

Murky Markets: A Review of FERC’s Determination of Submarkets in Wholesale Electric Power Mergers

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I. Introduction

When is a market not a market? Section 203 of the Federal Power Act tasks the Federal Energy Regulatory Commission (“FERC” or “Commission”) with examining proposed mergers and acquisitions (“M&A”) that affect wholesale power markets to determine if these transactions are in the public interest. When the relevant parties operate in the footprint of a Regional Transmission Organization (“RTO”) or an Independent System Operator (“ISO”), FERC often simply defines the relevant geographic market as the entire RTO/ISO.⁵

However, if some areas of an RTO/ISO exhibit transmission constraints⁶ that have resulted in, or potentially could result in, anticompetitive price increases or other abuses of market power, FERC may designate those areas as smaller “submarkets.” When it does so, the Commission noted,⁷ “that submarket becomes the default relevant geographic market for sellers located within the submarket for purposes of the market-based rate analysis.” This means that the finding of a submarket in an M&A proceeding will affect regulatory requirements for any power sellers in that area going forward, even those uninvolved in the M&A.

Over the years, FERC has made rulings on submarkets in a handful of merger applications. In these proceedings, the Commission occasionally has defined submarkets within an RTO/ISO, such as several different submarkets in the Northeast. As FERC summarized in a 2007 order: “For example, in some

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⁵ Broadly speaking, an RTO or ISO is an independent entity that coordinates and monitors the electric grid in a defined area. There are seven such entities in the United States, several of which will be discussed in this article.

⁶ A transmission constraint refers to the absence of sufficient and reliable transmission system capacity to deliver electricity from its source to final consumers. *See, e.g.*, U.S. Department of Energy, *Transmission Constraints and Congestion in the Western and Eastern Interconnections, 2009-2012*, January 2014, p. 3.

⁷ Final Rule in *Market-Based Rates for Wholesale Sales of Electric Energy, Capacity and Ancillary Services by Public Utilities*, Order No. 697, FERC Stats. & Regs. ¶ 31,252 (2007) (“Order No. 697”), P 15.

merger orders, the Commission has found that PJM-East, and Northern PSEG are markets within PJM; Southwestern Connecticut (SWCT) and Connecticut Import interface (CT) are separate markets within ISO-NE; and New York City and Long Island are separate markets within NYISO.”⁸ More recently, FERC designated the AP South and 5004/5005 areas as submarkets within PJM in the 2011 proceeding regarding the merger of Exelon Corporation (“Exelon”) and Constellation Energy Group (“Constellation”).

In four more recent M&A proceedings, however, the Commission declined to designate submarkets:

- The 2012 merger of NRG Energy, Inc. (“NRG”) and GenOn Energy, Inc. (“GenOn”);
- The 2013 acquisition by Dynegy Inc. (“Dynegy”) of Ameren Corporation’s (“Ameren”) merchant generating fleet;
- The 2015 merger of Wisconsin Energy Corporation (“WEC”) and Integrys Energy Group (“Integrys”); and
- The 2015 acquisition of Union Power Partners (“Union Power”) by affiliates of Entergy Corporation (“Entergy”).

In addition, the Commission is currently examining the definition of potential submarkets in the pending merger of Great Plains Energy (“Great Plains”) and Westar Energy (“Westar”).

In light of this varied history, this paper reviews these recent proceedings at a high level to examine the motivation for considering submarkets; the information, data, and analyses that were submitted by the merging parties and intervenors; and the rationale for FERC’s decisions to designate or decline to designate such submarkets. We conclude by summarizing some insights to consider when preparing analyses related to submarket definition in wholesale electric power mergers.

⁸ PJM refers to the PJM Interconnection RTO; PSEG refers to the territory of Public Service Electric & Gas Company; ISO-NE refers to ISO-New England; NYISO refers to the New York ISO. Order No. 697, P 236, citing *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).

II. Data and Analyses Relevant to Submarket Determination

As the applicants noted in the NRG-GenOn merger, “Market definitions can be established through a variety of different analyses and tests, including analysis of physical flows, price correlation analysis, statistical analysis and other modeling applications to market definition concepts.”⁹ In the proceedings that we are examining, different types of analyses were used to either support or refute requests for submarket definition. The analyses have variously been requested by FERC staff, submitted by the applicants, or submitted by intervenors (such as local governments or consumer groups) in opposition to the proposed merger.

From a review of these decisions, it appears that evidence of actual transmission congestion on interfaces between geographic regions often is a key, determining factor in market definition. As the Commission noted in its order related to the Exelon-Constellation merger, “[t]he Commission has stated that any proposal to use an alternative geographic market must include a demonstration regarding whether there are frequently binding transmission constraints during historical seasonal peaks and at other competitively significant times that prevent competing supply from reaching customers within the proposed alternative geographic market.”¹⁰ Therefore, data on the number of hours where there were binding constraints between the proposed submarket and the rest of the RTO/ISO, compared with the total number of hours during the period examined, is a major piece of evidence.

In addition, documenting price separation (i.e., different price levels) between the area under consideration and the remainder of the RTO/ISO is a way of showing that the binding constraints are frequent enough to warrant treating the area as a separate submarket. In some proceedings, high correlations between prices in the area under consideration and the remainder of the RTO/ISO are used to argue that the area should not be considered a submarket. However, price correlations by themselves may not be particularly convincing. Many external factors, such as weather, time of day, and fuel prices, impact prices in a way that may create correlation between areas that are, in fact, separate

⁹ NRG Energy, Inc. and GenOn Energy, Inc., *Joint Application For Authorization Of Disposition Of Jurisdictional Assets And Merger Under Sections 203(A)(1) And 203(A)(2) Of The Federal Power Act*, Docket No. EC12-134-000, August 10, 2012 (“NRG-GenOn Application”), Exhibit J, p. 31 and fn. 48. One type of modeling application is, for example, a simulated Small-but-Significant Non-Transitory Increase in Price Test: “[A] distinct geographical market for market power analysis exists if a hypothetical monopolist over the whole supply in that market would profitably be able to sustain a Small-but-Significant Non-Transitory Increase in Price (“SSNIP”).”

¹⁰ *Exelon Corporation*, 138 FERC ¶ 61,167 at P 32.

markets—such factors may exert the same influence on pricing within different markets but do not necessarily imply that the areas are in the same market.¹¹

The number of interconnections between the area under consideration and the remainder of the RTO/ISO (or even other markets) can also be considered as evidence that a given area may or may not be a submarket. For instance, it may be found that, even if certain interfaces are frequently constrained, an area need not be considered a submarket if the constraints among multiple interconnections are not simultaneous.

Finally, each RTO/ISO has a market monitor tasked with assessing the competitiveness of the market. The market monitors generally issue periodic reports in which certain areas may be designated as constrained. Parties may point to a market monitor’s findings as evidence that there is or is not a submarket.

Table 1. Selected Submarket Decisions in FERC’s M&A Rulings

Exelon-Constellation (2011)

RTO/ISO	Submarket in question	Submarket allowed?	FERC rationale
PJM	PJM East	Yes	Previously defined submarket maintained; no rationale provided
	5004/5005 and AP South	Yes	Frequency of transmission constraints and resulting price separation
	Northern Illinois	No	No evidence of transmission constraints or price separation

NRG-GenOn (2012)

RTO/ISO	Submarket in question	Submarket allowed?	FERC rationale
PJM	PJM East and 5004/5005	Yes	Previously defined submarkets maintained; no rationale provided
NYISO	East of Central East	No	Insufficient frequency of transmission constraints
CAISO	South of Path 15 (SP-15)	No	Sporadic, rather than consistent, congestion due to factors other than lack of competition

¹¹ Note that, in some instances, the merging parties provided price correlation analysis addressed these concerns.

Dynegy-Ameren (2013)

RTO/ISO	Submarket in question	Submarket allowed?	FERC rationale
MISO	Southern Illinois	No	No evidence supporting concerns that market concentration would lead to price increases

WEC-Integritys (2014)

RTO/ISO	Submarket in question	Submarket allowed?	FERC rationale
MISO	Wisconsin-Upper Michigan System (WUMS)	No	Low frequency and lack of simultaneity of transmission constraints among multiple interconnections; WUMS prices were generally lower than those in the rest of the RTO/ISO

Entergy-Union Power (2015)

RTO/ISO	Submarket in question	Submarket allowed?	FERC rationale
MISO	MISO South	No	Historical transmission constraints reduced; FERC accepted simulation model of future flows

Great Plains-Westar (2016)

RTO/ISO	Submarket in question	Submarket allowed?	FERC rationale
SPP	Kansas City Area	Ongoing proceeding	TBD; FERC requested applicants provide constraint analysis and price separation/correlation analysis

III. Regional Summary of FERC's Rationales in Submarket Determination

A. Proposed Submarkets for the PJM Interconnection RTO

At the times of the Exelon-Constellation merger and the NRG-GenOn merger, PJM East had previously been recognized by FERC as a submarket due to transmission constraints; however, applicants in the Exelon-Constellation merger presented data indicating that those constraints had been substantially

reduced since the area was first accepted as a submarket.¹² As a result, applicants argued that PJM East should no longer be considered a relevant submarket. Ultimately, in both proceedings the Commission declined to change its previous determination that PJM East is a submarket, but it also provided no detail on the factors it considered in making this determination.¹³

In their merger application, Exelon and Constellation also proposed that the areas east of the 5004/5005 interface (“5004/5005”) and east of the AP South interface (“AP South”) may be submarkets based on the number of hours in which binding constraints across the interfaces occurred and on the magnitude of the congestion component of prices in these regions.¹⁴ Monitoring Analytics, PJM’s independent market monitor, similarly found that these areas were frequently separated from the rest of PJM by transmission constraints.¹⁵ Based on the data presented, the Commission agreed that the 5004/5005 and AP South areas should be considered submarkets.¹⁶ The Commission reiterated its recognition of the 5004/5005 and AP South submarkets in its decision on the NRG-GenOn merger.¹⁷

Finally, in response to the Exelon-Constellation application, the Illinois Attorney General’s office (“Illinois AG”) requested that a hearing be held to determine if Northern Illinois should be designated a submarket.¹⁸ It presented data that purportedly showed that market concentration in the “Northern Illinois market” would increase substantially if Exelon and Constellation were to merge. However, the Commission declined the Illinois AG’s request for a hearing, stating that the Illinois AG had provided no evidence of transmission constraints or price separation that would indicate that Northern Illinois operates as a distinct submarket.¹⁹

¹² Exelon Corporation and Constellation Energy Group Inc., *Joint Application For Authorization Of Disposition Of Jurisdictional Assets And Merger Under Sections 203(A)(1) And 203(A)(2) Of The Federal Power Act*, Docket No. EC11-83-000, May 20, 2011 (“Exelon-Constellation Application”), Exhibit J-1, p. 8.

¹³ *Exelon Corporation*, 138 FERC ¶ 61,167 at P 31.

¹⁴ Exelon-Constellation Application, Exhibit J-1, pp. 5-7 and 34-37.

¹⁵ Monitoring Analytics, *Review and Analysis of the Proposed Merger of Exelon and Constellation*, p. 27.

¹⁶ *Exelon Corporation*, 138 FERC ¶ 61,167 at P 31.

¹⁷ *NRG Energy, Inc.*, 141 FERC ¶ 61,207 at P 67.

¹⁸ Motion to File Intervention and Protest of the People of the State of Illinois by Attorney General Lisa Madigan, Instanter.

¹⁹ FERC further signaled that the Illinois AG’s analysis was flawed in that it incorrectly attributed all energy purchased from PJM as coming from a single supplier and that it did not separate purchases by season and peak period. *Exelon Corporation*, 138 FERC ¶ 61,167 at PP 32-33.

B. Proposed Submarket for the New York ISO

In their initial merger application, NRG and GenOn cited the 2011 Congestion Assessment and Resource Integration Study (“CARIS”) prepared by NYISO, concluding that “the Central East interface is the most constrained path in NYISO,”²⁰ and stating that these constraints contributed to price differences across New York.²¹ They thus considered the “East of Central East” area as a potential submarket within NYISO.

FERC decided that the historical record did not support the recognition of a submarket. According to FERC, the applicants had failed to show an increase in frequency in binding transmission constraints during historical peaks and other competitively significant times that prevented competing supply from reaching customers in that region.²²

C. Proposed Submarkets for the California ISO

In their initial merger application, NRG and GenOn also considered the area known as the South of Path 15 (“SP-15”), a key transmission corridor in the California ISO (“CAISO”), as a potential submarket. They prepared a price separation analysis on hourly day-ahead prices in the south and north of Path 15 (“NP-15”) areas, and concluded that price differences greater than 5 percent between NP-15 and SP-15 occurred in over 30 percent of hours.²³

However, FERC did not rely on the pricing analysis alone, but also relied on a congestion study by the California Department of Market Monitoring.²⁴ FERC noted that the congestion it did observe was due to scheduled maintenance on Path 15, rather than any persistent competitive issue,²⁵ and therefore concluded that it found no evidence of ongoing, persistent binding transmission constraints that would prevent competing supplies from entering the SP-15 area.²⁶

²⁰ NRG-GenOn Application, Exhibit J, p. 66. The constrained hours of the Central East path ranged from 195 hour (2.2% of hours) to 1,199 hours (13.7% of hours) yearly, and a 5-year total of 2,892 hours (6.6% of 5-year hours).

²¹ NRG-GenOn Application, Exhibit J, p. 66.

²² *NRG Energy, Inc.*, 141 FERC ¶ 61,207 at P 75.

²³ NRG-GenOn Application, Exhibit J, fn. 51.

²⁴ CAISO Department of Market Monitoring, *2011 Annual Report on Market Issues and Performance* at Table 7.2, “Impact of congestion on day-ahead prices by load aggregation point (February–December)” (April 2012), available at <http://www.aiso.com/Documents/2011AnnualReport-MarketIssues-Performance.pdf>.

²⁵ *Id.* at 135, see also 135–137.

²⁶ *NRG Energy, Inc.*, 141 FERC ¶ 61,207 at P 80.

D. Proposed Submarkets for the Midcontinent ISO

In the initial application for the Dynegy-Ameren acquisition, applicants prepared a price correlation and price separation analysis of the 2012 monthly average day-ahead and real-time prices in the Midcontinent ISO (“MISO”) at four market hubs: Illinois, Indiana, Michigan, and Minnesota.²⁷ This analysis concluded that the congestion seen within Illinois and between MISO and PJM had not caused Illinois to “have consistently higher prices than elsewhere in MISO.”²⁸ Therefore, the applicants concluded, the portion of Illinois within MISO (generally referred to as Southern Illinois) was not a submarket.

The Illinois Municipal Electric Agency (“IMEA”) filed a protest, saying it was particularly concerned with Dynegy’s ability to take advantage of transmission congestion in Illinois to drive up prices in Illinois.²⁹

The Commission ultimately approved the transaction reaffirming that MISO, in its entirety, was the appropriate relevant geographic market.³⁰ The Commission stated that the applicants’ data showed that there was no need for additional submarkets,³¹ and that the IMEA had failed to produce any evidence to substantiate its concerns.³²

In a different proceeding, the WEC-Integrays applicants asserted that the Wisconsin-Upper Michigan System (“WUMS”) should not be considered a submarket, primarily on the basis of their analysis of price separation and price correlation. The applicants found that WUMS did not have consistently higher prices than the average for the rest of MISO; if anything, WUMS was generally a “low-side” market. Furthermore, the applicants found that the price correlation

²⁷ Ameren Energy Generating Company, et al., *Joint Application for Authorization under Section 203 of the Federal Power Act and Request for Expedited Consideration*, Docket No. EC13-93-000, April 16, 2013 (“Ameren-Dynegy Application”), Exhibit JRS-1, p. 21.

²⁸ Ameren-Dynegy Application, Exhibit JRS-1, p. 21.

²⁹ *Protest of the Illinois Municipal Electric Agency*, Docket No. EC13-93-000, June 17, 2013, pp. 24-25.

³⁰ *Ameren Energy Generating Company*, 145 FERC ¶ 61,034, pp. 1, 20 and 35.

³¹ *Ameren Energy Generating Company*, 145 FERC ¶ 61,034, p. 20.

³² *Ameren Energy Generating Company*, 145 FERC ¶ 61,034, p. 20. “[I]ntervenors have not provided evidence to show that there are binding transmission constraints during historical peaks and other competitively significant times that would prevent competing supply from customers within the proposed alternative geographic market of southern or central Illinois.” The Commission also referenced the same order Ameren and Dynegy had referenced in their rejection of a Southern Illinois submarket, *NRG Energy, Inc.*, 141 FERC ¶ 61,207 at ¶ 75: “Applicants have not shown an increase in frequency in binding transmission constraints during historical peaks and other competitively significant times that prevent competing supply from reaching customers within the proposed alternative geographic market.”

between WUMS and the remainder of MISO was 0.96, a strong correlation that, they argued, would be expected for a single market.³³

The intervenors, which included the Michigan Governor and Attorney General, Great Lakes Utilities, and two mining companies, argued that WUMS should be considered a submarket. They pointed to the finding of MISO's independent market monitor that WUMS is a "narrowly constrained area" ("NCA"), and also referenced other data on the number of hours with binding transmission constraints provided by the independent market monitor.³⁴

The Commission was unconvinced. The NCA designation was insufficient for the Commission to consider WUMS a separate submarket given that the applicants showed that none of the five interconnections into WUMS were frequently binding and that, when there was a constraint at one interconnection, the others were not simultaneously constrained. The Commission also pointed to the applicants' initial showing that prices in WUMS tended to be lower.³⁵

Finally, in the Entergy-Union Power application, the applicants provided data on the number of hours with binding constraints in both the day-ahead and real-time markets for the MISO South and MISO Midwest areas.³⁶ Their analysis showed the existence of occasional, non-systematic transmission constraints into MISO South. However, applicants argued that the constrained hours did not consistently correspond with historical peaks or other competitively significant times.³⁷

The applicants also compared prices in MISO South, as measured by the Arkansas hub, to prices in MISO Midwest, as measured by the Indiana hub.³⁸

³³ Wisconsin Energy Corporation, et al., *Joint Application for Authorization of Disposition of Jurisdictional Assets and Merger under Sections 203(a)(1) and 203(a)(2) of the Federal Power Act*, Docket No. EC14-126-000, August 15, 2014.

³⁴ *Motion to Intervene, Protest, and Request for Hearing of Michigan Attorney General Bill Schuette and Michigan Governor Rick Snyder*, Docket No. EC14-126-000, October 17, 2014; *Motion to Intervene and Protest of Great Lakes Utilities*, Docket No. EC14-126-000, October 17, 2014; *Protest of Tilden Mining Company L.C. and Empire Iron Mining Partnership*, Docket No. EC14-126-000, October 17, 2014.

³⁵ *Wisconsin Energy Corporation, et al.*, 151 FERC ¶ 61,015, at P 36.

³⁶ *Union Power Partners, L.P.*, 154 FERC ¶ 61,149, at P 37. At the time of the acquisition application, the MISO South area had been recently integrated into MISO. MISO Midwest refers to the footprint of MISO prior to the integration of MISO South.

³⁷ *Union Power Partners, L.P.*, 154 FERC ¶ 61,149, at P 37.

³⁸ Applicants initially used the price of a single hub for each region (*i.e.*, Arkansas hub for MISO South and Indiana hub for MISO Midwest) in their analysis regarding price separation. The Commission questioned this approach and raised the lack of precedence that the Commission had accepted the use of one hub price as the proxy for an entire market. Applicants subsequently provided data on load-weighted average of hub prices in MISO South, but did not provide an additional analysis of price separation using the load-weighted average of hub prices. See

Their analysis demonstrated that the average Arkansas hub price was rarely higher than the average Indiana hub price, and generally only in off-peak periods.³⁹ The applicants opined that “generally lower prices in MISO South...support a conclusion that adequate or excess generation exists in the MISO South region and that generators in MISO Midwest can compete with generation from MISO South.”⁴⁰

However, a previous dispute between MISO and Southwest Power Pool (“SPP”) had temporarily constrained flows between MISO South and MISO Midwest. Following the settlement of the dispute, the Commission also requested prospective estimates, in addition to the historical data, of the binding transmission constraints for the period after the limitation was to be removed.⁴¹ To provide the estimates, the applicants relied on a simulation model developed by MISO for 2019.⁴²

In the end, the Commission decided that MISO as a whole was the relevant geographic market and declined to designate MISO South as a submarket because substantial evidence provided by applicants showed that the previously-existing transmission limitation would be eliminated in the future.⁴³

E. Proposed Submarket in the Southern Power Pool RTO

The initial Great Plains-Westar merger application did not include analysis of any submarkets because the applicants argued that FERC had never found the need to analyze any submarkets within the SPP.⁴⁴ They additionally asserted that data showed that SPP had not experienced debilitating congestion or significant price separation in the region relevant to the proposed merger.⁴⁵

In response to the initial application, the City of Independence, Missouri stated that prices within the Kansas City Area were frequently higher than prices

Request for Expedited Consideration and Shortened Comment Period, Docket No. EC15-98-000, December 7, 2015, p. 8; 154 FERC ¶ 61,149 at P 38.

³⁹ *Union Power Partners, L.P.*, 154 FERC ¶ 61,149 at P 38.

⁴⁰ *Union Power Partners, L.P.*, 154 FERC ¶ 61,149 at P 39, citing *Applicants’ Response to FERC Data Request Letter*, Docket No. EC15-98-000, June 30, 2015, p. 5.

⁴¹ *FERC Second Data Request Letter*, Docket No. EC15-98-000, November 24, 2015, p. 4.

⁴² *Union Power Partners, L.P.*, 154 FERC ¶ 61,149, at P 51, citing *Applicants’ Response to FERC Second Data Request Letter*, Docket No. EC15-98-000, December 7, 2015, p. 6.

⁴³ *Union Power Partners, L.P.*, 154 FERC ¶ 61,149 at P 53.

⁴⁴ Great Plains Energy Incorporated and Westar Energy, Inc., *Joint Application for Authorization of Disposition of Jurisdictional Assets and Merger Under Sections 203(a)(1) and 203(a)(2) of the Federal Power Act*, Docket No. EC16-146, July 11, 2016, (“Great Plains-Westar Application”), p. 14.

⁴⁵ Great Plains-Westar Application, Exhibit J-1, pp. 20-21.

at the locations of the generating facilities, indicating some form of congestion that was likely to worsen after the merger.⁴⁶ Consequently, FERC requested that the merging parties examine the Kansas City Area in more detail.

Great Plains and Westar provided a detailed response, including information on the number of hours that key transmission lines in the Kansas City Area were constrained, both in the day-ahead and real-time markets. Their analyses revealed that even though the Kansas City Area was designated as a frequently constrained area (“FCA”) by the SPP market monitor in 2013, recent improvements to the transmission system had eliminated the need for this designation.⁴⁷ The applicants also provided price separation and price correlation analysis for six different load zones (including the Kansas City Area).⁴⁸ The results indicated that prices within SPP increased geographically from north to south. The Kansas City Area, which is located in the middle of SPP territory, was shown to have higher electricity prices than the northern areas of SPP and lower prices than the southern areas of SPP, but the spreads were not large, especially to nearby areas.⁴⁹ The electricity prices in the Kansas City Area were also shown to be highly correlated with prices drawn from the other five areas examined.⁵⁰ Given these findings, the applicants concluded that there was no basis for the designation of the Kansas City Area as a submarket.

The matter is ongoing, and the Commission has not yet made a determination.

IV. Lessons Learned

As can be seen, FERC considers a variety of data and information when deciding whether to designate a new submarket. It does not appear to exhibit any institutional bias either in favor of or against designating submarkets, but rather considers the quality and depth of analysis and data provided by both applicants and intervenors. Some lessons can be gleaned from the above.

First, the Commission is consistent in its demands for evidence of transmission constraints creating price separation to establish the existence of a submarket. Evidence of market concentration alone is not sufficient for proving

⁴⁶ *Protest of the City of Independence, Missouri*, Docket No. EC16-146, September 23, 2016, pp. 8-10.

⁴⁷ *Response to the Commission’s Deficiency Letter of October 7, 2016, on behalf of Great Plains Energy, Inc. and Westar Energy, Inc.*, Docket No. EC16-146, November 7, 2016 (“Great Plains-Westar Response”), Attachment 1, pp. 4-5.

⁴⁸ Great Plains-Westar Response, Attachment 1, pp. 10-13.

⁴⁹ Great Plains-Westar Response, Attachment 1, pp. 10-13.

⁵⁰ Great Plains-Westar Response, Attachment 1, pp. 10-13.

that a submarket exists. As in any antitrust analysis, the first step is defining the market. The market concentration analysis comes after the market is clearly defined.

The intervenors in some cases confused this fundamental concept. For example, in the Exelon-Constellation merger, despite showing high concentration in the Northern Illinois area, the Illinois AG failed to provide any evidence that the area operated as a separate market from PJM as a whole to begin with. Without an analysis of transmission constraints and price differentials, the Commission was unmoved.

Similarly, in the Dynegy merchant transaction, intervenors raised concerns over Dynegy's ability to take advantage of transmission constraints by raising prices, but they did not provide sufficient evidence to rebut the applicants' previously-submitted analysis of those constraints. Again, the Commission declined to designate a new submarket in that proceeding.

Second, the Commission requires well-documented evidence of systemic, persistent effects. In the WEC-Integritys merger, intervenors cited information on binding constraints and price separation. However, the information cited showed that there were binding constraints in only approximately 6 percent of hours, and the intervenors provided only snapshots of heat maps showing price separation in specific time intervals. The Commission found that the merging parties' more comprehensive analysis sufficiently rebutted the intervenors' concerns. Similarly, in the Entergy-Union Power merger, the Commission was unconvinced by intervenors' protests that lacked data or analysis, but twice requested from applicants historical analyses and prospective estimates of binding constraints, which carried the day for the applicants.

In these cases, analytical rigor and appropriateness of the data can be powerful influences. For example, analyses of transmission constraints and price separation should divide the data by season and demand levels,⁵¹ as noted in the Commission's determination in the Exelon-Constellation merger and reaffirmed in several other proceedings. Transmission constraints and price differentials occurring in peak hours and at "other competitively significant times" are weighted more heavily in the Commission's decisions than those occurring in off-peak hours when prices are generally lower. The Commission declined the designation of both the East of Central East area within NYISO and the SP-15

⁵¹ Due to the limited ability to store electric power, competitive conditions can vary by season and time of day.

area within CAISO as relevant submarkets in the NRG-GenOn merger for this specific reason.

In addition, with several connections into an area, it is important to analyze whether the constraints are jointly binding. For instance, in the WEC-Integrus merger, the applicants showed, and the Commission accepted, that the five interconnections into WUMS were not simultaneously binding and therefore competing supply was not prevented from being delivered into WUMS.

Third, evidence of generally lower prices appears to outweigh evidence of a few hours of transmission constraints into an area. For instance, in the WEC-Integrus merger, evidence was provided that WUMS had lower prices on average than the rest of MISO, while transmission constraints bound in approximately 6 percent of hours. Similarly in the Entergy-Union Power merger, MISO South had lower prices on average than MISO Midwest, while transmission constraints were expected to bind in approximately 3 percent of hours on average. In both cases, the Commission declined to designate the areas in question as submarkets.

The “low-side” of a transmission constraint also typically has not been considered a separate market. For instance, in the Exelon-Constellation merger in which PJM East was considered a submarket, the remainder of PJM, excluding PJM East, was not analyzed as a separate submarket.⁵²

Fourth, if significant changes to transmission are expected in the near future or have been recently completed, a simulation can be used as evidence of expected constraints after the alterations are completed. In the Entergy-Union Power merger, FERC required an analysis of the expected transmission constraints after the elimination of the power flow limitation, and accepted the results of a simulation model that applicants provided as sufficient evidence that the constraint between MISO Midwest and MISO South would not generally be binding.

Finally, it seems there is a high bar to “un-designate” a previously-designated submarket. In the Exelon-Constellation merger, the merging parties

⁵² Some have suggested that if the high-priced side of the market is a separate market in some hours, then in those same hours, the low-priced side of the market must be treated as a separate market because high-priced generation from the high side of the market would not compete with generation on the low side of the market. However, unless all transmission paths into the high-priced side of the market are constrained, generation from the high side of the market can be competitive with generation on the low side of the market as shown in Morris and Accordini (2010), implying that it is not generally appropriate to analyze the low side of the market as a submarket. Morris and Accordini (2010), “Geographic Market Delineation in LMP Electric Power Markets,” *The Electricity Journal*, Vol. 23, Issue 3.

submitted information indicating that the previously-designated submarket of PJM East had been constrained far less frequently in the years since it was originally designated. However, in its order conditionally authorizing the merger, the Commission did not address this argument at all, and PJM East has continued to be considered a submarket in more recent market power-related proceedings.

In conclusion, applicants preparing to apply to FERC for an M&A approval, particularly parties with large amounts of overlapping generation, should consider the geographic areas in which their generating facilities overlap and whether there may be a need to examine a smaller area than the entirety of an RTO/ISO. In the event that FERC staff or an intervenor raises concerns that a submarket may exist, applicants should be prepared to provide a rigorous analysis of both transmission constraints and price data by season and demand to address these concerns. Intervenors concerned about a particular merger or acquisition should provide a similarly rigorous analysis and not rely on a few examples of transmission constraints or price separation. Furthermore, intervenors should be careful to provide evidence to establish that the area of concern is, in fact, a submarket before complaining about high post-merger market concentration.