EXPLAINING THE DIVIDE BETWEEN DOJ AND FERC ON ELECTRIC POWER MERGER POLICY

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Synopsis: The Antitrust Division of the Department of Justice (DOJ) and the Federal Energy Regulatory Commission (FERC) purport to apply the same analytical framework to analyze the competitive effects of electric power mergers. In practice, however, the DOJ and the FERC take very different approaches. The FERC relies largely on market concentration screens to determine whether a merger is likely to result in anticompetitive effects; the DOJ, on the other hand, relies on a wider range of evidence to assess anticompetitive effects. In this article I explain differences between the FERC and the DOJ using a "cost minimization" framework that accounts for the error costs (the costs of reaching an incorrect determination about the likely effects of a merger) and administrative costs (the costs of determining whether a merger is likely to result in anticompetitive effects) of alternative merger policies. I argue that the FERC's preference for concentration screens arises from its belief that the administrative and error costs of that approach are relatively small, and that the DOJ's preference for a wide ranging analysis arises from an implicit belief that the error costs of a simpler approach are relatively large. Although a case can be made that DOJ's approach is preferable, there is not a terribly strong empirical basis for preferring its approach over the FERC's approach. As a result, I suggest that the FERC and the DOJ develop and implement their own research agendas to identify and assess the size of administrative and error costs of alternative merger policies. A better understanding of these costs may facilitate a better understanding of merger policy and, potentially, convergence between FERC and DOJ merger policies.

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I. INTRODUCTION

The Antitrust Division of the Department of Justice (DOJ) and the Federal Energy Regulatory Commission (FERC) take very different approaches to analyzing the competitive effects of electric power mergers. Each agency reviews horizontal mergers between electric power generators for effects on competition in wholesale electricity markets, the FERC as part of a relatively broad public interest inquiry, and the DOJ as part of a narrower competition inquiry.[1] Each agency purports to analyze competitive effects under the same general analytical framework outlined in the Horizontal Merger Guidelines (HMG) issued by the DOJ and the Federal Trade Commission (FTC).[2] The agencies, however, take very different approaches to applying the HMG's framework to potentially problematic mergers. The FERC's approach largely is based on market concentration rules that deem a merger competitively benign if market concentration levels fall within certain safe harbor levels. The DOJ's approach relies less on concentration safe harbors and more on a detailed, open-ended inquiry in which factors other than concentration play a substantial role. Although it sometimes appears that the DOJ and the FERC reach similar conclusions regarding a merger's competitive effects, their different approaches can lead to different conclusions regarding effects and remedies for those effects, which may unnecessarily increase costs for merging generators facing conflicting or inconsistent outcomes at the two agencies.

1. The FERC reviews mergers under section 203 of the Federal Power Act, 16 U.S.C. § 824b(a)(B) (2012), which requires the FERC to approve a merger if it is found to be in the public interest. *See also* 16 U.S.C. § 824(a) (2012). The FERC considers the effect of the merger on competition, rates, and regulation in making its public interest determination. *See generally* Policy Statement, Inquiry Concerning the Commission's Merger Policy Under the Federal Power Act, 61 Fed. Reg. 68,595 (1996) (codified at 18 C.F.R. pt. 2) [hereinafter MPS]. The DOJ reviews mergers under section 7 of the Clayton Act, 15 U.S.C. § 18 (2011). A merger violates section 7 if its effect "may be substantially to lessen competition, or to tend to create a monopoly." *Id.* If the DOJ determines that a merger violates section 7, it must file suit to block the merger. This paper does not concern the decision to litigate, litigation standards, or how the DOJ will conduct litigation of the cases it decides to bring.

2. The FERC's current merger policy is based on the HMG issued by the DOJ and the FTC in 1992. *See generally* U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES (Apr. 2, 1992), *available at* http://www.justice.gov/atr/public/guidelines/hmg.pdf [hereinafter 1992 HMG]. The DOJ and the FTC revised the HMG in 2010. The revisions did not change the analytical techniques of the HMG; rather, the revisions were primarily designed to promote transparency, explaining how the DOJ applies the techniques in practice. U.S. DEP'T OF JUSTICE & FED. TRADE COMM'N, HORIZONTAL MERGER GUIDELINES (Aug. 19, 2010), *available at* http://www.justice.gov/atr/public/guidelines/hmg-2010.pdf [hereinafter 2010 HMG]; *see also* Carl Shapiro, Update from the Antitrust Division, Remarks at the American Bar Association Section of Antitrust Law Fall Forum (Nov. 18, 2010), *available at* http://www.justice.gov/atr/public/speeches/264295.pdf ("As we revised the Guidelines, we were cognizant of the virtues of explaining not just how the Agencies evaluate mergers, but why we employ the techniques described in the 2010 Guidelines, almost all of which were also in the 1992 Guidelines.").

Recent revisions to the HMG have further highlighted differences between the FERC and DOJ approaches to assessing competitive effects. The FERC's current merger policy is based on the HMG issued in 1992 (1992 HMG).[3] However, the DOJ and the FTC issued a new version of the HMG in 2010 (2010 HMG).[4] The revised 2010 HMG elaborated on, but did not change substantially, the ways in which the antitrust agencies apply the HMG in practice.[5] Notably, the 2010 HMG more clearly identified the types of evidence used to assess competitive effects,[6] increased the market concentration levels that indicate a merger is likely to have anticompetitive effects,[7] and expanded its treatment of unilateral effects.[8] In 2011, the FERC opened a Notice of Inquiry seeking comments on whether, and if so how, it should revise its merger policy to reflect the revised 2010 HMG.[9] In early 2012, however, the FERC considered the comments it received and decided not to revise its merger policy, choosing instead to continue with its existing policy, which was formulated in 1996 based largely on the 1992 HMG.[10]

The debate over whether the FERC should alter its merger policy in light of revisions to the HMG is the latest chapter in an ongoing debate about electric power merger policy.[11] This debate turns, in large part, on an old and ongoing debate regarding the costs and benefits of a merger policy based on simple rules that account for a limited number of factors, such as market concentration, versus a policy based on more open-ended inquiry that accounts for many factors other than concentration.[12] Simple rules are easy for an agency to administer and give industry participants greater certainty regarding likely agency decisions. Because they are based on a limited amount of information, however, simple

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3. *See generally* 1992 HMG, *supra* note 2.

4. *See generally* 2010 HMG, *supra* note 2.

5. *Id*. at ii.

6. *Id*. at 2-5.

7. *Id*. at 15-19.

8. *Id*. at 20. For an extended discussion of the 2010 HMG, see Carl Shapiro, *The Revised Horizontal Merger Guidelines: From Hedgehog to Fox in Forty Years*, 77 ANTITRUST L.J. 49 (2010). For a briefer discussion, see *Report of the Competition & Antitrust Committee*, 32 ENERGY L. J. 159, 168-71 (2011).

9. Notice of Inquiry, *Analysis of Horizontal Market Power under the Federal Power Act*, 134 F.E.R.C. STATS & REGS. ¶ 35,571 (2011), 76 Fed. Reg. 16, 394 (2011) [hereinafter NOI].

10. *Analysis of Horizontal Market Power under the Federal Power Act*, 138 F.E.R.C. ¶ 61,109 at P 2 (2012) [hereinafter Order Reaffirming Commission Policy].

11. *See, e.g.*, Darren Bush, *Electricity Merger Analysis: Market Screens, Market Definition, and Other Lemmings*, 32 REV. INDUS. ORG. 263, 286 (2008) (urging caution in the use of market power screens, stating that "the usefulness of merger screens as a tool in analyzing electricity mergers is somewhat dubious."); Richard Gilbert & David Newbery, *Analytical Screens for Electricity Mergers*, 32 REV. INDUS. ORG. 217, 223 (2008) (proposing that merger screens based on concentration indexes be replaced by a "competitive residual demand" analysis). Much to its credit, the FERC has been willing to re-examine its merger policy in recent years. Only four years before its recently concluded merger proceeding, the FERC convened a technical conference to consider, among other things, whether its approach to merger policy needed to be updated in light of recent industry developments. Supplemental Notice of Technical Conference, *Technical Conference on Public Utility Holding Company Act of 2005 and Federal Power Act Section 203 Issues*, FERC Docket No. AD07-2 (Mar. 7, 2007), *available at* http://www.ferc.gov/EventCalendar/Files/20070305082159-supplemental.pdf.

12. The debate dates back at least to 1960 and Derek Bok's influential article arguing for an administrable merger policy based on a few presumptive rules. Derek C. Bok, *Section 7 of the Clayton Act and the Merging of Law and Economics*, 74 HARV. L. REV. 226 (1960); Herbert Hovenkamp, *Derek Bok and the Merger of Law and Economics*, 21 U. MICH. J.L. REFORM 515, 529 (1988). *See also* CARL KAYSEN & DONALD F. TURNER, ANTITRUST POLICY: AN ECONOMIC AND LEGAL ANALYSIS 133 (1959) (arguing for presumptions to render merger policy administrable).

rules may not accurately predict the competitive effects of a merger. A more open-ended inquiry incorporating more information, on the other hand, will more accurately predict competitive effects. However, an open-ended inquiry entails greater costs related to gathering and assessing additional information, and less certainty for industry participants. In short, a simple rule reduces the cost to the agency and others of assessing competitive effects ("administrative costs"), but increases the likelihood of incorrectly assessing a merger's competitive effects ("error costs"). An open-ended inquiry, on the other hand, reduces error costs by incorporating more information, but increases administrative costs.

As I discuss in this article, differences between the DOJ and the FERC merger policies can be explained, at least in part, by the agencies' different beliefs about the relative size of the administrative and error costs of alternative approaches to assessing competitive effects.[13] There are many differences between the DOJ and the FERC that could account for their different competitive effects analyses, including their statutory authorities for merger review, their abilities to gather information, and their abilities to conduct off-the-record merger reviews.[14] Beliefs about administrative and error costs, however, have played a prominent role in the FERC's public justifications for its merger policy. The FERC's preference for simple rules based on market concentration screens appears to follow directly from its clearly-stated belief that the error and administrative costs of such rules are small relative to an open-ended approach. Unlike the FERC, the DOJ has not issued any clear statements about its beliefs about the relative size of error or administrative costs. However, the DOJ's open-ended approach is consistent with a belief that the error costs of simple rules are relatively large, which favors a more open-ended inquiry, even with that policy's higher administrative costs.[15]

It is not easy to determine whether FERC policy, DOJ policy, or some other merger policy is the best possible policy. The work of several scholars suggests that an appropriate way to choose among merger policies is to choose the policy that minimizes the sum of error and administrative costs.[16] Merely adopting a cost minimization standard, however, does not provide a clear answer as to what an optimal electric power merger policy ought to look like. An agency needs evidence regarding the magnitude of administrative and error costs of alternative policies to determine which policy minimizes their sum. Unfortunately, there is little concrete evidence regarding these costs, which makes the task of choosing among policies difficult. Nonetheless, an important first step toward identifying

13. Many commentators have noted differences between the FERC's and the DOJ's merger review. *See, e.g.*, Diana L. Moss, *Antitrust Versus Regulatory Merger Review: The Case of Electricity*, 32 REV. INDUS. ORG. 241, 244-57 (2008) (describing differences in standards of review, information collection procedures, economic analyses, and remedies); Milton A. Marquis, *DOJ, FTC and FERC Electric Power Merger Enforcement: Are There Too Many Cooks in the Merger Review Kitchen?*, 33 LOY. U. CHI. L.J. 783, 784-86 (2002) (describing key differences between regulatory approach of the FERC and the law enforcement approach of the DOJ). Few have sought to explain why those differences exist and persist.

14. Moss, *supra* note 13, at 244-57; Marquis, *supra* note 13, at 784-86.

15. *See infra* Section IV for further discussion.

16. Recent works analyzing antitrust policy under a cost minimization framework include Arndt Christiansen & Wolfgang Kerber, *Competition Policy with Optimally Differentiated Rules Instead of "Per Se Rules vs Rule of Reason,"* 2 J. COMP. L. ECON. 215 (2006), and Ken Heyer, *A World of Uncertainty: Economics and the Globalization of Antitrust*, 72 ANTITRUST L.J. 375 (2005).

and implementing an optimal merger policy is to clearly articulate a framework that incorporates the relevant costs. Even if the available evidence is limited, a clear framework at least allows one to identify the types of evidence that should be developed to inform merger policy.[17]

In this article, I describe the cost minimization framework, and I use it to assess FERC and DOJ merger policies.[18] Section II describes the cost minimization framework, which incorporates error and administrative costs. Section III describes the DOJ's relatively complex approach to assessing electric power mergers and contrasts it with the FERC's relatively simple approach. Section IV uses the cost minimization framework to explain differences between the FERC and the DOJ merger policies. Section V assesses the currently available evidence on administrative and error costs, arguing that the evidence suggests that a relatively complex policy is preferable to a relatively simple policy based largely on concentration screens. Section VI outlines the case for further research on error and administrative costs, which would help put the merger policy debate on firmer empirical ground. The debate currently is based in large part on weakly supported presumptions about the relative size of error and administrative costs. Stronger evidence would make it more likely that an optimal approach to assessing competitive effects would be identified. In turn, this would increase the likelihood of convergence between the DOJ and the FERC on competitive effects analyses. Section VII concludes, suggesting that further research may contribute to debates regarding overlapping merger review by the DOJ, the FERC, and states.

II. COST MINIMIZATION FRAMEWORK FOR ASSESSING MERGER POLICY

It is widely believed that an important goal of merger policy is to prevent harm to consumers, where harm often is taken to mean a merger-induced price increase.[19] Whether there will be a price increase will depend on the net effect

17. *Cf.* Jurgen-Peter Kretschmer, *Optimal Structuring of Assessment Processes in Competition Law: A Survey of Theoretical Approaches* 29 (MAGKS, Discussion Paper No. 14-2011) (arguing that theoretical models of optimal competition policy can focus research on key issues), *available at* http://www.uni-marburg.de/fb02/makro/forschung/magkspapers/14-2011_kretschmer.pdf. The need to develop quantitative evidence regarding merger policy, in general, has been recognized by several commentators. *See, e.g.*, Dennis W. Carlton, *The Need to Measure the Effect of Merger Policy and How to Do It*, 22 ANTITRUST 39 (2008) ("Although the qualitative judgments of [learned practitioners and scholars] is important, it is no substitute for quantitative studies and measures. The dearth of such studies and measures means that there is no reliable guide for determining whether our antitrust policy is too lax in some areas and too stringent in others.").

18. It is important to distinguish between the determination that *a particular merger* is or is not anticompetitive and a determination that *a merger policy* is or is not optimal. This article concerns the appropriate means of identifying an optimal merger policy; it does not concern the appropriate means of determining whether a particular merger is or is not anticompetitive. To determine that a policy is optimal is not to simultaneously determine that every decision made under that policy regarding a particular merger is optimal. Accounting for all relevant costs, an optimal policy occasionally will reach an incorrect determination regarding a particular merger.

19. There is substantial debate about what "harm to consumers" actually means, much of it concerned with whether harm should be measured by the economic concepts of consumer surplus, producer surplus, or total surplus. *See, e.g.*, Joseph Farrell & Michael L. Katz, *The Economics of Welfare Standards in Antitrust* 29, 32 (July 20, 2006), http://escholarship.org/uc/item/1tw2d426 (last visited Sept. 10, 2011) (arguing there are merits to consumer surplus as an appropriate standard); Russell Pittman, *Consumer Surplus as the Appropriate Standard for Antitrust Enforcement* 3 (U.S. Dept. of Justice, Antitrust Div., Working Paper No. EAG 07-9, June 2007), *available at* http://www.justice.gov/atr/public/eag/225696.pdf (last visited Sept. 10, 2011) (arguing consumer surplus is an appropriate standard and may produce results similar to a total welfare standard). The classic statement of the case for antitrust policy based on total surplus is ROBERT BORK, THE ANTITRUST

of two factors: market power and efficiencies. A merger can tend to increase prices by increasing market power exercised by the merged firm; on the other hand, a merger can tend to decrease prices by increasing efficiencies. If market power effects predominate, the merger will increase prices; if efficiency effects predominate, the merger will decrease prices.[20] Thus, the goal of merger policy, generally, is to prevent mergers where market power effects predominate (which harm consumers through higher prices), and to permit mergers where efficiency effects predominate (which benefit consumers through lower prices).

There are many alternative policies that could, in principle, achieve that goal, ranging from very simple to very complicated policies. For example, an agency could adopt a simple rule that prohibits all mergers, thereby preventing any merger-related market power effects. That policy, however, might deprive consumers of merger-related efficiency effects. At the other extreme, an agency could adopt a rule that calls for a highly detailed examination of every merger to be more certain that the agency does not permit mergers that harm consumers or prohibit mergers that benefit consumers. Alternatively, an agency could take a middle path by, for example, implementing a structural screen based on concentration to identify mergers deserving of greater scrutiny while permitting mergers that do not fail the screen.

There has been a long and ongoing debate about the role of structural screens in merger policy. Legal scholars in the 1960s noted that section 7 of the Clayton Act, the primary federal merger statute, called for judgments about the future effects of a merger based on imperfect information about a wide range of factors that could affect a merger's competitive effects.[21] These scholars believed that a feasible merger policy would require presumptions designed to avoid an administratively burdensome, potentially error-prone, full-blown analysis of all factors that might bear on every merger's competitive effects.[22] As a result of the influence of this scholarly work, presumptions – largely in the form of structural screens based on market shares or concentration – have long been an element of federal merger policy.[23]

PARADOX 107-115 (1978). In this article I assume that consumer surplus is the appropriate standard and that the goal of merger policy should be to prevent increased prices to consumers. The assumption does not substantially affect the analysis or conclusions of this article; it is made purely for expositional convenience.

20. The classic statement of the tradeoff between efficiencies and market power is Oliver E. Williamson, *Economies as an Antitrust Defense*, 58 AM. ECON. REV. 18 (1968).

21. One of the first works to explicitly address these issues with respect to mergers (albeit in a judicial context) was Bok, *supra* note 12. As described by Herbert Hovenkamp,

> Most economists of Bok's day believed that [a] panoply of factors had to be taken account of in merger cases, for each factor was relevant to the thing the court was supposed to decide: whether, on balance, a merger was competitive or anticompetitive. Bok argued that this insistence on analyzing every factor was unrealistic, given the institutional limitations of the courts. Furthermore, it was unnecessary, for a few presumptive rules could produce reasonably accurate results.

Hovenkamp, *supra* note 12, at 528-29. Although Bok largely was concerned with judicial decision making regarding mergers, his arguments affected the course of merger policy at the DOJ more generally. *Id*. at 537 ("The 1968 Merger Guidelines issued by the Department of Justice also show strong influence from Bok.").

Like Bok, Carl Kaysen and Donald Turner also advocated the use of structural presumptions to make antitrust policy feasible. KAYSEN & TURNER, *supra* note 12, at 132-133 (noting that proof of effects under Section 7 concerns future probabilities, which requires reliance on structural presumptions rather than behavior evidence to make antitrust policy feasible).

22. KAYSEN & TURNER, *supra* note 12, at 132-33.

23. The first merger guidelines, issued by the DOJ in 1968 when Donald Turner headed the Antitrust Division, were based largely on presumptions based on market shares. U.S. DEP'T OF JUSTICE, MERGER GUIDELINES ¶ 5 (1968), *available at* http://www.justice.gov/atr/hmerger/11247.pdf. Every subsequent version

Simple structural screens, however, are imperfectly correlated with the likelihood of competitive harm, which means that a policy based on them will sometimes erroneously permit mergers that are anticompetitive and prohibit mergers that are procompetitive, both of which can be costly to consumers. Following on the earlier work concerning the utility of presumptions, later scholarly work more thoroughly explored the consequences of errors in antitrust policy, identifying tradeoffs between a more complex, administratively costly policy, and reduced error costs.[24] More recently, legal scholars and economists have developed formal models of that tradeoff, and have suggested that merger policy should seek to minimize error and administrative costs.[25] Different merger policies have different costs, and minimizing the costs to society of merger policy – not just minimizing the harm a merger imposes on consumers through higher prices – can be viewed as an important end in itself. As discussed in greater detail below, these "error cost" or "cost minimization" models formalize the relationship between administrative costs and error costs.

A. Error Costs

No merger policy is perfect. Every policy inevitably will allow some mergers that harm consumers by increasing market power, which results in higher prices, and will prohibit some mergers that benefit consumers by increasing efficiency, which results in lower prices.[26] A simple policy consisting of a per se rule permitting all mergers, for example, will always fail to prevent harmful mergers but will always permit beneficial mergers. A simple policy consisting of a per se rule banning all mergers will always prevent harmful mergers but will always fail to permit beneficial mergers. Even a slightly more sophisticated policy that seeks to distinguish between harmful and beneficial mergers based on a concentration screen is not likely to be perfect; because there is an imperfect relationship between concentration and harm or benefits to consumers, the policy sometimes will, and sometimes will not, accurately identify mergers that are likely to benefit consumers. Thus, apart from per se rules banning or allowing mergers, any merger policy is likely to produce two

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of the HMG has incorporated market concentration presumptions. U.S. DEP'T OF JUSTICE, MERGER GUIDELINES, § I (1982), *available at* http://www.justice.gov/atr/hmerger/11248.pdf; U.S. DEP'T OF JUSTICE, MERGER GUIDELINES 2 (1984), *available at* http://www.justice.gov/atr/hmerger/11249.pdf; 1992 HMG, *supra* note 2, at 3.

24. For a comprehensive overview of literature on economic models of competition policy, including models like the cost minimization model I use in this paper, see Kretschmer, *supra* note 17. Much of the more formal work in the 1970s addressed error and administrative costs in the context of legal rulemaking generally. *See, e.g.*, Richard A. Posner, *An Economic Approach to Legal Procedure and Judicial Administration*, 2 J. LEGAL STUD. 399 (1973). One of the first scholars to apply the lessons of this literature to antitrust policy in the 1980s was Frank H. Easterbrook, *The Limits of Antitrust*, 63 TEX. L. REV. 1, 16 (1984) ("The legal system should be designed to minimize the total costs of (1) anticompetitive practices that escape condemnation; (2) competitive practices that are condemned or deterred; and (3) the system itself.").

25. *See, e.g.*, C. Fredrick Beckner III & Steven C. Salop, *Decision Theory and Antitrust Rules*, 67 ANTITRUST L J. 41, 50, 54-57, 65 (1999) (developing error cost model as applied to judicial decision making, including decisions with respect to horizontal mergers); Heyer, *supra* note 16, at 376; Christiansen & Kerber, *supra* note 16, at 216.

26. Heyer, *supra* note 16, at 380 ("In the merger context . . . most regulators and practitioners would admit that authorities might not block all of those mergers that would prove harmful to competition. Likewise, authorities might not permit all of those mergers that are benign or procompetitive."); *cf.* Christiansen & Kerber, *supra* note 16, at 223 ("The basic assumption of this error-cost approach is that competition enforcement is always imperfect.") (citations omitted).

types of errors, commonly referred to as type I (failing to stop harmful mergers that raise prices for consumers as a result of market power) and type II (failing to permit beneficial mergers that lower prices for consumers as a result of efficiency gains) errors.[27]

Type I and type II errors potentially can result in substantial costs for consumers and producers in power markets. The failure to block a merger that enables generators to exercise market power (a type I error) denies consumers the benefits of competition, potentially reducing output and increasing prices. This is not a hypothetical concern; as is well understood, several features of power markets render them susceptible to an exercise of market power.[28] Moreover, several studies confirm that generators have exercised market power in power markets in the United States and elsewhere; and, they confirm that such exercises yield gains to generators and costs to consumers that can be extremely large.[29] Although there are few studies that directly address the net effect of mergers between generators on prices, the theory and empirical evidence concerning power markets suggests that mergers that increase market power can have very large adverse effects on consumers; i.e., this work suggests that type I errors, while benefitting generators, can be very costly for consumers.

The failure to permit a merger that enables generators to realize efficiencies (a type II error) potentially denies consumers the benefits of merger-related efficiencies. Merger-related efficiencies, such as reduced generation costs, can expand output and reduce prices for consumers. Although there is a substantial amount of evidence regarding potential efficiencies arising from mergers, in general, there is little evidence regarding potential efficiencies from electric power mergers.[30] That is not to say that such efficiencies do not exist; it is only to say that the evidence regarding efficiencies is limited. Thus, the evidence bearing on type I errors in power markets seems to be much more developed than the evidence on type II errors in these markets.

B. Administrative Costs

Error costs are not the only costs a merger policy can impose on consumers and society more generally. A merger policy also entails administrative costs, which are the costs of determining whether a merger harms or benefits consumers. There are two types of administrative costs: direct and indirect.

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27. Heyer, *supra* note 16, at 380-81 (describing type I and type II errors in merger context); Christiansen & Kerber, *supra* note 16, at 225 (describing type I and type II errors in antitrust policy more generally).

28. *See, e.g.*, Frank A. Wolak, *Using Restructured Electricity Supply Industries to Understand Oligopoly Industry Outcomes*, 18 UTIL. POL'Y 227, 227 (2010) (noting that power markets are characterized by high storage costs, finite transmission capacity, and inelastic demand, which render them susceptible to an exercise of market power).

29. *See, e.g.*, Severin Borenstein, James B. Bushnell & Frank A. Wolak, *Measuring Market Inefficiencies in California's ReStructured Wholesale Electricity Market*, 92 AM. ECON. REV. 1376, 1396 (2002) (finding that rents attributable market power in California rose from $425 million in 1998 to $4.4 billion in 2000).

30. One of the few recent studies of the effects of electric power mergers in restructured markets is J. Dean Craig & Scott J. Savage, *Market Restructuring, Competition and the Efficiency of Electricity Generation: Plant-level Evidence from the United States 1996 to 2006* 23 (Univ. Colo. Econ. Dep't, Working Paper No. 09-06, 2009), *available at* http://dirwww.colorado.edu/Economics/papers/Wps-09/wp09-06/wp09-06.pdf (finding that efficiency gains from market restructuring are due to factors other than mergers).

Direct costs include those costs borne by the merging parties and other individuals or firms that may have evidence regarding a merger's competitive effects.[31] They include the costs to the merging firms and others of identifying and providing an agency, like the DOJ or the FERC, with the data, documents, and other information it requires to assess a merger's competitive effects. Direct costs also include costs borne by the agency, including the cost of having agency staff review and analyze information provided by the merging parties or others. These costs are not trivial: anecdotal evidence suggests that a comprehensive analysis of a complicated merger can cost the merging parties alone tens of millions of dollars.[32] At least some portion of direct costs, whether borne by merging parties or agencies, eventually will fall on consumers in the form of higher taxes or higher electricity costs.

Indirect administrative costs cover all other costs borne by society at large. These costs include, for example, the effects of uncertainty on future mergers. A highly uncertain merger policy that makes it difficult for firms contemplating a merger to predict whether an agency will permit a merger, may discourage beneficial mergers (i.e., mergers that lower prices) simply because there is a chance that the agency will block the merger.[33] A more certain merger policy, on the other hand, will give firms greater confidence that the efforts they sink into planning and executing a merger will be worthwhile, encouraging potentially beneficial mergers.

There are two important points to make about this framework. First, to simply recognize that error and administrative costs exist, and that they should be minimized, does not provide much guidance to an agency seeking to implement an optimal policy. The magnitude and likelihood of these costs will vary across policies, and different policies will result in different costs for an agency, consumers, and others. All of this implies that empirical estimates of the likelihood and magnitude of these costs are necessary to formulate an optimal policy. Second, this framework recognizes and accounts for the fundamental tradeoff inherent in merger policy. As merger policy moves from a relatively simple to a more complex policy, error costs may decrease but administrative costs will increase.[34] This tradeoff, while obvious, is not often recognized in discussions of merger policy differences between the FERC and the DOJ. Under this framework, and as discussed at greater length below, FERC policy can be viewed as one that economizes administrative costs through the use of bright line concentration screens to assess competitive effects, at the expense of greater error costs. DOJ policy, on the other hand, can be viewed as

31. Heyer, *supra* note 16, at 386-87 (noting that incorporating more information into a merger analysis would increase "the more direct costs associated with obtaining and processing additional information (and litigating over additional issues)").

32. *See infra*, Part V.B and accompanying text.

33. Heyer, *supra* note 16, at 386 (noting that a cost of moving to a more complex merger policy is that it may make it harder for businesses to predict when a proposed merger might be subject to challenge).

34. The distinction between a relatively simple and a more complex policy I describe in this article is similar to the distinction made with respect to merger rules in Christiansen & Kerber, *supra* note 16. Christiansen & Kerber describe a continuum of merger rules with per se rules at one extreme and a rule of reason at the other extreme, but with "more or less differentiated rules," in between. *Id.* at 220-21. Rules that take into account a greater number of criteria and a greater amount of information are considered more complex or more "differentiated" by Christiansen & Kerber. *Id.* at 221. When I refer to a more complex policy, I am referring to a policy that uses a "more differentiated" rule as described by Christiansen & Kerber. *Id.* at 220-21.

one that economizes error costs through the use of a more extensive inquiry to assess competitive effects, at the expense of greater administrative costs.

III. FERC AND DOJ MERGER POLICY

FERC and DOJ merger policies are very different. The FERC's policy is based on relatively simple rules regarding market concentration levels that are easy to administer, whereas the DOJ's policy is based on a more open-ended examination of a wide range of evidence that is more costly to administer. These differences are clearly illustrated by the agencies' analyses of the proposed, but unconsummated, 2005 Exelon-PSEG merger and the consummated 2012 Exelon-Constellation merger, both of which resulted in the agencies reaching different conclusions regarding competitive effects and appropriate remedies.

A. DOJ Merger Policy

The DOJ's framework for analyzing mergers is described in the 2010 HMG, which are designed to provide market participants with some certainty about how the DOJ will analyze a merger.[35] The HMG are intended to apply to a broad range of industries, and the manner in which the HMG are applied to a particular merger will depend on the facts and circumstances of the merger. Unlike the FERC, the DOJ has not issued merger guidelines designed specifically for electric power mergers. The DOJ has, however, issued public statements concerning specific mergers describing how it has applied the HMG to horizontal electric power mergers.[36] These statements show that the DOJ has engaged in a relatively complex inquiry into competitive effects that considers many factors, not just concentration.

The HMG describe two types of merger-related competitive effects: coordinated and unilateral. Coordinated effects result when a merger makes it more likely that firms remaining in the industry after the merger would engage in some kind of coordination to increase price (or lessen competition in some other way).[37] Unilateral effects result when a merger makes it more likely that the merged firm, without coordinating with other firms remaining in the industry, would increase prices.[38] The evidence that the DOJ relies on to determine whether a particular merger harms consumers depends on the theory of harm – unilateral or coordinated – and the particular characteristics of the industry and firms involved.

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35. Shapiro, *supra* note 8, at 709 ("[T]he revised Guidelines . . . should allow the business community to assess more accurately how the Agencies are likely to evaluate proposed horizontal mergers.").

36. The DOJ made several public statements concerning its analysis of the proposed 2005 Exelon-PSEG merger. *See, e.g.*, United States of America v. Exelon Corp. and Pub. Servs. Enter. Grp., 71 Fed. Reg. 49,477, 49,487 (2006); Thomas O. Barnett, Asst. Atty. General, Antitrust Div., U.S. Dept. of Justice, Merger Review: A Quest for Efficiency, Address at the New York State Bar Ass'n, Antitrust Section, Annual Meeting (Jan. 25, 2007), *available at* http://www.justice.gov/atr/public/speeches/221173.pdf; Dennis W. Carlton, *Mergers in Regulated Industries: Electricity* (Antitrust Div., Economic Analysis Group, Working Paper EAG07-16, 2007), *available at* http://www.justice.gov/atr/public/eag/228709.pdf; Elizabeth Armington, et al., *The Year in Review: Economics at the Antitrust Division, 2005-2006*, 29 REV. INDUS. ORG. 305, 315-22 (2006). The DOJ also issued public statements concerning its analysis of the consummated 2012 Exelon-Constellation merger. United States v. Exelon Corp., 76 Fed. Reg. 81,528 (2011).

37. 2010 HMG, *supra* note 2, § 7. Coordination need not occur through an explicit agreement or conspiracy, it also may occur through tacit collusion. *Id.* (noting that coordination can occur through a "common understanding" or through "parallel accommodating conduct").

38. *Id.* § 6.

Market concentration, measured by the Hershman-Herfindahl Index (HHI), often plays a role under either theory.[39] The HMG describe a method for identifying relevant product and geographic markets, which in turn allows one to identify market participants and compute concentration levels and merger-induced changes in concentration.[40] The HMG identify concentration levels and changes that indicate the DOJ's degree of concern with a merger; the greater the post-merger concentration and the greater the change in concentration, the greater the likelihood the merger will result in anticompetitive effects.[41] If a merger produces concentration levels and changes that are within certain levels identified in the HMG, the DOJ believes the merger is unlikely to harm consumers.[42] The purpose of the HMG's so-called safe harbor concentration levels is not to rigidly separate anticompetitive from procompetitive mergers; rather, the higher the post-merger concentration and the increase in concentration resulting from a merger, the greater the likelihood that the DOJ will seek additional information to analyze the merger.[43] For mergers that are not unlikely to harm consumers, evidence other than concentration often plays a substantially greater role in the DOJ's analysis.

The DOJ has described its approach to competitive effects analysis of electric power mergers in various public documents related to the Exelon-PSEG (PSEG) merger and Exelon-Constellation (Constellation) merger. In each case, the DOJ described the relevant product and geographic markets, and the evidence supporting those markets;[44] the competitive effects theory under which the merger was analyzed, and the evidence supporting the theory;[45] and the evidence concerning the likelihood that entry would offset the mergers' competitive effects.[46] In the case of the PSEG merger, the DOJ ultimately

39. *Id.* § 5.3 ("Market concentration is often one useful indicator of likely competitive effects of a merger.").

40. *Id.* § 4. In some circumstances, direct evidence of harm to consumers may obviate the need to consider market definition and concentration under the HMG. *Id.* ("The Agencies' analysis need not start with market definition. Some of the analytical tools used by the Agencies to assess competitive effects do not rely on market definition, although evaluation of competitive alternatives available to customers is always necessary at some point in the analysis.").

41. *Id.* § 5.3.

42. *Id.* (mergers involving an HHI increase of less than 100 points and mergers resulting in an unconcentrated market (an HHI of less than 1500) "are unlikely to have adverse competitive effects and ordinarily require no further analysis").

43. The 2010 HMG expressly notes that

> The purpose of these thresholds is not to provide a rigid screen to separate competitively benign mergers from anticompetitive ones, although high levels of concentration do raise concerns. Rather, they provide one way to identify some mergers unlikely to raise competitive concerns and some others for which it is particularly important to examine whether other competitive factors confirm, reinforce, or counteract the potentially harmful effects of increased concentration. The higher the post-merger HHI and the increase in the HHI, the greater are the Agencies' potential competitive concerns and the greater is the likelihood that the Agencies will request additional information to conduct their analysis.

2010 HMG, *supra* note 2, § 5.3. Thus, the concentration levels of the 2010 HMG are far from the de facto safe harbor they tend to be under the FERC's MPS.

44. 71 Fed. Reg. 49,477, at 49,479, 49,487 (Exelon-PSEG); 76 Fed. Reg. 81,528, at 81,530, 81,533-34 (Exelon-Constellation).

45. 71 Fed. Reg. 49,477, at 49,479, 49,487 (Exelon-PSEG); 76 Fed. Reg. 81,528, at 81,530-531, 81,534 (Exelon-Constellation).

46. 71 Fed. Reg. 49,477. at 49,479, 49,487-88 (Exelon-PSEG); 76 Fed. Reg. 81,528, at 81,531, 81,534 (Exelon-Constellation).

determined the merger would increase electricity prices for consumers in two geographic markets within the PJM control area, and entered into a consent decree with Exelon and PSEG calling for the divestiture of 5,600 megawatts (MW) of generating capacity to remedy merger-related harm in those markets.[47] In the case of the Constellation merger, the DOJ ultimately determined the merger would increase electricity prices in two geographic markets within the PJM control area and entered into a consent decree with Exelon and Constellation calling for the divestiture of 2,600 MW of generating capacity to remedy harm in those markets.[48]

Court papers filed by the DOJ with the Exelon-PSEG and Exelon-Constellation consent decrees described a unilateral effects theory of harm that is commonly referred to as a "withholding" or "output suppression" theory.[49] Under this theory, each merger would have increased the incentive or ability of the merged firm to withhold output from relatively high cost generating units to raise wholesale electricity prices to the benefit of output from lower cost generating units that continued to produce output.[50]

In the case of the PSEG merger, the DOJ determined that bringing together Exelon's low cost generating units and PSEG's high cost generating units would increase the ability and incentive of the merged firm to withhold output, raising wholesale electricity prices relative to their premerger levels, ultimately increasing electricity costs for consumers.[51] The DOJ made a similar determination in the case of the Constellation merger, finding that bringing together Exelon's low cost generating units and Constellation's higher cost generating units would increase the likelihood of an exercise of market power, raising wholesale power prices.[52]

Concentration played only a limited role in the DOJ's analysis of the Exelon-PSEG and Exelon-Constellation mergers. In the case of the PSEG merger, the DOJ stated that wholesale electricity prices would increase in two geographic markets that were defined by constraints that often arose on two well-known transmission interfaces in the PJM control area.[53] Although the DOJ reported premerger concentration levels and changes in each market, and tied them to the HMG's judgments about likely competitive effects,[54] the DOJ

47. 71 Fed. Reg. 49,477, at 49,480. The DOJ analyzed the Exelon-PSEG merger under the 1992 HMG. Although the HMG were revised in 2010, there is little reason to believe that the DOJ's analysis of the Exelon-PSEG merger would have changed substantially if analyzed under the 2010 HMG. *Cf.* Press Release, Dep't of Justice, Dep't of Justice and Federal Trade Comm'n Issue Revised Horizontal Merger Guidelines 3 (Aug. 19, 2010), *available at* http://www.justice.gov/atr/public/press_releases/2010/261642.pdf ("[The 2010 HMG] are not intended to represent a change in the direction of merger review policy, but to offer more clarity on the merger review process to better assist the business community and, in particular, parties to mergers and acquisitions.").

48. 76 Fed. Reg. 81,528, at 81,534-35.

49. 71 Fed. Reg. 49,477, at 49,487 (Exelon-PSEG); 76 Fed. Reg. 81,528, at 81,534 (Exelon-Constellation). *See also* STEVEN STOFT, POWER SYSTEM ECONOMICS: DESIGNING MARKETS FOR ELECTRICITY 319-333 (2002) (describing withholding theory in power markets); 2010 HMG, *supra* note 2, § 6.3, Example 20 (describing output suppression theory).

50. Mark A. Dutz, *Horizontal Mergers in Declining Industries*, 7 INT'L J. INDUS. ORG. 11, 11 (1989).

51. 71 Fed. Reg. 49,477 at 49,487.

52. 76 Fed. Reg. 81,528, at 81,534.

53. 71 Fed. Reg. 49, 477, at 49,486-87 (describing "PJM East" and "PJM Central-East" markets defined by Eastern Interface and 5004/5005 Interface respectively).

54. *Id*.

stated that the more important evidence concerned changes to the composition of the generating portfolio owned by the merged firm and its implications for harm under a unilateral effects theory.[55] In the case of the Constellation merger, the DOJ went through a very similar analysis, determining that electricity prices would rise in two geographic markets defined by transmission interfaces within the PJM control area, noting concentration levels and changes induced by the merger, but again emphasizing the importance of changes to the composition of the generating portfolio held by the merged firm.[56]

In short, the DOJ's analyses of the Exelon-PSEG and Exelon-Constellation mergers went well beyond simple concentration measures to determine whether the mergers would harm consumers. The DOJ examined the cost characteristics of each generator's generation portfolio to determine that each merger was likely to enhance the ability and incentive of the merged firm to exercise market power. Concentration was merely the starting point for the DOJ's competitive effects analysis.

B. FERC Merger Policy

The FERC, on the other hand, largely relied on the concentration screens of its Merger Policy Statement (MPS)[57] to determine whether the Exelon-PSEG and Exelon-Constellation mergers would harm consumers. The MPS, issued in 1996, describes the FERC's framework for analyzing horizontal mergers. It was designed to expedite the FERC's review of mergers and provide the industry with greater regulatory certainty.[58] Toward that end, Appendix A of the MPS clearly articulated a method for identifying relevant markets and computing concentration.[59] It also identified safe harbor concentration levels (based on the 1992 HMG) that, if met by a merger with or without an appropriate mitigation (sometimes referred to as a remedy), would result in almost automatic approval by the FERC.[60] If a merger failed the screen, the MPS stated that the FERC would undertake a more detailed analysis, possibly including a trial-type

55. *Id*. ("*More importantly*, in both geographic markets the merged firm would own low-cost baseload units that provide incentive to raise prices, mid-merit units that provide incentive and ability to raise prices, and certain peaking units that provide additional ability to raise prices in times of high demand." (emphasis added)).

56. 76 Fed. Reg. 81,528, at 81,533 (describing "PJM Mid-Atlantic North" and "PJM Mid-Atlantic South" markets defined by 5004/5005 Interface and AP South Interface, respectively). As in the case of the Exelon-PSEG merger, the DOJ emphasized the importance of the composition of the combined firm's generating portfolio and its implications for harm to competition, stating: "*More importantly*, in both geographic markets the merged firm would own or control low-cost baseload units that provide incentive to raise prices and higher-cost units that provide ability to raise prices." *Id.* (emphasis added).

57. *See generally* Policy Statement, Inquiry Concerning the Commission's Merger Policy Under the Federal Power Act, 61 Fed. Reg. 68,595 (1996) (codified at 18 C.F.R. pt. 2) [hereinafter MPS].

58. *Id.* at 68,596.

59. *Id.* at 68,606-609.

60. *Id.* at 68,601, stating

> If the Guidelines' thresholds are not exceeded, no further analysis need be provided in the application. As stated earlier, if an adequately supported screen analysis shows that the merger would not significantly increase concentration, and there are no interventions raising genuine issues of material fact that cannot be resolved on the basis of the written record, the Commission will not set this issue for hearing.

Restraints on their ability to obtain discovery under FERC regulations make it difficult for intervenors to raise genuine issues of material fact. Such restraints further entrench the HHI thresholds as the single most important factor determining whether the FERC will approve a merger.

hearing.[61] The MPS adopted the 1992 HMG as the basic framework for analyzing a merger's competitive effects.[62] The MPS, however, gave little consideration to how the HMG, designed to apply to a wide range of industries, should be applied to the specific facts of the electric power industry. In particular, the MPS did not discuss whether the general HHI thresholds of the 1992 HMG, which were the basis of the safe harbor concentration levels of the MPS, were appropriate for the electric power industry. Moreover, the MPS did not mention the two primary theories of merger harm identified in the HMG: unilateral and coordinated effects. In short, although the MPS adopted the HMG, the MPS was vague about the way in which the FERC would implement the HMG (apart from its implementation of concentration safe harbors). In subsequent merger orders, however, the FERC has discussed the ways in which it applies the HMG.

In its orders approving the Exelon-PSEG and Exelon-Constellation mergers, the FERC applied the MPS to determine that neither merger, with the parties' proposed mitigation measures, would harm competition.[63] As called for by the MPS, the FERC relied on concentration levels under various demand conditions in different geographic markets. The FERC compared concentration levels to the MPS's safe harbor thresholds and found that, although there would have been some violations of the thresholds in certain time periods, the parties' proposed remedies were sufficient to clear the concentration thresholds and permit the merger to take place without an administrative hearing.[64] In the case of the PSEG merger, the parties' proposed divestiture of generating units, and a virtual divestiture of capacity totaling 6,600 MW, was sufficient to permit the merger to proceed.[65] In the case of the Constellation merger, the parties' proposed divestiture of generating units with a total capacity of 2,600 MW, their commitment to enter into fixed price sales for 500 MW of electricity, and their commitment to abide by several restrictions on their behavior were sufficient to permit the merger to proceed.[66]

In its orders, the FERC expressed few reservations about the use of concentration to predict competitive harm from the mergers. In the case of the PSEG merger, the FERC stated that concentration conveys useful information about the likelihood of a unilateral exercise of market power.[67] It also stated that

61. *Id.* at 68,606.

62. *Id.* at 68,596 ("[O]ur analysis of the effect on competition will more precisely identify geographic and product markets and will adopt the Department of Justice/Federal Trade Commission Merger Guidelines (Guidelines) as the analytical framework for analyzing the effect on competition.").

63. Order Authorizing Merger under Section 203 of the Federal Power Act, *Exelon Corp. and Public Service Enterprise Corp.*, 112 F.E.R.C. ¶ 61,011 at P 1 (2005); *See also* Order Conditionally Authorizing Merger and Disposition of Jurisdictional Facilities, *Exelon Corp. and Constellation Energy Grp., Inc.*, 138 F.E.R.C. ¶ 61,167 at P 2 (2011).

64. 112 F.E.R.C. ¶ 61,011; 138 F.E.R.C. ¶ 61,167.

65. 112 F.E.R.C. ¶ 61,011 at P 120.

66. 138 F.E.R.C. ¶ 61,167 at PP 93-94.

67. *Id.* at P 131. The Commission dismissed arguments that it should have engaged in a more detailed analysis of the merger, stating:

> We are not convinced by arguments that Applicants should have analyzed the merger's effect on their ability and incentive to harm competition by engaging in strategic bidding (which is a form of unilateral market power). The Commission's analysis focuses on a merger's effect on competitive conditions in the market. That is, we look at the merger's effect on the concentration of the relevant markets, as measured by the HHI. . . . [T]he Merger Guidelines recognize that the HHI does, in fact,

the parties' remedy – which differed markedly from the remedy that the parties agreed to with the DOJ – would result in divestiture of generating units whose output could be withheld to exercise market power.[68] Finally, the FERC noted that withholding output could qualify as market manipulation under its rules, potentially resulting in revocation of the merged Exelon-PSEG's market-based rate authority,[69] which, in principle, could impose severe restrictions on the merged firm's ability to set its prices freely. In the case of the Constellation merger, the FERC's commentary on its approach to assessing competitive effects was not nearly as extensive as that for the PSEG merger, with the FERC largely relying on concentration analyses to justify its Exelon-Constellation order.[70]

C. Convergence or Divergence?

A cursory examination of the FERC's and the DOJ's analyses of the Exelon-PSEG and Exelon-Constellation mergers might lead one to believe that the agencies are converging rather than diverging in their respective analyses of competitive effects. The FERC and the DOJ required divestiture of exactly the same plants in the case of the Constellation merger. In contrast, only six years earlier the FERC and DOJ remedies for the PSEG merger diverged more sharply, with the DOJ calling for divestiture of 5,600 MW of generating capacity and the FERC calling for an actual and virtual divestiture of 6,600 MW of capacity.[71] At the end of the day, why should anyone care about differences between the analytical techniques used by the DOJ and the FERC if they ultimately arrive at the same conclusion regarding competitive effects and an appropriate remedy?

There are at least two answers to this question. First, the mere fact that we observe similar outcomes at the agencies does not necessarily mean merger policies are converging. One plausible alternative explanation is that merging generators are seeking to minimize their costs of trying to satisfy two agencies. Anticipating different analyses and remedies at the agencies, merging generators may find it in their own interest to propose similar remedies to each agency, in part to avoid inconsistent remedies imposed by the agencies. Rather than propose one remedy to the FERC and another to the DOJ, merging generators also may avoid the costs associated with proposing, implementing, and overseeing two different remedies by proposing the same remedy to each agency. Although such a strategy may reduce costs to merging generators, it plainly does not eliminate the costs of review by two agencies employing different analytical techniques. Merging parties still face the cost of two reviews that purport to do the same thing: assess competitive effects. They also still face the costs associated with uncertainty regarding the nature of the potentially

convey information about the likelihood of the unilateral exercise of market power. *Id.* (citation omitted).

68. *Id.*

69. *Id.*

70. 138 F.E.R.C. ¶ 61,167 at PP 93-101. In an unusual step, the FERC incorporated into its final order commitments made by the parties to the PJM Market Monitor with respect to the identity of the parties entitled to acquire generating units to be divested by the parties, among other things. *Id.* at PP 82-85, 93-94. The FERC, however, did not offer any rationale or justification for its decision to incorporate the Market Monitor agreement into its order. The DOJ made no reference to the Market Monitor agreement in any of its public statements regarding the Exelon-Constellation merger.

71. *See supra* notes 47 and 66 and accompanying text.

duplicative or inconsistent remedies that will be imposed by the agencies.[72] These costs are borne not only by merging parties: some part of them will be passed on to consumers in the form of higher electricity prices or increased taxes, which gives consumers an interest in seeing that merger review is consistent across agencies. Consistency at least ensures that merging parties will not have to prepare two different competitive effects analyses.[73]

Second, the mere fact that each agency appeared to agree to similar remedies for the Constellation merger should not obscure the fact – discussed at length above – that the DOJ and the FERC continue to rely on vastly different analyses to assess competitive effects, which will always leave open the very real possibility of sharply different outcomes at the agencies, as with the PSEG merger. The key difference between the DOJ and the FERC in the case of the PSEG merger and the Constellation mergers was the willingness of the DOJ to look beyond concentration measures for evidence of the competitive effects of the mergers. In place of a quick and easy concentration analysis, the DOJ articulated and analyzed the merger under a unilateral effects theory of harm based on the particular characteristics of the markets involved and the generation portfolio owned by the combined company.[74]

The DOJ's analysis of the PSEG merger noted that the merger would give the combined firm a larger share of mid-merit and peaking capacity with costs that often were close to the market clearing price in the PJM wholesale market.[75] The DOJ also noted that the merger would give the merged firm a greater amount of baseload capacity with costs that often were well below the PJM market clearing price.[76] According to the DOJ, mid-merit and peaking units could be withheld from the market at relatively low cost (because the operating costs of those units were near the market clearing price, with relatively small profits that would be lost through withholding) to the benefit of the combined firm's baseload units.[77] The merger thus increased the likelihood of an exercise of market power.[78] The FERC, on the other hand, did not explicitly consider evidence regarding the composition of Exelon's and PSEG's generation portfolio. Instead, market concentration was the key factor for the FERC: given that the merger with the parties' proposed remedy produced concentration levels within the MPS's safe-harbor levels, the FERC was satisfied that anticompetitive effects were unlikely.[79]

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72. *See, e.g.*, AMERICAN BAR ASS'N, REPORT ON ELECTRIC MERGER REVIEW BY THE SECTION OF ANTITRUST LAW TO THE ANTITRUST MODERNIZATION COMMISSION 9 (July 17, 2006) [hereinafter ABA REPORT] (noting that inconsistent outcomes "create uncertainty regarding the final shape and the timing of a given transaction, and hamper the [merging] parties' ability to plan their business operations"), *available at* http://www.americanbar.org/content/dam/aba/administrative/antitrust_law/comments_electric-power-mergers.authcheckdam.pdf.

73. Whether the FERC or the DOJ should cede merger review to the other agency is beyond the scope of this article. Although, as noted below, the empirical work I call for can contribute to that debate. *See infra* notes 131-132 and accompanying text.

74. United States of America v. Exelon Corp. and Pub. Serv. Enter. Grp., Inc.: Proposed Final Judgment and Competitive Impact Statement, 71 Fed. Reg. 49,477, at 49,487 (Aug. 23, 2006) (Competitive Impact Statement, describing theory of harm).

75. *Id.*

76. *Id.*

77. *Id.*

78. *Id.*

79. 112 F.E.R.C. ¶ 61,011 at PP 120, 131.

In addition to affecting each agency's assessment of a merger's harm, differences in competitive effects analyses affect DOJ and FERC remedies.[80] Because the FERC believes that concentration is a reliable indicator of harm, it is generally willing to accept remedies that restore concentration to premerger levels, with little regard for the specific generating units to be divested to remedy harm to competition. Because the DOJ typically goes beyond concentration, articulating a theory of harm based on the composition of the generating portfolio owned by the merged firm, it generally requires the divestiture of specific generating units to remedy harm arising under its theory of competitive effects. In the case of the PSEG merger, this resulted in the FERC's willingness to accept the divestiture of unspecified generating plants that would restore concentration to premerger levels. The DOJ, on the other hand, clearly identified the generating plants to be divested, consistent with its theory of harm. Thus, as long as the FERC's merger policy continues to make concentration a dispositive factor, it seems likely that substantially different outcomes at the agencies – including different assessments of the harm to competition and different remedies – will remain a real possibility.

Finally, it is important to note that the Exelon-PSEG and Exelon-Constellation mergers are only two of many mergers that have occurred over the last twenty years. There appear to have been other mergers involving horizontal or vertical competitive effects where the FERC differed with the antitrust agencies on the extent of harm or the appropriate remedy for that harm.[81] Indeed, in the case of the recently consummated Progress-Duke merger, the FERC found the merger produced anticompetitive effects in wholesale power markets.[82] Consequently, the FERC imposed substantial requirements on the merged firm to remedy those effects;[83] the DOJ, on the other hand, did not seek to challenge the merger or impose any remedy.[84]

Differences between the DOJ and the FERC are likely to persist for the foreseeable future. Two times in the last five years, the FERC has reconsidered its merger policy, only to conclude that the MPS, relying largely on concentration safe harbors to analyze competitive effects, was to remain FERC policy.[85] Indeed, in its recently concluded Notice of Inquiry on the analysis of horizontal market power, several commentators noted the divergence between the DOJ's and the FERC's implementation of the HMG, urging the FERC to

80. *See generally* Bush, *supra* note 11, at 270-73, for an extended discussion of the interaction between remedies and competitive effects under DOJ and FERC merger policy with a focus on the Exelon-PSEG merger.

81. Moss, *supra* note 13, at 254-57. *See also* ABA REPORT, *supra* note 72, at 67 (stating that "[o]n several occasions, the differing DOJ and FERC approaches resulted in an inconsistent antitrust assessment of the same transaction"). The ABA cites the example of the 2000 AEP-CSW merger, which the DOJ cleared without any remedies; the FERC, on the other hand, required divestiture of 550 MW of generating capacity, in addition to other remedies. *Id.*

82. *Duke Energy Corp. & Progress Energy, Inc.*, 139 F.E.R.C. ¶ 61,194 at P 113 (2012).

83. *Id*.

84. Press Release, Progress Energy, Progress Energy shareholders overwhelmingly approve merger with Duke Energy (Aug. 23, 2011), *available at* https://www.progress-energy.com/company/media-room/news-archive/press-release.page?title=Progress+Energy+shareholders+overwhelmingly+approve+merger+with+Duke+Energy&pubdate=08-23-2011 (noting that the companies had satisfied DOJ review).

85. *See supra*, notes 9-11 and accompanying text.

more closely follow the approach of the DOJ.[86] The FERC, however, declined to change policy, as it had declined to do so on prior occasions.[87] As I discuss in the following sections, understanding the sources of differences between the DOJ and the FERC may help to resolve those differences and more closely align their policies.

IV. ERROR AND ADMINISTRATIVE COSTS

Differences between FERC and DOJ electric power merger policies can be explained, in large part, by differences in the agencies' beliefs about the error and administrative costs of their respective policies. The FERC's reliance on concentration safe harbors reflects its belief that the error and administrative costs of such a simple rule are small relative to alternative policies. The DOJ's reliance on a more complex, open-ended inquiry, on the other hand, is consistent with a belief that the error and administrative costs of an open-ended inquiry are small relative to alternative policies.

A. Error and Administrative Costs at DOJ

In recent years, the DOJ has downplayed the role of market shares and concentration in merger analysis. The DOJ has stated that "[a]pplication of the Guidelines as an integrated whole to case-specific facts – not undue emphasis on market share and concentration statistics – determines whether the Agency will challenge a particular merger."[88] The DOJ also has stated that merger analysis under the HMG is a fact-intensive process that, in appropriate cases, involves extensive investigations "using data, documents, and other information obtained from the merging firms, their competitors, their customers, databases of various sorts, and academic literature or private industry studies."[89] Indeed, the 2010 HMG describe the types of evidence the DOJ may rely on to predict a merger's likely competitive effects.[90] However, market shares and concentration are only two of several types of evidence mentioned, which include the actual effects of consummated mergers, natural experiments, substantial head-to-head competition, and the disruptive role of a merging firm.[91]

The DOJ's statements regarding the Exelon-PSEG and Exelon-Constellation mergers, and its recent revisions of the HMG, suggest that it believes it is appropriate – as a matter of policy – to undertake a detailed case-specific analysis of potentially problematic electric power mergers, even if the administrative costs of such analyses are not trivial, as some evidence suggests. It took the DOJ over a year to conclude its investigation of the Exelon-PSEG merger investigation, and it took hundreds of man-hours to produce data for just one of the merging firms, according to an attorney representing PSEG.[92] And

86. NOI, 134 F.E.R.C. ¶ 61,191; *see also* Comments of the Independent Market Monitor for PJM, FERC Docket No. RM11-14-000, 4 (May 23, 2011).

87. Order Reaffirming Commission Policy, *supra* note 10, at PP 55-59 (2012).

88. U.S. DEPT. OF JUSTICE & FED. TRADE COMM'N, COMMENTARY ON THE HORIZONTAL MERGER GUIDELINES 15-16 (2006), *available at* http://www.justice.gov/atr/public/guidelines/215247.pdf.

89. *Id.* at 3.

90. 2010 HMG, *supra* note 2, § 2.2

91. *Id.*

92. Transcript of Technical Conference on Merger and Acquisition Review Standards, 118:12-23, 122:7-20, FERC Docket Nos. RM05-32 & 34 (Mar. 8, 2007) [hereinafter Transcript] (testimony of Douglas

there are, of course, other administrative costs associated with a detailed inquiry into the competitive effects of a merger, including the indirect costs associated with uncertainty regarding a DOJ determination. Absent bright-line rules, firms contemplating a merger may not be able to accurately estimate the likelihood that the DOJ will seek to block the merger. As a result, firms that underestimate the probability of a DOJ challenge may unnecessarily incur costs related to a merger that never is consummated. Similarly, firms that overestimate the probability of a DOJ challenge may not pursue a beneficial merger, one that might produce efficiencies or lowers prices for consumers. Such uncertainty may discourage potentially beneficial electric power mergers.

That the DOJ is willing to impose such direct and indirect costs on the merging parties, and to incur its own direct costs by devoting resources to a detailed investigation, suggests that it places a relatively high premium on avoiding type I or type II errors. Thus, it makes sense for the DOJ to devote considerable resources to analyzing a merger (i.e., to incur substantial administrative costs) to avoid making potentially large errors regarding a merger's likely competitive effects. That is, the DOJ's approach to merger analysis is consistent with a belief that the error and administrative costs of an extensive inquiry are relatively small, which makes such an approach beneficial to society.

B. Error and Administrative Costs at the FERC

The FERC has been more explicit than the DOJ about its beliefs regarding the size of administrative and error costs of a simple concentration-based rule (which the FERC refers to as an analytic screen) relative to the costs of a more complex inquiry into a merger's competitive effects. The MPS emphasizes the need for analytical and procedural certainty to reduce administrative costs for the FERC and merging parties. For example, the MPS expresses the belief that clearly articulating the merger-related information it needs would provide more certainty.[93] The MPS also states that "[i]t is important to give applicants some certainty about how filings will be analyzed and what will be an adequate showing that the merger would not significantly increase market power. This will allow applicants to avoid or minimize a hearing on this issue."[94] The desire to increase certainty suggests a concern with reducing indirect administrative costs; the desire to minimize the likelihood of a hearing suggests a concern with reducing direct administrative costs.

In contrast to its emphasis on administrative costs, there is little mention of error costs in the MPS. The FERC recognizes that mergers may produce firms with market power; and, it recognizes that no market power screen is perfect, stating that its "analytic screen will produce a reliable, conservative analysis of the competitive effects of proposed mergers. However, it is not infallible. In

Green stating that it took 455 days for the Antitrust Division to complete its review of the Exelon-PSEG merger, and hundreds of man-hours to produce data from one firm regarding one market). *See also* Comments of Dr. John R. Morris concerning *Notice of Inquiry, Analysis of Market Power Under the Federal Power Act*, at 21, FERC Docket No. RM11-14 (May 23, 2011) ("[I]n my experience complying with a [an extensive information request] at DOJ could easily cost ten times the cost of submitting and monitoring a merger application before the Commission.").

93. MPS, *supra* note 1, at 68,596.

94. *Id.* at 68,600.

some cases, the screen may not detect certain market power problems."[95] Even when it discusses possible errors, the MPS nonetheless emphasizes a need for certainty and speed as an overriding concern. For example, the MPS states that the FERC "must find ways to assess more accurately the competitive impact of merger proposals. In doing so, however, we must be sensitive to another pressing concern: the industry's need for more analytic and procedural certainty from the Commission."[96]

In the end, the FERC's MPS seems to place great faith in the ability of its safe harbor threshold to identify mergers that do not warrant any further consideration and should be approved: "By applying an analytic 'screen' based on the [HMG] early in the merger review process, the Commission will be able to identify proposed mergers that *clearly will not harm competition*."[97] At another point, the FERC notes that the screen "is conservative enough so that parties and *the Commission can be confident* that [a merger] that clears the screen would have *no* adverse effect on competition."[98] Subsequent statements from the FERC – and from individual commissioners – suggest that it still believes that a relatively strict adherence to the MPS's concentration thresholds is unlikely to produce substantial errors in assessing competitive effects.[99]

In its recent order rejecting adoption of the 2010 HMG and retaining its existing merger policy, the FERC again emphasized its belief that HHI screens remain "an important tool for evaluating mergers on the basis of their effect on market structure and performance while also providing analytic and procedural certainty to industry at relatively low cost."[100] This statement is consistent with a belief that an extensive inquiry into a merger's competitive effects would be unduly costly, making a policy of relying on concentration screens more desirable. That is, the FERC seems to believe that the error and administrative costs of its policy are small relative to alternative policies, including a more open-ended inquiry into competitive effects.

V. ASSESSING ALTERNATIVE ELECTRIC POWER MERGER POLICIES

In the recent proceeding concerning changes to the HMG, the FERC received comments suggesting a wide range of responses. Some proposed that the FERC make no changes to its policy, some proposed that the FERC simply change the MPS concentration safe harbors to make them consistent with the concentration levels of the revised HMG,[101] and some proposed that the FERC incorporate a broader range of evidence concerning competitive effects.[102] Unfortunately, few comments offered any concrete evidence for or against alternative policies. At the end of the day, the FERC declined to alter its merger

95. *Id*.

96. *Id*. at 68,599.

97. *Id*. at 68,596 (emphasis added).

98. *Id*. at 68,600 (emphasis added).

99. Transcript, *supra* note 92, at 82:19-24 (statement of Commissioner Kelliher expressing the belief that the FERC has never incorrectly deemed a merger competitively benign).

100. 138 F.E.R.C. ¶ 61,109 at P 35.

101. As noted above, the concentration levels of the 2010 HMG are far from the de facto safe harbor they tend to be under the FERC's MPS. *See supra* note 43 and accompanying text.

102. *Report of the Competition & Antitrust Committee*, 33 ENERGY L.J. 159, 177-82 (2012) (summarizing submitted comments).

policy despite the DOJ's revisions to the HMG.[103] The FERC's order rejecting any changes to its existing policy reflected a belief – but no clear evidence – that the administrative and error costs of its policy were low relative to alternative policies.[104]

A. Priors and Policy Preferences

Estimates of the magnitude and likelihood of error and administrative costs are necessary to effectively assess merger policy.[105] As suggested by the dearth of comments offering any concrete evidence in the FERC's most recent merger policy proceeding, however, there are few, if any, well-documented estimates of these costs. As a result, judgments about the efficacy of alternative electric power merger policies largely appear to be based on different presumptions – or *priors* – concerning administrative and error costs. *Priors* have been described as "the underlying beliefs and presumptions held based on one's experiences, training, and the best possible intelligence on the subject."[106]

Although there are many factors driving the merger policy debate – including the contending interests of generators who wish to see high power prices, and load serving entities (LSEs) and retail consumers who wish to see low prices – one important factor is different priors regarding the relative size and likelihood of error and administrative costs of alternative merger policies. Generators probably would bear a large share of the administrative costs of a complex policy. Because their experience suggests that administrative costs can be large, generators may emphasize those costs over error costs, leading generators to prefer a simple policy that they believe minimizes the sum of error and administrative costs. LSEs and consumers, on the other hand, probably would bear a large share of the error costs of a simple policy. Because their experience suggests that error costs can be large, LSEs may emphasize those costs, leading LSEs to prefer a complex policy that they believe minimizes the sum of error and administrative costs.

It is obvious that one's *professed* priors on merger policy may reflect nothing more than naked self-interest. Generators may prefer a simple merger policy because it maximizes their profits. A simple merger policy economizes administrative costs (which probably are borne disproportionately by generators) at the expense of greater error costs (including type I errors, which would permit

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103. 138 F.E.R.C. ¶ 61,109 at P 34.

104. The FERC emphasized its belief that its analytical screen was "generally conservative," *id.* at P 35, and that it provided "analytic and procedural certainty to industry at relatively low cost." *Id.* at P 34.

105. *Cf.* Carlton, *supra* note 11, at 42 (discussing need for empirical evidence regarding merger policy, stating that "[s]trong opinions are not a substitute for quantitative analysis"); Orley C. Ashenfelter, et al., *Generating Evidence to Guide Merger Enforcement* 19 (CEPS Working Paper No. 183, 2009) (describing methods for retrospective merger studies; noting that "there is relatively little empirical evidence to guide policy makers on how mergers affect competition"), *available at* http://www.princeton.edu/ceps/workingpapers/183ashenfelter.pdf.

106. Heyer, *supra* note 16, at 377 n.3. Judgments about alternative merger policies also may reflect different degrees of risk tolerance among generators, LSEs, regulators, and others. Even if all parties agreed on the magnitude and likelihood of administrative and error costs of alternative merger polices, attitudes toward risk might influence policy preferences. LSEs or regulators, for example, who might be unwilling to tolerate even a slight likelihood of an anticompetitive merger (i.e., of type I errors), might be willing to accept a merger policy that took a hard line on all mergers, even if it resulted in the increased rejection of beneficial mergers (i.e., of type II errors). As a result, risk tolerance, as well as priors and other factors, may influence merger policy preferences and choices.

merging generators to exercise market power). Thus, generators may have a strong incentive to make disingenuous or weakly supported arguments in favor of a simple merger policy. LSEs, on the other hand, may prefer a complex policy because it maximizes their profits. A complex merger policy reduces error costs (including type I errors that result in LSEs paying higher costs for wholesale power) at the expense of greater administrative costs (which are probably not a large burden on LSEs). Thus, LSEs may have a strong incentive to make disingenuous or weakly supported arguments in favor of a complex merger policy. Similarly, regulators and others involved in the merger policy debate may advance weakly supported arguments in favor of one policy or another based on their own self-interest.

More extensive empirical evidence on the costs of alternative electric power merger policies would help move the merger policy debate beyond an exchange of views based on little more than self-interest or weakly-supported priors. Although there is some anecdotal empirical evidence regarding the direct administrative costs of DOJ merger policy relative to FERC merger policy, there is no systematic evidence. Although there is some theory and empirical evidence that bears on the relationship between market structure and market power, there is little empirical evidence that bears directly on the effect of mergers on market power or efficiencies. In this section, I discuss this evidence and use it to illustrate how better estimates of the relevant costs could be used to improve merger policy.

Given the current state of the evidence regarding merger policy, it is difficult to reach any immutable conclusions about the direction electric merger policy should take, whether toward a more complex or a more simple policy. To put merger policy on firmer ground, the FERC, the DOJ, and others should seriously consider defining and pursuing a research agenda that would yield concrete estimates of the costs of alternative electric power merger policies.

B. Evidence Regarding Administrative Costs

It seems clear that the more complex a merger policy is (that is, the greater the range of evidence accounted for under the policy), the greater the policy's direct administrative costs will be. Although seemingly obvious, there is only limited evidence supporting this intuition. There does not appear to be any evidence regarding the indirect administrative costs of merger policy in general, let alone with respect to electric power merger policy. Moreover, there does not appear to be any publicly available evidence on the direct administrative costs to the DOJ or the FERC of their merger policies: the public data simply do not permit one to put together very good estimates of the cost to either agency of implementing its merger policy. However, there is evidence suggesting that the direct administrative costs to merging parties of DOJ merger policy are not trivial. There also are anecdotal claims that DOJ merger policy is very costly relative to FERC merger policy.

Under the Hart-Scott-Rodino Antitrust Improvement Act (HSR Act), which governs DOJ merger review, merging parties are typically required to submit to the DOJ a notification form and a limited set of information and documents

regarding their merger.[107] The DOJ has thirty days from receipt of this initial filing to determine whether to issue the merging parties an additional request for information regarding the merger,[108] which is commonly referred to as a "Second Request."[109] A Second Request usually calls for the production of extensive amounts of information, in the form of requests for interrogatory responses, documents, and data.[110] Once the merging parties complete their response to the Second Request – which can take many weeks – the DOJ has another thirty days to determine whether it should ask a court to block the merger under section 7 of the Clayton Act,[111] which requires the DOJ to demonstrate to the court's satisfaction that the merger substantially tends to lessen competition.[112] More often than not, however, the DOJ will enter into a consent decree with the merging parties to remedy any merger-related harm. The typical DOJ remedy for harm arising from a horizontal merger calls for the divestiture of physical assets. In the case of a horizontal electric power merger, the typical remedy calls for the divestiture of generating plants.

The FERC's merger review under the FPA and the MPS calls for the merging parties to submit a section 203 filing and a "Competitive Analysis Screen" (CAS) as required under Appendix A of the MPS.[113] The merging parties must submit the model and all data used to perform the CAS, which then becomes part of the public record.[114] The Appendix A analysis is only one part of the FERC's public interest inquiry under section 203, which also encompasses review of the merger's effect on rates and regulation.[115] A typical FERC merger review calls for a public notice and comment period during which intervenors may express concerns about, or support for, the merger.[116] The FERC is required by statute to complete its merger review within 180 days, although it may extend the time to review a merger to a total of 360 days.[117] If, at the end of its review, the FERC determines the merger fails to meet section 203's public interest standard, the FERC may deny the merger application.[118] The FERC may also approve a merger conditioned on an appropriate remedy that allows the merger to meet the public interest standard, such as the divestiture of generating plants or other structural or behavioral remedies.[119]

The available evidence suggests that the DOJ's merger review process takes longer than the FERC's process. It has been estimated that a DOJ Second Request merger investigation takes an average of 180 days to complete, with an investigation raising more serious concerns (i.e., investigations requiring an enforcement action such as a consent decree) taking an average of 260 days to

107. Regulations governing the content of the notification form are codified at Transmittal Rules, 16 C.F.R. § 803.1 (2012).

108. Transmittal Rules, 16 C.F.R. § 803.10(b) (2012).

109. *See, e.g.,* Model Second Request, *available at* http://www.justice.gov/atr/public/242694.htm.

110. *Id.*

111. Transmittal Rules, 16 C.F.R. § 803.10 (2012).

112. 15 U.S.C. § 18 (2011).

113. MPS, *supra* note 1, at 68,606-10, Appendix A.

114. *Id.*

115. *Id.* at 68,596.

116. *Id.* at 68,600.

117. Federal Power Act, 16 U.S.C. § 824(b)(5) (2011).

118. MPS, *supra* note 1, at 68,597, 68,606.

119. *Id.* at 68,610.

complete.[120] More complex DOJ investigations can take up to 18 months, according to some reports.[121] Although there are no comparable estimates of the time it takes the FERC to review a merger, it generally appears that the FERC processes most merger applications well within the 180-day statutory requirement, with extensions beyond 180 days exceedingly rare.

The available evidence also suggests that the direct administrative costs of the DOJ's merger review process are much greater than for the FERC's process. It has been estimated that a DOJ Second Request investigation costs merging parties several million dollars, including costs for the services of lawyers, economists, data processing vendors (to produce responses to requests for electronic documents and e-mail), and copy vendors (to produce responses for requests for hard-copy documents).[122] Anecdotal evidence suggests that a DOJ Second Request investigation costs the merging parties an average of between $3 million and $5 million.[123] It has also been reported that a Second Request investigation can cost merging parties up to $20 million.[124] There are no comparable estimates of the cost of a FERC merger investigation, but anecdotal evidence suggests it may be substantially less than the cost of a DOJ Second Request investigation. One participant in merger proceedings at the FERC and the DOJ estimated that a DOJ investigation can cost the merging parties ten times more than a FERC investigation.[125]

With respect to indirect administrative costs, I am not aware of any estimates related to the cost of uncertainty associated with a more complex merger policy.[126] Although the argument that more complex policy causes greater uncertainty seems plausible, there does not appear to be any substantial evidence that merger policy uncertainty chills mergers that are beneficial to consumers. Indeed, I am not aware of a single example of a pro-competitive electric power merger that has been called off because of merger policy uncertainty.

Given the DOJ's relatively open-ended inquiry into competitive effects, it is not surprising that the evidence suggests that FERC's process, which involves a more clearly defined analysis of competitive effects, appears to take less time and to be less costly.[127] More complex policies, like the DOJ's, generally are

120. ANTITRUST MODERNIZATION COMM'N, REPORT AND RECOMMENDATIONS 164 (2007), *available at* http://govinfo.library.unt.edu/amc/report_recommendation/amc_final_report.pdf [hereinafter AMC] (reporting figures provided by the DOJ).

121. *Id.* at 163 (reporting estimates provided by the American Bar Association, Antitrust Section).

122. *Id.* at 162-63.

123. *Id.* at 163-64 (reporting averages provided by the American Bar Association, Antitrust Section).

124. *Id.* at 163.

125. *See supra* note 92 (statement of John R. Morris).

126. One of the few papers to attempt to empirically assess the effect of antitrust policy uncertainty on business behavior is George Bittlingmayer, *Regulatory Uncertainty and Investment: Evidence from Antitrust Enforcement*, 20 CATO J. 295 (2001). Bittlingmayer models industry investment as a function of several variables, including uncertainty regarding antitrust policy. He measures antitrust policy uncertainty by antitrust case filings, *id.* at 296-97, which include criminal and civil filings, as well as monopolization and merger cases, *id*. at 314. Moreover, he explicitly excludes utilities from his estimates. *Id.* at 317. As a result, Bittlingmayer's work sheds little direct light on the effect that merger policy uncertainty has on electric power consumers.

127. Consistent with the notion that more complex merger policies have greater administrative costs, the Antitrust Modernization Commission noted that, as antitrust analysis has evolved from a reliance on structural presumptions to a more complex fact- and data-intensive analysis, the antitrust agencies have required more

expected to have greater administrative costs than less complex policies, but they also are expected to have smaller error costs. The real issue is whether the greater administrative costs of a more complex policy are more than outweighed by smaller error costs. That is, are the added administrative costs are more than offset by reduced error costs resulting from a more accurate prediction of the likely harm arising from the merger?

A crude example may help illustrate the issues. Assume that a relatively simple policy has administrative costs of $1 million per merger and that a more complex policy has administrative costs of $10 million per merger. In this case, the additional average administrative costs of a complex policy would be $9 million. In very crude terms, a complex policy would be preferred to a simple policy if it reduced error costs per merger (relative to the error costs of the simple policy) by more than $9 million. However, to determine whether, in fact, a more complex policy is preferable, one also needs to estimate the error costs of alternative policies.

C. Evidence Regarding Error Costs

The evidence regarding the error costs of alternative merger policies is less well developed than that for administrative costs. Although there is a fairly substantial body of theoretical and empirical work suggesting that generators can, and sometimes do, exercise market power, there is little work concerning the net effect on consumers of electric power mergers – which can involve increased efficiencies benefitting consumers or increased market power harming consumers.[128] Moreover, I am not aware of any substantial empirical work on the ability of particular policies to identify problematic electric power mergers. Despite the shortcomings of the evidence, a case can be made that error costs, particularly type I error costs, can be very large. This is due, in part, to the sheer size of wholesale electric power markets, which can have annual sales of billions of dollars.

Even a small percentage price increase due to an exercise of market power can cost consumers millions of dollars because electric power markets are so large. Consider, for example, the PJM East market alleged by the DOJ in its

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information from merging parties. AMC, *supra* note 120, at 165. This, in turn, likely has increased the administrative costs of the DOJ's merger policy.

128. *See generally* Par Holmberg & David Newbery, *The Supply Function Equilibrium and its Policy Implications for Wholesale Electricity Auctions*, 18 UTIL. POL'Y 209 (2010) (summarizing empirical work concerning unilateral exercises of market power in wholesale power markets); *see also* Richard Benjamin, *Tacit Collusion in Real-Time U.S. Electricity Auctions* (USAEE-IAEE Round Table Grp., Working Paper No. 11-085, 2011), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1938757## (summarizing theoretical literature concerning coordinated exercises of market power in wholesale power markets).

There is only limited empirical work regarding the coordinated exercise of market power in power markets. Seth B. Blumsack, et al., *Lessons from the Failure of U.S. Electricity Restructuring* 4 (Tepper Sch. of Bus., Working Paper No. 239, 2006) cites simulation work by Kong-Wei Lye, (unpublished Ph.D. Dissertation, Dept. of Elec. and Comp. Eng., Carnegie Mellon Univ., 2004) and experimental work by Stephen Rassenti, et al., *Controlling Market Power and Price Spikes in Electricity Networks: Demand-Side Bidding*, 100 PROCEED. OF THE NAT. ACAD. OF SCI. 2998 (2003) suggesting that generators can learn the strategies of one another to quickly raise price above competitive levels. *See also* Rafael Emmanuel A. Macatangay, *Tacit Collusion in the Frequently Repeated Multi-Unit Uniform Price Auction for Wholesale Electricity in England and Wales*, 13 EUR. J.L. & ECON. 257, 271 (2002), (finding limited evidence of collusion); Andrew Sweeting, *Market Power in the England and Wales Wholesale Electricity Market: 1995-2000*, 117 ECON. J. 654, 681 (2007) (finding evidence consistent with either tacit collusion or an attempt to spot wholesale prices to raise forward prices and the price of generating assets).

court filings related to the Exelon-PSEG merger. According to the DOJ, annual sales in the PJM East market totaled more than $10 billion.[129] Even if PJM East were a relevant market only ten percent of the hours in a year, sales during that time could be more than $1 billion. An exercise of market power that increased prices by only one half of one percent would increase wholesale power costs by $50 million. Consistent with this intuition, several academic studies have concluded that an exercise of market power can have very large effects on wholesale power prices, increasing power costs in some instances by hundreds of millions of dollars.[130] Concerns about market power producing type I errors might be reduced if there were powerful evidence of efficiencies arising from electric power mergers. However, there appears to be little evidence regarding the efficiency effects of electric power mergers,[131] suggesting that type I errors should be of substantial concern to policy makers.

It is not enough, however, to simply recognize that error costs can be large. One needs evidence regarding the magnitude and likelihood of errors under alternative policies to choose an optimal policy. Although such evidence is limited, there is a fairly substantial body of theoretical and empirical work that brings into question the efficacy of a merger policy largely based on the use of market concentration to predict competitive effects.[132] This work suggests that market concentration is a particularly poor predictor of market power in wholesale power markets. Indeed, the primary lesson of this work is that market power can be exercised in these markets with market shares and concentration levels substantially below those typically thought to indicate market power.[133] Thus, one would expect a merger policy based on traditional market share or concentration presumptions, like that of the FERC, to yield larger type I errors than a policy based on a wider range of evidence, like that of the DOJ.

Given that the DOJ relies on a much wider range of evidence than the FERC to assess competitive effects, one would expect the error costs of the DOJ's policy to be lower than those of the FERC's policy. In addition to the concentration analyses of the type relied upon by the FERC, the DOJ considers a much larger body of evidence, including documents, data, and other information provided by the merging parties, other industry participants, and industry observers. The FERC appears largely reliant on market concentration measures that have a tenuous relationship to market power in wholesale power markets; for the DOJ, such measures are only one of many types and sources of evidence it considers. In sum, it seems reasonable to conclude that the DOJ's assessment of a merger's competitive harm is more accurate than the FERC's assessment of harm. However, there is no evidence showing how much more accurate the DOJ's assessment is than the FERC's assessment. Absent that evidence, it is

129. 71 Fed. Reg. 49,477, at 49,487.

130. *See, e.g.*, Borenstein, *supra* note 29, at 1393.

131. For one example of a recent study finding negligible efficiency effects from electric utility mergers, see, generally, Craig & Savage, *supra* note 30.

132. *See, e.g.*, Paul Twomey, et al., *A Review of the Monitoring of Market Power: The Possible Role of TSOs in Monitoring for Market Power Issues in Congested Transmission Systems* (MIT Ctr. for Energy and Envtl. Pol'y Res., Working Paper No. 05-002, 2005), *available at* http://web.mit.edu/ceepr/www/publications/workingpapers/2005-002.pdf.

133. *Id.* at 17 ("A major criticism of market share and HHI analysis for electricity markets is that even where the most dominant net seller has a relatively small market share (say less than 10%) they may still be able to exercise market power.").

difficult to determine whether the FERC's policy is more or less costly than the DOJ's policy.

Although the DOJ's assessment of harm is likely to be more accurate than the FERC's, it should be noted that the FERC's preference for its current policy may depend on institutional constraints.[134] For example, the FERC's ongoing oversight of the electric power industry and merging generators may make it more tolerant of error costs than the DOJ, which does not exercise ongoing oversight. The FERC has, in the past, relied on its ability to institute ex post market manipulation proceedings against a merged firm, which may result in revocation of market based rate authority, to justify its decision to allow a merger.[135] The DOJ has no comparable ex post tools and, as a result, may be less tolerant than the FERC of type I and type II errors.[136] Thus, calls for the FERC to engage in a more open-ended inquiry, which increases administrative costs relative to a simple structural rule, may be misguided if the FERC can remedy market power after the fact at a relatively low cost. However, there is little evidence that the FERC has used or would use ex post proceedings to remedy merger-related harm.

D. The Case for A Complex Merger Policy

In an ideal world, policy makers would have detailed, accurate estimates of the costs of alternative policies and simply choose the cost minimizing policy. That plainly is not the case for electric power merger policy. The available evidence regarding administrative and error costs is limited. Given this evidence, however, a case can be made for a cautious merger policy, one that places greater weight on the costs associated with mistakenly permitting a merger that substantially increases the likelihood of an exercise of market power. Such a policy corresponds more closely to DOJ policy than to FERC policy.

There are at least three reasons for preferring, at present, a policy that places great weight on preventing type I errors. First, as noted above, economic theory and empirical work suggests that generators can exercise market power with relatively small market shares, i.e., at low market concentration levels. This suggests that a policy based primarily on traditional presumptions regarding market concentration may be inappropriate for electric power mergers, and that incorporating more information into a merger analysis is desirable. The

134. The FERC also faces several statutory constraints on its merger policy that likely have a substantial effect on its merger policy, including the methods it has adopted to assess a merger's competitive effects. For example, FERC merger review is governed by the requirements of the Administrative Procedures Act for on the record decisions, which limits communications between the FERC and merging parties. 18 C.F.R. § 385.2201 (2012). The FERC must also complete its review of a merger within 180 days. Federal Power Act, FPA § 203(a)(5), 16 U.S.C. § 824(b) (2012). A simple, administrable rule that allows for the possibility of substantial error costs may be optimal given these constraints. However, the FERC may extend its review of a merger for an additional 180 days, giving it nearly a year for review. *Id.* As a result, the statutory time limit probably is not a substantial constraint.

135. *See, e.g.*, 112 F.E.R.C. ¶ 61,011 at P 131. More generally, James Bushnell argues that the FERC has increasingly relied on ex post regulation rather than fostering a competitive market structure to ensure that electricity markets are, in some sense, competitive. James Bushnell, *Looking for Trouble: Competition Policy in the U.S. Electricity Sector*, *in* ELECTRICITY DEREGULATION: CHOICES AND CHALLENGES 256, 288-89 (James M. Griffin & Stephen L. Puller ed., 2005).

136. The DOJ, moreover, has expressed a belief that regulation typically is not sufficient to effectively preserve competition. U.S. DEPT. OF JUSTICE, ANTITRUST DIVISION POLICY GUIDE TO MERGER REMEDIES § III.A (June 2011), *available at* http://www.justice.gov/atr/public/guidelines/272350.pdf.

available evidence also suggests that an exercise of market power can be very costly to consumers. As noted above, even a small exercise of market power can yield harm to consumers that totals tens of millions of dollars. Moreover, even a small exercise of market power would seem to more than outweigh the administrative costs of a more complex merger policy. This suggests that it is appropriate to adopt a more complex policy that is less likely to produce type I errors.

Second, a complex policy that entails a closer look at a merger has the side benefit of permitting an agency, whether the FERC or the DOJ, to develop a deeper understanding of the effect of electric power mergers. A close examination of a series of mergers will permit the agency to more closely examine the relationship between changes in market structure or firm behavior arising from a merger and the likely competitive effects of a merger. As the agency gains more experience with electric power mergers, and as it develops a deeper understanding of the connection between market structure, firm behavior, and competitive effects, it may be able to develop more effective screens to circumvent a full-blown analysis of a merger's competitive effects. In short, such "learning by doing" may give the agency the ability to develop better merger policy in the future.

Third, the exercise of market power may undermine the FERC's restructuring agenda. There can be little doubt that public concerns about the proper functioning of restructured power markets have inhibited the FERC's restructuring agenda.[137] The meltdown of California's electricity markets – a function of poor market rules, poor market regulation, and the exercise of market power – brought restructuring to a halt in California and in many other states.[138] Other widely publicized exercises of market power also have undermined public support for restructuring, which likely has further inhibited the FERC's agenda.[139] If one believes that the FERC's restructuring agenda is good public policy, then one should be wary of adopting a merger policy that produces larger type I errors than necessary, which may, in turn, undermine support for restructuring.

VI. IMPROVING ELECTRIC POWER MERGER POLICY

The conclusion that a DOJ-like merger policy is preferable to a FERC-like merger policy is based on our current state of knowledge regarding error and administrative costs, which is limited. Better estimates of these costs would help policy makers determine whether a complex policy truly is better than a simple policy. Although it might take some time and effort, it would be desirable for the FERC or the DOJ to define and implement a research agenda to develop

137. *Cf.* Diana L. Moss, *Electricity and Market Power: Current Issues for Restructuring (A Survey)*, 1 ENVTL. & ENERGY L. & POL'Y J. 11, 13 (2006) ("Perhaps the greatest threat to [restructuring] is the exercise of market power through generation withholding and exclusionary conduct designed to deny rivals' access to inputs such as electricity transmission and fuel transportation.").

138. *See generally* Borenstein, Bushnell & Wolak, *supra* note 29.

139. *See, e.g.*, Sandeep Vaheesan, *Market Power in Power Markets: The Filed Rate Doctrine and Competition in Electricity*, U. MICH. J.L. REFORM (forthcoming 2012) (manuscript at 6-18) (describing instances in which market power was exercised), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1974324.

better estimates, which might contribute to the development of better electric power merger policy.

Although the challenges of developing such evidence may appear to be daunting, it is probably much easier to develop evidence for electric power markets than for most other markets.[140] First, unlike many other markets, there is a wealth of publicly available information about power markets, particularly about regional transmission organization (RTO) markets. The FERC routinely collects and publishes highly detailed information about wholesale power markets, including data on the cost characteristics of generators. RTOs routinely collect and publish highly detailed information about market clearing prices and quantities.

Second, economists and others have developed relatively sophisticated models of electric power markets.[141] Such models attempt to capture the relationship between market structure changes (as when mergers occur) and market power. Given the availability of relatively rich data and modeling tools to analyze that data, there is reason to believe that the FERC, the DOJ, or others could implement a research agenda to develop evidence to inform and improve merger policy.

A. Developing Better Administrative Cost Evidence

It would be relatively easy for the DOJ or the FERC to develop better estimates of the direct administrative costs of their respective merger policies. The direct costs of a merger policy largely are borne by the merging parties and the reviewing agencies. Additional costs may be borne by third parties that have important evidence related to the merger. As has been suggested by others, each agency might be able to assess these costs by surveying merging parties and third parties about their costs of complying with the merger review process.[142] Each agency should be able to track with reasonable accuracy the time and resources it uses to review individual mergers. Surveys of parties involved in the merger process and internal agency data on resources devoted to merger review should yield reasonable estimates of the direct costs of merger review.

It likely would be more difficult to assess the indirect administrative costs of merger policy, which include the costs of mergers not undertaken because of policy uncertainty.[143] Trying to isolate the effect of policy uncertainty (and the possible foregone consumer benefits) seems like a difficult task given that many factors affect the decision to merge or not merge. As noted above, there appears

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140. Wolak, *supra* note 28, at 227-28 (arguing that the rich data, regulatory history, and clearly specified market rules makes it easier to study market outcomes, including the effect of mergers, in electricity markets than in other markets).

141. *See, e.g.*, Gilbert & Newbery, *supra* note 11; Frank A. Wolak & Shaun D. McRae, *Merger Analysis in Restructured Electricity Supply Industries: The Proposed PSEG and Exelon Merger*, *in* THE ANTITRUST REVOLUTION 30 (John E. Kwoka & Lawrence J. White eds., 5th ed. 2008); John H. Morris & Daniel Oska, *The Likely Effect of the Proposed Exelon-PSEG Merger on Wholesale Electricity Prices*, 21 ELEC. J. 45-54 (2010).

142. AMC, *supra* note 120, at 167 (suggesting the DOJ and the FTC track the costs and burdens imposed on merging parties).

143. *Cf.* Andrew I. Gavil, *The Next Step in the Development of Ex Post Evaluation of Merger Review Procedures: Defining the State of the Art with Staged Options for Implementation* ¶ 14, CONCURRENCES NO. 4-2011, *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1977516 (noting the importance of evaluating agency decision making on the "incentives of *all* industry and non-industry participants, including those who may be considering a merger").

to be little if any evidence on mergers called off due to uncertainty. The evidence that might exist largely would be in the hands of generators who have contemplated mergers. As a result, the DOJ and the FERC may wish to survey generators regarding the real costs of merger policy uncertainty. Given that generators may have a strong incentive to misrepresent the true costs of uncertainty (to promote a simple merger policy that increases the likelihood of type I errors and increased market power), the agencies would have to demand concrete evidence of such effects rather than rely on unsupported self-serving assertions.

B. Developing Better Error Cost Evidence

It would also be difficult to assess the error costs of alternative merger policies. As others have suggested, retrospective studies regarding the effects of consummated mergers could shed substantial light on the efficacy of merger policy.[144] Although there have been some retrospective studies of the effect of mergers on consumers, there are little, if any, explicitly addressing the net effect of electric power mergers on consumers.[145] Retrospective reviews, whether conducted by the FERC, the DOJ, market monitors, or others, could help the agencies determine whether their original judgments about a merger's competitive effects were accurate, which might contribute to the development of better tools for assessing the competitive effects of future mergers.[146] Even if an agency could determine whether the mergers it has approved under a particular policy have or have not benefited consumers (i.e., whether the policy has produced type I errors), it still would need to determine whether the mergers it did not approve would have benefited consumers (i.e., whether the policy has produced type II errors). Isolating the effect of an *actual* merger on consumers can be challenging, isolating the effect of a *hypothetical* merger on consumers can be even more difficult.

A somewhat less challenging task would involve assessing the ability of market concentration, or other structural or behavioral measures, to predict a merger-induced exercise of market power. Concerns that traditional concentration measures do not accurately predict market power in wholesale power markets have prompted many researchers and policy makers to consider

144. *Id.*

145. *See generally* Graeme Hunter, et al., *Merger Retrospective Studies: A Review*, 23 ANTITRUST 34 (2008) (surveying retrospective U.S. merger studies, none of which address electricity mergers); Matthew Weinberg, *The Price Effects of Horizontal Mergers*, 4 J. COMP. L. ECON. 433 (2008); Paul A. Paulter, *Evidence on Mergers and Acquisitions*, 48 ANTITRUST BULL. 119 (2003).

146. The FERC and the DOJ seem to have some latitude to conduct retrospective merger studies. The FERC, for example, has the authority to monitor a merger and, if necessary, supplement its section 203 order. Federal Power Act, § 203(b), 16 U.S.C. § 624b. In principle, the FERC could use this authority to conduct a post-merger review of a merger's competitive effects to determine whether its original competitive effects assessment was accurate. Moreover, routine post-merger reviews under section 203(b) might inform the FERC's merger policy making more generally as the FERC would be able to compare its initial judgments about competitive effects based on HHI screens with actual market outcomes, allowing it to assess the likelihood and magnitude of type I errors. Although the DOJ does not have the same broad authority that the FERC does to conduct a post-merger review, the HMG note that the DOJ can study past mergers to help it assess the competitive effects of a proposed merger. 2010 HMG, *supra* note 2, § 2.1.2 ("The Agencies look for historical events, or 'natural experiments,' that are informative regarding the competitive effects of the merger. For example, *the Agencies may examine the impact of recent mergers*, entry, expansion, or exit in the relevant market." (emphasis added)). Thus, like the FERC, the DOJ also may be in position to gather at least some information on the likelihood and magnitude of type I errors.

alternative measures. For example, some work suggests that pivotal supplier indicators or residual supply indexes may better predict market power than concentration measures.[147] Further research on the ability of such structural or behavioral measures to predict market power might lead to a more effective merger screen that would reduce the need for full-blown merger analyses. Market monitors are particularly well-suited to perform such studies. They routinely assess competitive conditions in RTO markets, often developing their own structural or behavioral screens for identifying and mitigating behavior thought to facilitate an undue exercise of market power. Research of this type could also be carried out by the FERC, the DOJ, consultants, or academics.

VII. CONCLUSION

The error and administrative costs to society of electric power merger policy can be substantial. This appears to be especially true of the error costs associated with permitting electric power mergers that increase market power, which can increase costs to consumers by tens of millions of dollars, if not more. Despite that, there appears to have been little research on these costs and their implications for federal merger policy. The current debate over merger policy is based on limited evidence regarding policy costs. Further empirical work regarding these costs may help move the debate beyond arguments based on little more than weakly supported, subjective priors toward arguments that are based on objective evidence.[148] Moreover, better evidence may facilitate consensus on the appropriate approach to merger policy, which might lead to convergence between DOJ and FERC merger policy, reducing the likelihood of unnecessarily duplicative or inconsistent remedies across the agencies.

Further empirical work also may advance the debate regarding the role of the DOJ and the FERC in merger review. Some commentators have argued that the DOJ should be given exclusive responsibility for evaluating a merger's competitive effects; there are, however, arguments in favor of giving FERC exclusive responsibility.[149] The question of whether merger review should continue to be shared by the FERC and the DOJ, or should rest exclusively with one of the agencies, is well beyond the scope of this paper. However, better empirical evidence on merger policy costs could contribute to this debate. For example, if the evidence leads to the conclusion that a complex merger policy, calling for the evaluation of a wide range of evidence, is optimal, then the DOJ may be better suited to perform merger review. The DOJ has the statutory

147. *See, e.g.*, Twomey, et al., *supra* note 132, at 17-19 (discussing pivotal supplier and residual supply indexes).

148. *Cf.* William E. Kovacic, *Evaluating Antitrust Experiments: Using Ex Post Assessments of Government Enforcement Decisions to Inform Competition Policy*, 9 GEO. MASON L. R. 843, 855-56 (2001) ("Government antitrust bodies could improve the quality of policymaking by devoting more resources to evaluating the effects of past enforcement decisions. Expanded efforts to assess the effect of past enforcement decisions would provide important insights about the substance and process of policymaking.") (internal citations omitted); William E. Kovacic, *Assessing the Quality of Competition Policy: The Case of Horizontal Merger Enforcement*, 5 COMP. POL'Y INT'L. 129, 145 (arguing that agencies should set aside funds every budget cycle for evaluation of policy, whether carried out by agency insiders, external consultants, or a combination of the two).

149. *See, e.g.*, Marquis, *supra* note 13, at 789 (identifying arguments for antitrust review and for FERC review, concluding that antitrust review of competitive effects is preferable); ABA REPORT, *supra* note 72, at 9 (arguing that the antitrust agencies "should take the primary responsibility for the antitrust review of electric power mergers, with the FERC providing guidance based on its industry-specific expertise").

authority and institutional ability to obtain, process, and evaluate a wide range of evidence.[150] It may be much more difficult for the FERC to implement a complex merger policy given the statutory and institutional constraints it faces; in particular, the need for an on-the-record review may make it difficult for the FERC to undertake a wide-ranging analysis based on confidential information from the merging parties or third parties.

Finally, further empirical work may help reconcile differences between the federal agencies' and the states' approaches to assessing a merger's competitive effects. It is often the case that states review mergers for their effect on competition, among other factors.[151] And, they may assess competitive effects using methods or techniques that differ from those used by either the DOJ or the FERC.[152] This, in turn, may lead to differing, potentially inconsistent outcomes at the state and federal level, imposing additional costs on merging parties and society at large. Even if the DOJ, the FERC, and the states continue to share jurisdiction over merger review, further evidence on alternative merger policies may help federal *and* state regulators reach some degree of consensus on assessing competitive effects, which may reduce the need for different analyses by different regulatory authorities, reducing the overall costs to society of merger review.

150. Marquis, *supra* note 13, at 785-86.

151. Carl R. Peterson & Karl A. McDermott, *Mergers and Acquisitions in the U.S. Electric Industry: State Regulatory Policies for Reviewing Today's Deals*, 20 ELEC. J. 8, 11-19 (2006) (summarizing state merger review standards and factors considered by states).

152. In the case of the Exelon-PSEG merger proceeding before the New Jersey Board of Public Utilities (BPU), for example, the BPU requested a report from the PJM Market Monitoring Unit (MMU) assessing the effect of the merger on PJM wholesale markets. The MMU based its analysis on market shares, concentration, and the Residual Supply Index. PJM MARKET MONITORING UNIT, EXELON/PSEEG MERGER ANALYSIS (May 24, 2005), *available at* http://www.monitoringanalytics.com/reports/Reports/2005/20050524-mmu-merger-report-njbpu-color.pdf. It was reported that the market power issues identified by the MMU played a key role in the BPU's opposition to the merger. *See, e.g.*, George Lobsenz, *New Jersey Regulators Rebuff Exelon's 'Last' Offer on PSEG Deal*, ENERGY DAILY, Aug. 7, 2006, *available at* 2006 WLNR 15758279.