

**UNITED STATES OF AMERICA**  
**BEFORE THE**  
**FEDERAL ENERGY REGULATORY COMMISSION**

**Analysis of Horizontal Market Power                    )                   Docket No. RM11-14-000**  
**Under the Federal Power Act                            )**

**Comments of**  
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***The Brattle Group***

**I. INTRODUCTION**

Our names are Dr. Romkaew Broehm, Dr. Peter Fox-Penner, Dr. Oliver Grawe, and Dr. James Reitzes. We are economists of *The Brattle Group* who consult on energy matters and have been active in Federal Energy Regulatory Commission (FERC or the Commission), international, state regulatory proceedings and antitrust matters for many years. We have provided testimony and/or advice for a number of merger and acquisition (M&A) cases over the past 15 years. Our credentials are attached to our comments. We offer our comments in response to the Commission’s *Notice of Inquiry on Analysis of Horizontal Market Power Under the Federal Power Act* (hereafter 2011 M&A NOI). Specifically, the Commission seeks comments on whether, and if so how, the Commission should revise its approach for examining horizontal market power concerns in transactions covered under Section 203 of the Federal Power Act (FPA) to reflect the 2010 Horizontal Merger Guidelines (2010 Guidelines) issued by the Department of Justice and the Federal Trade Commission (DOJ/FTC or the Agencies).<sup>1</sup> These comments are our own and do not necessarily represent the views of *The Brattle Group*, other *Brattle* principals, or our past, present or future clients.

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<sup>1</sup> See *Horizontal Merger Guidelines*, U.S. Department of Justice and the Federal Trade Commission, August 19, 2010 at <http://www.justice.gov/atr/public/guidelines/hmg-2010.html>

In its 1996 Merger Policy Statement (Order 592),<sup>2</sup> the Commission described its criteria and policies for approval of public utility mergers. In light of dramatic and fast-paced changes in the electricity power industry, the Commission's goals as stated in Order 592 were to ensure that mergers are consistent with the public interest under the FPA standard (*i.e.*, do not raise market power concerns and do not have adverse effects on rates) and to provide market participants greater regulatory certainty and expedition of regulatory action on handling merger applications.

The Commission adopted the DOJ/FTC 1992 Horizontal Merger Guidelines (1992 Guidelines)<sup>3</sup> as the analytical framework for examining horizontal market power concerns. The 1992 Guidelines describe the analytical process that the Agencies would employ in determining whether to challenge a horizontal merger. However, the Agencies have maintained flexibility when applying the Guidelines to particular facts and circumstances by reviewing each proposed merger on a case-by-case basis. This is different from the Commission's method described in its Merger Policy Statement. Although the Commission allows customized analyses, it also requires a very prescriptive approach. Appendix A of the Commission's Merger Policy Statement prescribed precise steps that merger applicants must follow when performing their potential competitive impact analysis, with the exception of *de minimis* M&A cases. For the early period of the Commission's implementation of its Merger Policy Statement, the Commission's prescribed tool for the analysis of mergers was reasonable and usually served its purposes, provided that it was applied very carefully and sometimes with exceptions to parts of the Commission's fairly strict framework. The tool was designed to provide a standard analysis that could quickly predict mergers that potentially pose a risk to competition, while allowing mergers that do not present competitive concerns to proceed.

The mainstream view of mergers at the time assumed that this initial group of transactions was a necessary rationalization spurred by the onset of competition. We tend to think of this first wave as consolidation in response to transmission open access and retail choice. Most of the deals that occurred within this time period merged small utilities into larger regional players, which was thought necessary to survive a wholesale competitive era. Between 1996 and 2001, there were 53 mergers, with an average combined size of less than 10,000 MW. The average

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<sup>2</sup> FERC Order 592, 77 FERC ¶ 61,263, December 18, 1996, and later FERC Order 642, 93 FERC ¶ 61,164, November 15, 2000.

<sup>3</sup> U.S. Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, 1992, revised April 8, 1997.

combined size was approximately 20 percent of the size of the largest electric power firm in the industry, measured by physical capacity. A few of these were foreign utilities buying into the United States, but some of these deals were very large (e.g. the AEP-CSW merger), one of the few transactions the Commission set for hearing.

With the possible exception of these very large transactions, most consolidations did not, as a general rule, appear to have broad-scale competitive impacts. Additionally, this was an era in which the industry experienced dramatic and seemingly robust entry from new deregulated generation and power marketing companies, both retail and wholesale. Enron rocketed from obscurity into the front ranks of the power industry with essentially no traditional utility base, followed by AES, Calpine, Williams, and a host of other rapidly growing entrants. In a climate where traditional incumbents were believed to have higher legacy cost structures and less entrepreneurial fire, the presumption was that these older firms would continue to lose share to the more dynamic newcomers. Allowing mergers that involved traditional utilities seemed like a rescue plan, similar to arguments made in the airline industry.

Today, however, the Commission can strike a better balance between standardization regarding its test and the public interest. Wholesale power markets have developed well past their infancy since the Commission issued its Merger Policy Statement. Organized wholesale markets (*i.e.*, RTOs/ISOs), with the Commission's approved market monitoring and mitigation plans, are well established in various parts of the country. Their electricity market design has become increasingly complex, involving locational marginal pricings (LMPs) and local capacity markets. Despite an increase in the number of suppliers in a wholesale power market, we observe that there is also an increasing trend in transaction size. The size of the smallest merged firms in 2001 was 2,221 MW compared with 27,500 MW in 2005, 21,815 MW in 2010, and 31,703 MW in 2011<sup>4</sup> (as of April 2011). Many of these proposed mergers passed the Appendix A screen and/or were approved by the Commission without further scrutiny or any additional analyses or mitigation.

Some reconsideration of the Commission's competitive screen analysis would seem warranted and we applaud the Commission for revisiting the subject in light of the 2010 Guidelines. We believe that the questions posed by the Commission demonstrate that it must improve its tool kit used to analyze mergers in order to yield an outcome that is consistent with

the public interest. We proffer three main comments in responding to the Commission's 2011 M&A NOI. First, we encourage the Commission not to limit its horizontal merger screen to the current prescribed Appendix A methodology, which focuses on measuring merger effects based on a post-merger market concentration and a change in market concentration statistics. We recommend that the Commission considers adopting a principle-based approach that allows the Commission to be flexible in choosing appropriate analytical tools to match a theory of the competitive harm specific to each merger. After all, the facts and circumstances of each proposed merger are different. This flexibility will also allow the Commission to appropriately analyze proposed mitigation measures of anticompetitive mergers. Second, the Commission should not de-emphasize the importance of market definition. In almost all circumstances, delineating markets is a necessary predicate to assessing a proposed merger's effect on competition. Finally, we comment as to whether the 2010 Guidelines' safe harbor thresholds should be adopted by the Commission.

## **II. COMMENTS ON THE USE OF PRESCRIBED APPENDIX A ANALYSIS FOR CONSIDERING THE EFFECTS OF MERGERS**

The Commission should not limit its merger screen to the prescribed Appendix A analysis. Since the Merger Policy Statement was issued, the Commission has provided supplemental guidance and clarification on numerous occasions regarding the implementation of Section 203 filing requirement. During this process, the Commission received many comments in response to its notices of proposed rulemakings and technical conferences, suggesting that the prescribed Appendix A analysis-- particularly the use of market concentration statistics (Herfindahl Hirschman Index (HHI)) for measuring a merger's competitive harm-- should be de-emphasized or replaced. Despite the many criticisms on the Commission's prescribed screen, the Commission has stood firm on continuing to use the Appendix A analysis to measure a proposed merger's potential adverse competitive effect. The Commission offers several explanations for this, including (1) the test provides "a standard, generally conservative check to

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<sup>4</sup> This number includes only the merging parties' combined capacity within a contiguous market area.

allow the quick identification of mergers that are unlikely to present competitive problems...<sup>5</sup>; and (2) “the Commission does look beyond the change in HHI in its analysis of the effect on competition in both horizontal and vertical mergers...it typically considers a case-specific theory of competitive harm, which includes, but is not limited to, an analysis of the merged firm’s ability and incentive to withhold output in order to drive up prices.”<sup>6</sup> We believe, however, that these explanations are inadequate and can be misleading.

#### *A. Appendix A Analysis Does Not Always Yield Conservative Outcomes*

We believe that the Appendix A analysis does not always yield conservative outcomes, creating the possibility that the Commission might approve mergers that increase market power. We believe this risk is due to the design of the Appendix A analysis.

The Commission’s Appendix A analysis, known as a Delivered Price Test (DPT), is a structural test that assesses whether a proposed merger will create or enhance the ability of a merger applicant to exercise market power in a relevant market. The DPT model finds all megawatts that can be economically and physically delivered in a geographic market under various market conditions (such as summer super-peak, winter peak, fall off-peak, etc).<sup>7</sup> It then measures market shares, HHIs, and the change in HHIs before and after a proposed merger. If the post-merger HHI and the change in HHIs exceed the Commission’s safe harbor thresholds, there is a rebuttable presumption that the proposed merger is harmful to competition. Under the DPT, a supplier’s ability to reach a market depends upon (1) whether the supplier can supply energy to the destination market at a price less than 105 percent of the pre-determined price in that market, and (2) whether transmission is available to transport the supplier’s power.

The DPT can yield non-conservative results. It is important to emphasize that the DPT examines a merger effect for one market at a time, rather than simultaneously dispatching all capacity and load across markets. By design, the DPT ignores whether suppliers may have a better opportunity to sell in markets (other than the examined market) where they might obtain higher prices. For instance, consider a non-ISO/RTO market that is located next to an ISO/RTO market in which many suppliers have no native load obligation due to retail access. In this case,

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<sup>5</sup> Order 642 at 37.

<sup>6</sup> See *Order on Clarification and Reconsideration of FPA Section 203 Supplemental Policy Statement*, 122 FERC ¶ 61,157, (2008) at P 11.

the capacity of potential suppliers in the ISO/RTO is deemed to be available to the examined market as long as it is economic when compared with the examined market's market price plus five percent and there is available transmission capacity to reach the market. Consequently, it would appear that a buyer in the examined market has abundant alternative supplies when in fact those potential suppliers can achieve better financial gain from selling in their ISO/RTO market. This is likely to occur during tight market conditions -- periods in which there is high probability that market power can be exercised. Under this circumstance, the HHIs of pre- and post-merger transactions would be underestimated, and the screen would not capture the potential adverse effect of the proposed merger, resulting in a Type II error. Thus, it is appropriate for the Commission to improve the DPT screen and/or allow for the use of alternative approaches.

***B. The Commission's Initial Screen Should Look Beyond Post-Merger HHI and Change in HHI***

In the 2010 Guidelines, the Agencies have articulated different merger effects based on a competitive harm theory. A wide variety of analytical techniques were also suggested, depending upon different types of merger effects and the dimensions of competition. For example, the 2010 Guidelines discuss different types of unilateral anticompetitive effects arising from merging with competitors in markets with differentiated products, homogenous products, bargaining and auctions, and innovation.<sup>8</sup> Indeed, market concentration is no longer mentioned in the 2010 Guidelines as a metric to identify a merger with unilateral anti-competitive effects. Instead, the 2010 Guidelines would assess unilateral effects of a proposed merger with differentiated products by using a diversion ratio, which is a measure of the closeness or substitutability of two products. For a merger with homogenous products, like the electricity industry, the Agencies' principle is to evaluate whether a merging firm would profitably withhold their output to raise market prices. This type of analysis emphasizes such factors as the shape of the merged applicants' supply curves and the dynamic interaction between suppliers. Thus, the Agencies' focus is on the key competitive aspect of a merger—that is whether the merger likely to change incentives such that there will be an increase in market price. In other words, a combined company may be able to adjust market prices upward without losing their

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<sup>7</sup> Appendix A, Order 592.

<sup>8</sup> The 2010 Guidelines § 6.

profit. The Commission should place a greater emphasis on this concept for Section 203 of the FPA.

In fact, the Commission has agreed that merger analyses should be framed and analyzed based on a theory of competitive harm, but it appears that the Commission only requires this approach when the DPT screen is failed.

If the screen is failed, then, as discussed in paragraph 59 above, the Commission examines the factors that could affect competition in the relevant market. Specifically, in these circumstances the Commission typically considers a case-specific theory of competitive harm, which includes, but is not limited to, an analysis of the merged firm's ability and incentive to withhold output in order to drive up prices.<sup>9</sup>

And in its *Order on Clarification and Reconsideration* of the Supplemental Policy Statement, the Commission stated that:

Articulating a theory of competitive harm and explaining why a merger applicant has shown that a merger will not adversely affect competition, or why mitigation will be necessary to address the harm to competition, will provide additional guidance to both applicants and intervening parties. We will continue this practice and, as we stated in the Supplemental Policy Statement, expect both applicants and interveners to frame their arguments regarding a merger's effect on competition in terms of a theory of merger related harm to competition...<sup>10</sup>

We recommend that Commission not wait for a merger to fail the DPT screen to implement a case-specific theory of competitive harm. The Commission's prediction of a harmful merger requires an assessment of a merging company's ability and incentive to engage in exercising market power, which in turn depends on the characteristics of their relevant markets. We provide some examples below:

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<sup>9</sup> FPA Section 203 Supplemental Policy Statement, 120 FERC ¶ 61,060 (2007) at P 65.

<sup>10</sup> See Order on Clarification and Reconsideration FPA Section 203 Supplemental Policy Statement, 122 FERC ¶ 61,157 (2008) P 13.

### *a. Single-Priced Auction Markets*

The indicia of merger effects involved in markets with a single-market clearing price auction would be different from those involved in purely bilateral markets. While the market concentration index is still useful as an initial screen for mergers in bilateral markets, alternative mechanisms would be appropriate for mergers involving ISO/RTO markets. Mergers in ISO/RTO markets could create or enhance market power by providing incentives for withholding output to raise prices.<sup>11</sup> The analytical tool for assessing the likelihood that companies would engage in withholding behavior would be to examine merging parties' supply mix in relation to those of the rest of the market, both before and after the merger. A merger may provide a merging party with both baseload and peaking supplies that allow the merged entity to slightly withhold its output to raise price and increase profits; the merger eliminates a competitor that otherwise could have been available as buyers' alternative supplier. In some cases, particularly in an RTO/ISO with LMP, a merger creates congestion so that a firm in a congested area could earn higher prices. None of these effects can be detected by the DPT screen, which does not directly reveal supply mixes of merging firms and their substitutability.

### *b. Bilateral Power Markets*

Many buyers and sellers in wholesale power markets around the U.S. engage in bilateral transactions for both short- and long-term power. Buyers and sellers often directly negotiate their deals. In this market environment, as described by the 2010 Guidelines, anticompetitive unilateral effects are likely through an increase in the merging parties' bargaining power.<sup>12</sup> The Agencies analyze such unilateral effects of mergers by assessing a percentage of demand that will switch from one merging party as a result of a small increase in its price to the other merging party given that the departing demand was the force that held price down pre-merger. In other words, the Agencies look at a substitutability of products provided by the two merging suppliers.

This concept can still apply to power even though we often think of electricity as a homogenous product because of different dimensions of power markets. For instance, a buyer may engage in long-term contracting instead of purchasing their power in the short-term spot

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<sup>11</sup> The term withholding generally encompasses physical and economic withholding.

<sup>12</sup> Section 6.2, 2010 Guidelines.



market, and vice versa. Thus, the probability of anticompetitive unilateral effects may rise when a supplier with significant presence in a short-term power market merges with a supplier who engages in long-term contracts for the same set of customers. Their merger may push prices up in the long term but not raise short-term concerns. The DPT screen, which measures potential merger effects of short-term products only, will not capture the potential harm of this type of merger.

It is worth noting that although market concentration statistics may be used as an indicator of potential for unilateral anticompetitive behavior of mergers, a better structural and more direct indicator of unilateral effects for wholesale power markets is a pivotal supplier index (PSI).<sup>13</sup> A PSI measures the amount of demand that needs to be served by an examined supplier. The pre- and post-merger PSI values can be calculated to measure whether a combined firm could become pivotal in the market after the merger. The Commission has already adopted this metric as one of the two indicative screens when determining whether a seller should be granted market-based rate authority.<sup>14</sup> PJM, ERCOT, CAISO, and Midwest-ISO also use one form or another of PSI to assess the competitiveness of their markets.

Finally, as the Commission is well aware, both the organized and non-organized markets have continued to increase in complexity and diversity with respect to their specific rules and regulatory controls. The particular and perhaps unique market design and regulatory features of the market in which the merging parties operate could have significant impacts on the potential competitive impacts of a merger, positive or negative. By encouraging principle-based analyses that examine a proposed transaction within its actual market environment, the Commission will not only improve its merger oversight capabilities, but also will gain information useful to its ongoing activities of overseeing the wholesale markets themselves.

As a result of all this, we encourage the Commission to depart from its current prescribed Appendix A method to a principle-based method. We do not ask the Commission to abandon the use of market concentration statistics, or the DPT (HHI) screen, but rather to apply it when mergers are likely to increase coordinated interaction that harms consumers. In other words, we

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<sup>13</sup> Another index that can be used to measure the degree of pivotality is the Residual Supplier Index.

<sup>14</sup> The Commission initially adopted the interim approach for analyzing generation market power in the 2004 MBR Order. The core element of the generation market power analysis in Order No. 697 is the same as that in the 2004 MBR Order.

recommend the Commission set out guiding principles in assessing merger effects based on a theory of competitive harm at an early stage of its review. As described in the 2010 Guidelines, there are several common types of merger effects and there is no single methodology for their evaluation. Nevertheless, we recognize that other methodologies may have the same problems as those of the DPT screen. We believe that the Commission's guidance on how applicants will articulate their theory of competitive harm would form the core of the discussion about merger policy revisions.

### III. COMMENTS ON MARKET DEFINITION

Regardless of the analytical techniques chosen for merger effect assessments, the Commission should not de-emphasize the importance of defining relevant markets. Delineating a geographic market is a prerequisite to assessing competitive conditions. It provides a basis for the measurement of market size, and ultimately a calculation of market shares and substitutability. Suppliers are considered to be in the same market if their products can reach the same potential buyers. A market with high prices attracts distant sellers, whereas lower-price markets can support fewer distant sellers.

Currently, the Commission provides a reasonable guideline for merger applicants to define their relevant product and geographic markets. Because electricity varies by time, the Commission requires merger applicants to examine competitive effects for at least 10 periods.<sup>15</sup> Additionally, in previous merger cases, the Commission has made specific findings that the relevant market may be significantly smaller or larger than the Balancing Authority Area (BAA) due to the effect of transmission constraints at various times of the day and year.<sup>16</sup> Thus, these submarkets must be analyzed separately for the purposes of merger effects.

The Commission, however, should improve on how the DPT model screens for potential suppliers who can reach a relevant market. Although the DPT limits each market size based on each market's transfer capability and Simultaneous Import Limit (SIL), the DPT determines potential suppliers' (available) economic capacity *without* considering their opportunity costs.

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<sup>15</sup> The 10 periods are broken down by season (summer, winter, and shoulder) and time of day (extreme super-peak, super-peak, peak, and off-peak).

<sup>16</sup> Exelon Corp., 112 FERC ¶ 61,011, reh'g denied, 113 FERC ¶ 61,299 (2005). Wisvest-Connecticut, LLC, 96 FERC ¶ 61,101 (2001). National Grid plc, 117 FERC ¶ 61,080 (2006)

As a result, market sizes and market structure may be overstated due to an assumed large number of suppliers in a market. A production-costing model, which simultaneously dispatches generation and load among various areas, can be considered as an alternative. The use of this type of model could solve the issue of an economic allocation as the model's objective is to minimize cost of all markets simultaneously. However, if the Commission decides to continue the use of the DPT screen, we recommend that the Commission require applicants to take into account each potential supplier's opportunity costs. For instance, in our previous merger analyses, we had set marginal costs of pump storage facilities in a neighboring BAA to the highest market price in the surrounding BAA.<sup>17</sup>

#### **IV. COMMENTS ON ADOPTING 2010 GUIDELINES' SAFE HARBOR THRESHOLD**

The decision to adopt the 2010 DOJ/FTC Horizontal Merger Guidelines' safe harbor thresholds must rely on whether the Commission will modify its overall approach of its merger review process. As we have recommended in our previous sections, market concentration statistics by themselves are no longer adequate for initial screening of anticompetitive merger effects, considering the complexity and progression of wholesale electricity markets. Based on our unscientific survey, market concentration statistics within an RTO/ISO market tend to be around 1,000 or lower while those of a non-RTO/ISO market are often above 1,500. Using the HHI screen, mergers in an RTO/ISO market are likely to be viewed as having no adverse impact on competition, when they may create an incentive to engage in strategic anticompetitive behavior. Thus, we caution the Commission against adopting these threshold levels without revising the current analytical framework.

#### **V. CONCLUSIONS**

Since electric suppliers now operate in vastly different market environments, a uniform methodology as prescribed by the Commission may no longer be appropriate. We recommend that the Commission move away from the use of the Appendix A formula and rather describe a

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<sup>17</sup> See Workpapers of Dr. Fox-Penner on behalf of Nevada Power Company and GenWest LLC in Docket No. EC05-132-000, and on behalf of National Grid plc and Keyspan Corporation, Docket Nos. EL06-85-000 and EC06-125-000.

principle-based approach that evaluates merger effects based on a theory of competitive harm. Additionally, we recommend that the Commission utilize a range of tools that one can use to suit the theory, characteristics of merging parties and relevant products and markets in which they are involved. Since the DPT screen does not always yield conservative results and thereby is exposed to Type II errors, the Commission should neither wait for a merger to fail a DPT screen nor intervening parties to raise concerns before examining its merger effects beyond HHI statistics. With this flexible framework and some improvement to the DPT model (if the Commission continues to use it), the Commission would be able to adopt the 2010 Guidelines' HHI and change in HHI safe harbor thresholds.