

INTRODUCTION

CREATING COMPETITIVE WHOLESALE ENERGY MARKETS

*Darren Bush**

The purpose of this symposium is to discuss the implementation of “deregulation,” or, in the words of Professor Harry First, “regulated deregulation”¹ and whether such implementation has the capacity to eliminate abuses of the market that “deregulation” created. In most markets, it is the competitive process itself that defines the rules of the game, disciplines behavior, and provides incentives for firms in those markets to keep prices efficient.² In markets such as electricity with unique characteristics and serious market limitations, it is the federal government and state legislatures through legislation and agencies through regulation that set the limitations on market behavior.³ Thus, it is vital for state and federal authorities to get the “rules of the game right” prior to the onset of competition.⁴

But the creation of competitive wholesale power market

* Assistant Professor of Law, University of Houston Law Center and Environmental & Energy Law & Policy Journal Symposium Faculty Editor (2004–2005). J.D. (1998) and Ph.D. in Economics (1995), University of Utah.

1. Harry First, *Regulated Deregulation: The New York Experience in Electric Utility Deregulation*, 33 LOY. U. CHI. L.J. 911 (2002).

2. One misperception that has permeated the discussion of deregulated markets is that deregulation would always correct prices in the downward direction. Of course, prices do not necessarily move in the downward direction in response to market forces. Whether prices go up or down is largely a function of supply and demand, and these factors may indeed drive prices up in times of shortage.

3. See Joseph D. Kearney & Thomas W. Merrill, *The Great Transformation of Regulated Industries*, 98 COLUM. L. REV. 1323 (1998).

4. See Darren Bush & Carrie Mayne, *In (Reluctant) Defense of Enron: Why Bad Regulation Is to Blame For California's Power Woes, or Why Antitrust Law Fails To Protect Against Market Power When the Market Rules Encourage Its Use*, 83 OR. L. REV. 207 (2004).

rules does not end at the passage of legislation and the implementation of regulation. It is crucial to the development of wholesale power markets that the “rules of the game” be enforced and backed with serious penalties that have deterrence value to those who have incentive to violate those rules. Moreover, as conduct not prescribed by existing rules comes to light that appears to cause injury to the competitive process, market regulators should have flexibility to modify those rules to deal with such conduct. Of course, markets must be constantly monitored to prevent and restrain abuses of the “rules of the game.”

However, the “rules of the game” are not limited to the terms set forth by state public utility commissions and the Federal Energy Regulatory Commission (FERC). The Commodity Futures Trading Commission (CFTC),⁵ the Department of Justice (DOJ), and the Federal Trade Commission (FTC) also play significant roles in the promotion of competitive processes in wholesale power markets.⁶

The problems associated with “regulation” of energy markets are twofold. First, agency enforcement of laws tends to be *ex post*. Under an optimistic view of the role of regulation, regulation corrects market behavior by defining the rules of the game *ex ante* to restrict or eliminate the potential for impermissible conduct.⁷ In contrast, antitrust enforcement and other enforcement actions tend to occur after the harm has fallen on the market. Any *ex ante* effect from such enforcement occurs when the enforcement prevents and restrains future abuses.⁸

5. The CFTC’s mission “is to protect market users and the public from fraud, manipulation, and abusive practices related to the sale of commodity and financial futures and options, and to foster open, competitive, and financially sound futures and option markets,” including energy futures and derivatives. Commodity Futures Trading Comm’n, About the Commodity Futures Trading Commission, <http://www.cftc.gov/cftc/cftcabout.htm> (last visited Dec. 4, 2005).

6. Specifically, the FTC has the authority to prevent and restrain “unfair methods of competition.” *See* 15 U.S.C. § 45 (2006). The DOJ seeks to prevent and restrain unreasonable contracts, combinations, and conspiracies in restraint of trade, monopolization, attempts to monopolize, or conspiracies to monopolize, and mergers and acquisitions that are likely to tend to lessen competition. *See* 15 U.S.C. §§ 1–2 (2006). In practical terms, however, clearance processes between the agencies leave the bulk of electricity investigations to the DOJ, with the bulk of natural gas investigations, which have an effect upon the electricity industry, to the FTC.

7. Unfortunately, regulation is not always this well-functioning. FERC, for example, grants authority for participants to operate at market based rates based upon some initial screening for market power. However, should a market participant with authority to operate under market based rates engage in misconduct, the remedy implemented by the FERC is similar, but not identical to, the remedies imposed by federal antitrust agencies.

8. Bush & Mayne, *supra* note 4 at 284.

Second, the multiple layers of enforcement agencies, each with their own organic statute and enforcement power, create ambiguities for those participating in the market (and ambiguities in the design of the competitive market as well). The difficulty is defining clearly the *harms* to the market that the enforcement agencies are seeking to prevent and restrain.

For example, in the heat of the California energy crisis, there were frequent cries that “market power” should be prevented in competitive wholesale energy markets. While this seems reasonable in principle, a mere declaration that market power is bad does not advance the ball much. Market power for economists is any price above marginal cost. But unilateral exercises of market power such as price increases by a firm with monopoly power (another ambiguous term) do not violate the antitrust laws.⁹ However, such exercises in market power are likely to injure any competitive process, and might be of concern to regulators. The problem is that there is a wide range between the possible definitions of market power. The ultimate question is: when does market power become a problem, or, what is market power in a meaningful sense of the term?

Detection of market power is a subsidiary difficulty to the determination of what is meant by market power. Under current examination by the FERC is to what degree market power screens can be used to identify market power.¹⁰ Screens in this regard are like strainers that aid in the separation of the anticompetitive wheat from the chaff. However, much wheat can be lost through rudimentary market power screens. For example, one problem that might arise in the acquisition of generation assets is the “fuel curve” problem. The fuel curve theory posits that the acquisition of marginal generation assets, in conjunction with ownership of inframarginal generation units, provides the incentive and ability to raise prices.¹¹ While this diversity of

9. *Berkey Photo, Inc. v. Eastman Kodak Co.*, 603 F.2d 263, 294 (2d Cir. 1979); *Endsley v. City of Chicago*, 230 F.3d 276, 283–84 (7th Cir. 2000) (explaining that a price increase is an insufficient basis for a monopolization claim); *see also Alaska Airlines v. United Airlines, Inc.*, 948 F.2d 536, 548–49 (9th Cir. 1991).

10. Witness, for example, the current debate before FERC on market power defined by “contestable load” analysis. *See, e.g., Generation Market Power Screens Before the Federal Energy Regulatory Commission* (Jan. 27, 2005) (testimony of Louis R. Jahn, Director, Wholesale Market Policy, Edison Electric Institute), distributed at Technical Conference, at 2, *available at* http://www.eei.org/about_EEI/advocacy_activities/Federal_Energy_Regulatory_Commission/050314ComerFercGeneration.pdf; Order on Updated Market Power Analysis, Instituting Section 206 Proceeding and Establishing Refund Effective Date, 109 F.E.R.C. ¶ 61,276 at P 23 (2004).

11. By either physically or economically withholding the marginal unit, the generation owner may increase the clearing price paid in the market to its inframarginal units.

generation assets may increase efficiencies, it may also create market power. A straight-up counting of capacity may not detect market power arising from a fuel curve problem, and more analysis is necessary to determine the need to prevent and restrain such conduct.¹² Screens by themselves, however, are unlikely to do the job.¹³

And, of course, vertical market power exercises do not lend themselves well to horizontal market power screens. Consider the DOJ's consent decree in the matter of PE/Enova.¹⁴ Monopoly power over gas pipeline capacity could give rise to an increase in wholesale energy prices (in much the same fashion as the "fuel curve" theory described above), benefiting the pipeline's affiliate-owned inframarginal generation units. However, it is not necessary for the pipeline to affect any electricity supplier other than the marginal generation unit in order to bring about a price increase. Thus, the pipeline may or may not have market power in any sense except in the provision of gas to the marginal unit. Screens cannot be the end of the analysis here, either, and more investigation would be necessary to make any determination as to the effect such market power might have on competition.

In sum, market share screens have the potential for "false negatives." While corrections for any "false positives" brought about by market share calculations exist in the U.S. Department of Justice/Federal Trade Commission *Horizontal Merger Guidelines*¹⁵ in the form of entry and other analysis, there is no such corrective mechanism for "false negatives." Thus, other methodologies must be employed to detect market power potential such as those described above.

Another example comes from the term "market manipulation" that one often hears in the media. While in commodity futures the term has a more precise definition,¹⁶ the

12. See Bush & Mayne, *supra* note 4 at 262–66.

13. See Fed. Energy Regulatory Comm'n, *Market-Based Rates for Public Utilities*, 61 (affidavit of Professor Darren Bush, filed Mar. 14, 2005), available at http://www.appanet.org/files/PDFs/APPATAPS_Searchable.pdf; Fed. Energy Regulatory Comm'n, *Market-Based Rates for Public Utilities*, Comment of the Federal Trade Commission (Jan. 18, 2006), available at <http://www.ftc.gov/be/V060004.pdf>.

14. See Complaint, *United States v. Enova Corp.*, 107 F. Supp. 2d 10 (D.D.C. 2000), available at <http://www.usdoj.gov/atr/cases/f1700/1790.htm>.

15. 1992 Horizontal Merger Guidelines, 57 Fed. Reg. 41,552 (Sept. 10, 1992); Horizontal Merger Guidelines, 4 TRADE REG. REP. (CCH) ¶ 13,104, at 20,569 (Apr. 8, 1997) (containing revised section 4 of the 1992 Guidelines); 1992 Horizontal Merger Guidelines with revisions, available at <http://www.ftc.gov/bc/docs/horizmer.htm>.

16. Specifically, "(1) that the accused had the ability to influence market prices; (2) that they specifically intended to do so; (3) that artificial prices existed; and (4) that the accused caused the artificial prices. *In re Cox*, [1986–1987 Transfer Binder] Comm. Fut. L. Rep. (CCH) ¶ 23,786 at 34,061 (C.F.T.C. July 15, 1987).

usage across agencies and stakeholders is not uniform.¹⁷

This lack of common definitions creates a problem for firms operating in wholesale energy markets. It is difficult to determine, *ex ante*, what conduct a firm might engage in without prompting enforcement actions. *Ex post* determinations of potential violations, in contrast, are likely to be politically charged. And *ex post* enforcement is hardly a substitute for rules clearly established *ex ante*.

This all occurs against the backdrop of an industry that, at best, is “quirky.” Electricity, unlike most commodities, cannot generally be stored. Moreover, demand is, with some exceptions, unresponsive to price. This means that any competitive pressure on prices must come from excess capacity. Moreover, generation units possess different characteristics, use different fuels, have different heat rates, are located in different areas, and thus are not perfectly substitutable, giving rise to potential market power based upon one’s position in the “stack” or one’s location. Add to this quiriness the vertical issues: Energy is only useful if transmitted to consumers. But electricity follows the path of least impedance, and so potentially limits a generator’s ability to send power as another generator congests the transmission line. Firms holding both transmission and generation assets may have incentives to so curtail a competitor’s energy production while favoring their own.

For these reasons, the problems addressed at this symposium are important ones. The authors of the articles that follow are regular and important contributors to the national energy debate. And the articles and comments provided by these individuals are important in furthering the debate concerning competitive wholesale energy markets and their roles in the national energy policy.

There is no dearth of literature out there addressing concerns regarding wholesale power markets. Dr. Diana Moss’ article leads the symposium as a survey of the literature discussing market failures and remedies.¹⁸ Moss notes that the literature centers around five concerns: withholding, market definition, measurement of market power, issues arising from vertical relationships, and remedies. Moss notes that withholding can involve numerous possible strategies, from physical or

17. See, e.g., *id.* (noting that manipulation means that a commodity trader had the ability and specific intention to influence market prices, causing an artificial increase in price).

18. Diana Moss, *Electricity and Market Power: Current Issues for Restructuring Markets (A Survey)*, 1 ENVTL. & ENERGY L. & POL’Y J. 11 (2006).

economic withholding of generation assets to the use of generation to create transmission congestion to island markets. As Dr. Moss correctly notes, it is difficult to detect withholding, in particular because firms operating in the market benefit from receiving a higher clearing price and therefore have no incentive to snitch on the firm engaging in withholding. Defining the relevant market and accurately determining market power within those markets have their own idiosyncrasies. As mentioned previously, detecting market power is an elusive practice, made more so by the fact that the market definition in part drives the market power analysis. Vertical relations stem from the need for transmission to deliver energy. Thus, a firm who ties up transmission rights or otherwise prevents competitors from obtaining transmission benefits in the generation market. Finally, remedies for market power exercises are broad, from Regional Transmission Organizations (RTO) as the panacea to divestiture, the worst case scenario for an electric utility.

Professor Harry First's comments to Dr. Moss' paper wisely caution against the use of the term market power as a broad cleaver—it is rather an analytical tool with less than a precise definition in antitrust parlance, and perhaps deflects us from asking the right question in electricity markets.¹⁹ For Professor First, the question is whether regulatory oversight has a comparative advantage over market mechanisms. If regulator oversight would have a positive impact upon the market, then regulatory oversight is warranted.

The speeches from government officials—Jess Totten²⁰ from the Public Utility Commission of Texas and Robert Gramlich²¹ from FERC—remind us of the complexities involved in overseeing wholesale power markets. In particular, Mr. Totten details Texas's considerable efforts in preventing and restraining market power, ranging from the creation of an RTO, the impositions on generation market share, conduct rules dealing with sellers in the Energy Reliability Council of Texas (ERCOT) market, and the constant effort at market monitoring. Mr. Gramlich notes the roles of the enforcement agencies (antitrust, commodity futures, and energy regulators) and notes the limitations of each. Mr. Gramlich concludes that FERC must be

19. Harry First, "Market Power": *Why Are We Asking? A Comment on "Electricity and Market Power"*, 1 ENVTL. & ENERGY L. & POL'Y J. 43 (2006).

20. Jess Totten, *Development of Competition in Electricity in Texas*, 1 ENVTL. & ENERGY L. & POL'Y J. 67 (2006).

21. Robert Gramlich, *The Role of Energy Regulation in Addressing Generation Market Power*, 1 ENVTL. & ENERGY L. & POL'Y J. 55 (2006).

on the front lines to ensure that the markets function properly in its role as energy regulator.

Offering the capstone piece for the symposium, Judge Cudahy notes that the basic trend in electricity market structure is toward concentration.²² As he points out, there may be an inherent tendency in network industries that drives such industries toward vertical integration and horizontal consolidation—a condition that at first blush seems at odds with competition. And, as Judge Cudahy notes, regulation in part attempts to enforce rules that prevent and restrain such changes in industrial structure—changes that contribute to market power. As Judge Cudahy correctly points out, the more the rates offered to end users of electricity diverge from competitive rates, the more difficult it is to call those rates just and reasonable.

Professor Peter Carstensen's article²³ takes us back to the structure, conduct, performance paradigm.²⁴ He notes that the current, vertically integrated structure of the industry, the practical requirement of close collaboration among competitors in order to keep the lights on, and the physical characteristics of power flow lead to conditions that are at best contrary to competitive norms. He further notes that the multiple regulatory systems which regulate electricity markets create gaps in regulation, in particular between FERC and the states. Neither, he notes, have effective tools to deal with electricity markets, in terms of jurisdiction and remedies adequate to deal with anticompetitive conduct. The result, Professor Carstensen asserts, is great potential for misconduct that could affect the performance in these markets. Professor Carstensen asserts that it will take a major transition in the structure of the industry (in particular a "reorientation" of the transmission system so that there is not a conflict of interest arising from holders of both transmission and generation assets). Professor Carstensen asserts that this will require major changes in legislation.

Dr. John Hilke's comment on Professor Carstensen's article suggests that the road to competitive wholesale power markets is not as pessimistic as portrayed by Professor Carstensen.²⁵ Instead, Dr. Hilke notes considerable progress in the move

22. Richard Cudahy, *Elephants at Play*, 1 ENVTL. & ENERGY L. & POL'Y J. 77 (2006).

23. Peter Carstensen, *Creating Workably Competitive Wholesale Markets in Energy: Necessary Conditions, Structure, and Conduct*, 1 ENVTL. & ENERGY L. & POL'Y J. 85 (2006).

24. See, e.g., F.M. SCHERER, *INDUSTRIAL MARKET STRUCTURE AND ECONOMIC PERFORMANCE* (2d ed. 1980).

25. John Hilke, *Comments on Peter Carstensen's "Creating Workably Competitive Wholesale Markets in Energy"*, 1 ENVTL. & ENERGY L. & POL'Y J. 155 (2006).

towards workably competitive electricity markets. His comment provides a list of consumer “self-defense” mechanisms that are appearing on the electricity scene, and that Dr. Hilke hopes will allow for more workably competitive markets in the future.

Mr. Mark Hegedus’s comment, in contrast, echoes the concerns of Professor Carstensen.²⁶ Mr. Hegedus notes that FERC has used the carrot (“FERC candy”) and the stick to generate acquiescence to its vision of market restructuring for the electricity industry. However, FERC has not done as much as it could along these lines, particularly in detailing criteria for competitive conditions necessary to approve operation at market based rates. It also does not examine certain types of market power exercises.²⁷ Thus, Mr. Hegedus looks longingly to structural solutions such as those advocated by Professor Carstensen, while FERC has ignored such possibilities.

Dr. Karen Palmer and Dr. Dallas Burtraw’s article examines the role that electricity restructuring has played in environmental policy.²⁸ Specifically, Drs. Palmer and Burtraw undertake the daunting task of comparing ex ante expectations concerning restructuring’s effects on emissions and compare them to ex post analysis. The results are interesting (and will not be divulged here). However, the authors provide a caveat that determining the effects of electricity restructuring on the environment is difficult: There are other factors at play that appear to have a larger effect on emissions than the structure of electricity markets.

Professor Victor Flatt’s comment notes that the changes that electricity restructuring have not been undertaken in an environmental law vacuum.²⁹ Rather, changes in environmental regulation have likely given rise to some of the effects in Palmer and Burtraw’s study. For example, an increase in coal generation, unconfirmable as being derived from deregulation, could be primarily caused by the changing nature of the environmental regulation of coal. Nuclear power has seen renewed activity as well, potentially due to its minimal impact on greenhouse gases. Thus, insofar as environmental law impacts upon electricity restructuring, it perhaps requires a holistic

26. Mark Hegedus, *Points Well-Taken: Comments on Professor Carstensen’s Paper*, 1 ENVTL. & ENERGY L. & POL’Y J. 145 (2006).

27. *Id.* at 153 (discussing “supply curve” theory).

28. Karen Palmer & Dallas Burtraw, *The Environmental Impacts of Electricity Restructuring: Looking Back and Looking Forward*, 1 ENVTL. & ENERGY L. & POL’Y J. 171 (2006).

29. Victor Flatt, *What is the Best Formula to Protect the Environment in Electricity Restructuring?*, 1 ENVTL. & ENERGY L. & POL’Y J. 221 (2006).

2006]

INTRODUCTION

9

approach—to “regulate all things that significantly affect the environment and make sure that any special energy programs or deregulation do not interfere with general programs to take care of environmental harms.”³⁰

Finally, all of the contributors here are quite comfortable in each arena, whether academic or practice-based. The articles that follow are important contributions to the academic literature addressing the complicated issues arising from deregulated wholesale electricity markets. But they also provide valuable insight to those who are “in the trenches” in the deregulatory endeavor—specifically judges, regulators, and practicing attorneys.

30. *Id.* at 233.