhance market power for one or more generators within the transmission constraint. Computer simulation modeling may be useful in distinguishing output increases that serve primarily to create transmission constraints from those that help meet demand in load pocket areas.

IV. The Advantages of Structural Remedies

The discussion paper explains the difficulties in performing *ex ante* structural analyses in light of the complexities involved in defining relevant product and geographic markets. Despite these difficulties, we continue to believe that *ex ante* structural analyses are vital to diagnose potential market power problems.[24] Moreover, structural analyses of wholesale electricity markets, as described below, are critical to ensure that whatever remedies are adopted are narrowly tailored to the market power problem that is being corrected.

The structure of a market refers to many features of the market such as the number and relative sizes of independent suppliers in the market (concentration), product differentiation, entry conditions, cost functions, and vertical integration.[25] Prospects for the exercise of unilateral market power and/or coordinated interaction are reduced when the number of actual and potential suppliers is sufficient to provide the ability and incentives to undermine efforts of dominant suppliers to exercise market power.

---

[24] See Bliley Letter, *supra* note 3, at 5

[25] F. M. Scherer and D. Ross, Industrial Market Structure and Economic Performance 4-5 (3rd Ed., Boston: Houghton Mifflin 1990). We focus on the concentration and entry aspects of the term structural, rather than on the broader use that includes such issues as dispatch and bidding rules, reliability rules, and retail pricing regulations.

The probability that one or more suppliers will be pivotal is reduced when concentration is low or the supply elasticity is high for other suppliers.

The structure of the market that provides supply to particular customers is unlikely to be static because the geographic extent of the market varies as demand and supply conditions shift during the day and across seasons of the year. Because demand and supply in any given period is largely independent of demand and supply in other periods in electric power markets (in large part because storing electric power is not widely practical with existing technologies), each such period of time constitutes a separate product market with an associated geographic market. Further, at any given period of time, different types of generators (baseload, mid-merit, or peaking generators) may be more or less influential in determining the wholesale spot market price applicable to a geographic cluster of customers. Within a specific time frame, the structure of ownership and control over a subcategory of generators (for example, mid-merit generators) may be as telling as more general measures of market concentration.[26] Because the extent and shape of the relevant geographic market constantly changes, a structural remedy that is sufficient to address market power concerns in one period of time may be insufficient in other periods of time.

The goal for *ex ante* structural remedies in wholesale electric power markets is to create conditions that are conducive to competition and then let the markets operate relatively free from regulation. A principal source of concern about the horizontal structure of existing electric power markets is that, under nearly a century of rate and service regulation without antitrust review,

---

[26] FTC Staff Comment to the Arkansas Public Service Commission, Section IV, *supra* n. 14.

[27] Independence of a generator means that ownership or contractual control of the generator is separate from ownership or control of other generators supplying the same relevant market.

[28] Several issues should be considered in determining whether such contracts offer equivalent or increased net benefits for consumers compared to divestiture in any given situation. For example, the payment term (*i.e.*, whether it is upfront or on a pay-as-you-go basis) may affect the owner's incentive to maintain the unit and fully utilize the generator during all periods. These concerns may be heightened

bids in wholesale spot markets, as suggested in the discussion paper,[29] are generally not an attractive substitute for structural remedies. Offer caps have three unavoidable shortcomings: (1) they pose an inherent regulatory risk to market participants that the cap may be raised or lowered by subsequent policymakers, which may reduce the incentive for new generation investment; (2) they may be set too low to provide adequate entry incentives in high-cost areas, such as urban localities; and (3) if the offer caps are to meet the "clarity" criterion of the discussion paper, then the offer cap policy will have to stipulate—*in a binding manner*

[29] Discussion Paper at 7-8.

[30] As minimum efficient scale in generators falls, the potential for extensive entry by numerous small generators may help assuage concerns about existing market power. One of the attractive features of the recent advances in microturbines, fuel cells, and other forms of distributed generation is that they eventually may alleviate load pockets by making small scale, quick entry practical for system conditions under which they are economic sources of energy.

decades.

We recommend FERC identify transmission constraints that are congested and then examine market structure and entry conditions in these areas. Where a load pocket is found and is accompanied by transmission congestion, a highly concentrated market structure, and entry impediments, a well-developed market may not be enough to take care of market power concerns. For such areas, additional structural remedies may be appropriate if the benefits exceed the costs. Where structural remedies are not efficient, other regulatory approaches may be preferable, again if the benefits exceed the costs. Further, FERC may wish to give priority to longer-term policy initiatives that may eliminate such load pockets.

Respectfully submitted,

_____

David T. Scheffman, Director
John C. Hilke, Economist and Electricity Project Coordinator
Bureau of Economics

_____

Joseph J. Simons, Director
Bureau of Competition

_____

Susan S. DeSanti, Deputy General Counsel
Michael S. Wroblewski, Assistant General Counsel
Federal Trade Commission
600 Pennsylvania Ave., N.W.

Washington, D.C. 20580