UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

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NRG Energy Holdings, Inc., Edison Mission Energy	)	Docket No. EC14-14-000
	)	

ANSWER AND MOTION FOR LEAVE TO ANSWER
OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to Rules 212 and 213 of the Commission's Rules and Regulations,[1] Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor for PJM ("Market Monitor"), answers and moves for leave to answer pleadings filed by NRG Energy Holdings, Inc., and Edison Mission Energy (collectively, "Applicants") on December 23, 2013 ("Applicants' December 23rd Answer"), and January 7, 2014 ("Applicants January 7th Answer"), in response to the Market Monitor's reports analyzing the proposed merger filed in this proceeding on December 9, 2013, and January 2, 2014 ("IMM Report," all citations to the version filed January 2nd). The Market Monitor's analysis shows that the Applicants' merger increases market power in the PJM Regulation Market beyond levels deemed acceptable without mitigation. These analyses also showed material increases in concentration levels in the raise help market in the ComEd zone and recommended that the Commission require a report from the Market Monitor 12 months following the merger. In this answer, in order to ensure a complete record and to facilitate the decision-making process, the Market Monitor responds in the attached report to the Applicants' assertions about the analysis in the IMM Report and to the Applicants' unsupported opposition to the modest and proportional mitigation measures and condition that the Market Monitor recommends.

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[1] 18 CFR § 385.212 & 385.213 (2013).

I. ANSWER

A. The Issues Identified in the Market Monitor's Reports Are Valid and Should Be Addressed.

The Market Monitor responds to Applicants' claims about the Market Monitor's analytical approach to the Regulation Market in the attached report. Applicants' assertion that market shares, and the resulting calculations of HHI, should be based on all offers rather than what actually clears in the market has no merit.[2]

Accordingly, the Market Monitor recommends, as a condition of approving the merger, that the Applicants submit only cost-based offers in the Regulation Market and that Applicants continue to offer the same units and quantities historically offered.

B. The Targeted Behavioral Mitigation and Post Merger Analysis Recommended By the Market Monitor Is Needed, and Is Proportional to the Issues Identified.

Applicants argue that the behavioral mitigation in PJM is unnecessary because the applicants are subject to monitoring and mitigation under the PJM rules. The Market Monitor has proposed very specific mitigation in the PJM Regulation Market to address market power issues that its analysis has identified in that market as a direct consequence of the merger. The proposed mitigation is not onerous, especially given that applicants are explicitly committed to engage in competitive behavior. The proposed behavioral mitigation appropriately supplements gaps in the market power and mitigation rules applicable to the PJM Regulation Market.

One element of the proposed mitigation for the PJM Regulation Market, the requirement that Applicants continue to offer the same units and quantities historically offered, is identical to mitigation approved for the merger of Exelon Corporation and Constellation Energy Group.[3] This mitigation was accepted for Exelon even though Exelon

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2 Applicants December 23rd Answer at 3, Attachment A (December 23 Morris Report) at 10.

3 138 FERC ¶ 61,167 at P 94 (2012).

is subject to the market power and mitigation rules in PJM. In both cases, the proposed mitigation does not duplicate but reasonably enhances existing PJM market power and mitigation rules.

The second element of mitigation recommended for the Regulation Market, that Applicants submit only cost-based offers in the Regulation Market, is also an enhancement to the current market power and mitigation rules. Evidence in this case shows that the merger would significantly increase structural market power in the Regulation Market. The mitigation proposed is a prudent and proportional response to that issue. Applicants have not explained why accepting this mitigation, which does not deprive Applicants of any of the legitimate value of the proposed merger, should not be accepted as a condition for approval or why Applicants would plan to behave in any way inconsistent with the proposal.

The final recommended condition of the merger, a study twelve months after the merger is consummated, does not place a burden on the Applicants. No additional condition on the applicants would be imposed unless and until the Market Monitor finds and establishes to the Commission's satisfaction that an additional issue exists that needs to be addressed. If, as Applicants represent, the merger raises no market power issues in the energy market, there is no reason for alarm about inclusion of an explicit requirement that the Market Monitor analyze and report on the issue after 12 months.

Accordingly, a requirement that the applicants adhere to the proposed behavioral requirements and a requirement that the Market Monitor prepare the indicated report should be made conditions for approval of the proposed merger.

II. MOTION FOR LEAVE TO ANSWER

The Commission's Rules of Practice and Procedure, 18 CFR § 385.213(a)(2), do not permit answers to answers or protests unless otherwise ordered by the decisional authority.

The Commission has made exceptions, however, where an answer clarifies the issues or assists in creating a complete record.[4] In this answer, the Market Monitor provides the Commission with information useful to the Commission's decision-making process and which provides a more complete record. Accordingly, the Market Monitor respectfully requests that this answer be permitted.

III. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to this pleading as the Commission resolves the issues raised in this proceeding.

Respectfully submitted,

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4 *See, e.g.*, *N.Y. Indep. Sys. Operator, Inc.*, 121 FERC ¶61,112 at P 4 (2007) (answer to protest accepted because it provided information that assisted the Commission in its decision-making process); *PJM Interconnection, L.L.C.*, 119 FERC ¶61,318 at P 36 (2007) (accepted answer to answer that "provided information that assisted … decision-making process"); *California Independent System Operator Corporation*, 110 FERC ¶ 61,007 (2005) (answer to answer permitted to assist Commission in decision-making process); *New Power Company v. PJM Interconnection, L.L.C.*, 98 FERC ¶ 61,208 (2002) (answer accepted to provide new factual and legal material to assist the Commission in decision-making process).

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Dated: January 21, 2014

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,
this 21st day of January, 2014.

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Attachment

Reply to NRG Answer to IMM Review of the Proposed Merger of NRG and Edison Mission Energy

The Independent Market Monitor for PJM

January 21, 2014

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Introduction

In its answer to the IMM report, NRG states that the IMM's report "largely confirms Dr. Morris's earlier conclusions" that the merger will have "no substantial effects on competition in the energy, capacity, or regulation markets."[1] NRG also argues that there is no need for the IMM's suggested mitigation given the market mitigation protections already in place in the PJM market.[2] NRG argues that "[t]here is nothing about the Transaction that will undermine the efficacy of PJM's market monitoring and mitigation regime or otherwise put Applicants or their subsidiaries in a position to engage in anti-competitive offer behavior."[3] The IMM disagrees with NRG's assessment. In this report, the IMM responds to NRG's comments on the IMM's analysis and conclusions about the proposed merger's effect on the energy and regulation markets and the resulting need for the IMM's recommended relief.

Energy Market

In its discussion of the IMM analysis of the Lanesville constraint, NRG argues that the IMM analysis did not account for the fact that the June 2013 upgrades eliminated the Lanesville constraint and that "the IMM analysis fails to show any material increase in market concentration related to Lanesville or to any bona fide PJM energy market."[4]The IMM disagrees.

In conducting its analysis, the PJM IMM made use of actual dispatch, offer and availability data to define the relevant markets and to examine the effects of the proposed merger on those markets using concentration ratios and pivotal supplier indices within the 2012-2013 planning period.

In the 2012-2013 planning period (June 1, 2012 through May 30, 2013) the Lanesville constraint defined a market in PJM. In the 2012-2013 planning period, resources were dispatched to relieve the Lanesville constraint. The analysis showed that this market, made up of resources in and around the ComEd service territory, was a highly concentrated market pre-merger where one of the merging companies, Mission Energy, holds a dominant position, and the other merging company, NRG, holds a substantial position. The average pre merger HHI for all relevant hours (peak and offpeak) was

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1 NRG and EME Answer at 1; Morris Response to IMM Report at 3.

2 NRG and EME Answer at 3.

3 NRG and EME Answer at 3.

4 NRG and EME Answer at 2; Morris Response to IMM Report at 6.

7836, well above the 1800 threshold for a highly concentrated market. The median HHI for all relevant hours (peak and offpeak) was 7904. The maximum HHI in the period was 10000. The results show that the merger would increase the average peak market hour HHI by 66 points from 7554 to 7620, a significant increase in the average HHI at these high average concentration levels. These are material increases in HHI in this market in the period in question. The IMM did not recommend merger related mitigation for this constraint defined market. Instead, the IMM recommended that the Commission, as a condition of approving the merger, direct the IMM to monitor and report after 12 months on the merged companies behavior and performance in the ComEd zone.

NRG is correct that the upgrade affecting the Lanesville constraint appears to have eliminated the Lanesville market for constraint relief based on results for June 1, 2013, through December 31, 2013. The result highlights one of the challenges of performing analysis of real power markets which reflect real system conditions. The system changes over time as a result of modifications to the transmission system, the addition of new resources, retirements and mergers. Some of these changes mitigate structural issues and others aggravate structural issues.

The IMM analysis has the advantage of using actual system conditions, with actual system solutions forming the basis of the analysis. This allows a study of market structure based on PJM's actual security constrained, economic dispatch. The analysis of actual market conditions, regardless of the details, cannot be a forecast. There is limited information on which to base forecasts of system changes which would change the security constrained economic dispatch solution. In this case, the analysis of actual market conditions shows that a relief market that is dependent on resources in the ComEd zone, under specific system conditions, is highly concentrated and the merger would exacerbate this concentration. While the issue of the Lanesville constraint appears to have been resolved, the increased concentration of resources that would result from a merger remains a concern in any market for raise help relief that develops in the area going forward.

One such market has appeared since the Lanesville related upgrades were put in place in June of 2013. The Byron – Cherry Valley constraint based relief market, which did not occur during the 2012-2013 planning period, did occur in the ComEd zone following the Lanesville upgrades. The Byron—Cherry Valley relief market occurred in 67 hours in the June 1, 2013 through December 30, 2013 study period. Like the Lanesville constraint, the Byron – Cherry Valley constraint is one of the controlling elements identified in the PJM and MISO market to market operating agreement for which PJM or MISO can be required to provide relief. The market for relief defined by the Byron – Cherry Valley constraint has significant overlap with the resources in the pre-upgrade Lanesville relief supply curve, and, as shown in Table 1 below, this market is similarly concentrated.

Table 1 shows, for the Byron – Cherry Valley constraint, the pre merger market event hour HHI category, the number of market event hours where the proposed merger would have increased the HHI by 50 or more points, 100 or more points, 200 or more points and/or 300 or more points.

Table 1 shows that all of the 67 market hours for which Edison Mission Energy or NRG provided raise help relief supply for the Byron – Cherry Valley constraint in the June 1, 2013 through December 30, 2013, period had a pre merger HHI of 2500 or more and 66 of these market hours (98.5 percent of relevant market hours) had a pre merger HHI of 4000 or more. Of the 66 pre merger Byron – Cherry Valley market event hours with an HHI of 4000 or more, the merger would cause 33 of these market event hours to have an increase of 200 or more points and 30 of these market event hours to have an increase of 300 or more points. These are the market hours where both NRG and Mission Energy concurrently provided raise help relief supply for the Byron – Cherry Valley constraint in the June 1, 2013 through December 30, 2013 period.

Table 1 By pre merger market event HHI category, post merger change in HHI of 50 or more, 100 or more, 200 or more or 300 or more points: Byron-Cherry Valley Market June 2013 through December 30, 2013

HHI Range	Pre Merger Number of Market Hours	Post Merger Number of Market Hours	Change in Hours	Pre to Post Merger hours with HHI increase of 50 or more	Pre to Post Merger hours with HHI increase of 100 or more	Pre to Post Merger hours HHI increase of 200 or more	Pre to Post Merger hours with HHI increase of 300 or more	Percentage of Market Hours with HHI increase of 50 or more	Percentage of Market Hours with HHI increase of 100 or more	Percentage of Market Hours with HHI increase of 200 or more	Percentage of Market Hours with HHI increase of 300 or more	Pre Merger Percentage of Makret Hours in HHI Range	Post Merger Percentage of Hours in HHI Range	Change in percentage of hours in HHI range
<500	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%
500 to <1000	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%
1000 to <1500	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%
1500 to <2000	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%
2000 to <2500	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%
2500 to <3000	1	-	(1)	1	1	1	1	100%	100%	100%	100%	1%	0%	-1%
3000 to <3500	-	1	1	-	-	-	-	-	-	-	-	0%	1%	1%
3500 to <4000	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%
4000 to <4500	1	-	(1)	1	1	1	1	100%	100%	100%	100%	1%	0%	-1%
4500 to <5000	3	-	(3)	3	3	3	3	100%	100%	100%	100%	4%	0%	-4%
5000 to <5500	2	-	(2)	2	2	2	2	100%	100%	100%	100%	3%	0%	-3%
5500 to <6000	-	-	-	-	-	-	-	-	-	-	-	0%	0%	0%
6000 to <6500	4	1	(3)	4	4	4	4	100%	100%	100%	100%	6%	1%	-4%
6500 to <7000	6	1	(5)	5	5	5	5	83%	83%	83%	83%	9%	1%	-7%
7000 to <7500	12	7	(5)	7	7	6	6	58%	58%	50%	50%	18%	10%	-7%
7500 to <8000	4	6	2	2	2	2	1	50%	50%	50%	25%	6%	9%	3%
8000 to <8500	6	8	2	2	2	2	2	33%	33%	33%	33%	9%	12%	3%
8500 to <9000	6	5	(1)	5	4	4	4	83%	67%	67%	67%	9%	7%	-1%
9000 to <9500	10	13	3	3	3	3	2	30%	30%	30%	20%	15%	19%	4%
9500 to <10000	9	18	9	1	1	1	-	11%	11%	11%	0%	13%	27%	13%
10000	3	7	4.00	-	-	-	-	0%	0%	0%	0%	4%	10%	6%
Overall	67	67	-	36	35	34	31	54%	52%	51%	46%	100%	100%	0%

The IMM remains concerned that the merger would have a significant impact on a relief market that is dependent on resources in the ComEd zone. The IMM does not believe that specific mitigation is warranted as a condition of the merger at this time, but continues to request that the Commission, as a condition of approving the merger, direct the IMM to monitor and report after 12 months on the merged companies behavior and performance in the ComEd zone.

Regulation Market

The IMM disagrees with NRG's assertion that market shares, and the resulting calculations of HHI, should be based on total offers, regardless of price, rather than what actually clears in the market.[5] The IMM also disagrees with NRG's assessment that "the excess offers of regulation services 'makes it unlikely that any one market participant would find it profitable to withhold services.'"[6] The IMM also disagrees with NRG's assertion that the IMM's Regulation Market HHI analysis confirms NRG's conclusions that there is no need for mitigation due to the merger.[7]

A firm's market share is the percentage of a market served by that firm. Central to this definition is concept that the market share is the portion of demand actually served by the firm, not the portion of total supply under the control of the firm in question, regardless of cost. A car manufacturer's market share is not based on the proportion of the production capacity it controls or its inventory or how many cars it offers for sale; it is based on the number of cars it sells in the market for cars relative to other producers of cars in the same market in a specific period of time. Regulation market share is the percentage of the market actually served a supplier and not the proportion of total regulation capability offered, regardless of price. A firm's actual market share is based on its proportion of demand served by that firm. This is the basis of the IMM's analysis.

Regulation offers stand for 24 hours at a time, yet regulation resources are not eligible to clear in every hour. A regulation offer is only considered if the resource is available to provide regulation, which typically means it must be on line, and it must have flagged its standing offer as available. Such a resource is eligible to be considered as a regulation resource. Even if the resource is eligible to provide regulation, it may not be cleared by the optimization engine due to its total offer (lost opportunity cost plus offer) making it uneconomic, and therefore not competitive. In other words, it might be priced out of the relevant market for regulation in a particular hour, and not a relevant source of competition. On a day with high energy prices, a low cost energy resource with a $1/MW regulation offer will be a more expensive provider of potential regulation than a high cost energy resource with a $1/MW regulation offer, due to differences in the lost opportunity cost portion of the offers. Analysis of the Regulation Market must account for these complexities. Analysis that ignores the relative competiveness of offers will incorrectly treat high priced offers as competitors in a low price market.

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5 NRG and EME Answer at 3; Morris Response to IMM Report at 10.

6 Morris Response to IMM Report at 10.

7 Morris Response to IMM Report at 10.

Analysis of market structure depends on an accurate definition of the relevant markets. Market definitions depend on properly identifying and evaluating potential substitutes for a given product. Within organized markets data are available, and should be used, to define markets based on how the units are evaluated and dispatched to meet demand, based on networked relationships between resources and load, relative costs, availability and operational parameters. Such an approach provides definitions of the relevant markets based on actual operational data related to the participants and the markets in which they operate. Evaluated in this manner, the substitutability or lack of substitutability among supply options in a market is made transparent, along with the relevant market(s), and the relative importance of the merging firms within the market(s). It is on this basis that the use of prescribed formulas regarding market shares, residual suppliers and concentration ratios, as well as other metrics, can be useful tools for evaluating the effects of a proposed merger.

In the IMM analysis, the definition of the relevant market is based on the actual substitutability and relative competitiveness among available, relevant regulation resources which in turn is based on the offers or failure to offer, the offer prices and the physical facts of the system. These determine how PJM markets define the substitutability among available regulation resources in the relevant regulation market over the analysis period. The IMM analyzed the regulation market as defined by the actual operation of the market, based on regulation MW actually cleared. The IMM analysis of the relevant markets therefore reflects the information available based on the actual operation of the PJM regulation markets, rather than approximations that ignore relative dispatch costs.

The analysis of the impact of the merger on the Regulation Market examines the Regulation Market hours when either Edison Mission Energy or NRG supplied and cleared regulation MW in the period from October 1, 2012, through September 30, 2013.[8] These are the relevant regulation markets. A market hour exists each time PJM dispatch software runs and clears the regulation market. The IMM calculated HHI levels on a pre merger and a post merger basis for each market hour. As detailed in the prior report, the analysis indicated that the proposed merger raises significant market power concerns in the regulation market.[9]

8 This period was chosen to align with the significant changes to the Regulation Market which were implemented on October 1, 2012.

9 Review and Analysis of the Proposed Merger of NRG and Edison Mission Energy, January 2, 2014 at 24.

Mitigation

With respect to IMM's behavioral mitigation recommendations for the regulation market, NRG states that the "applicants and their subsidiaries are already subject to extensive market power monitoring and mitigation by PJM and other independent system operators ("ISOs")/regional transmission organizations ("RTOs")."[10] NRG states that "[w]ith that mitigation in place, Applicants and their subsidiaries currently have, and following the consummation of the Transaction, will have, no choice but to "engage in competitive offer behavior in each PJM market," even if they were inclined to do otherwise (and, to be clear, they are not)."[11] The IMM disagrees with NRG's assessment of the need for the IMM's suggested mitigation. The IMM also disagrees with NRG's assessment that "the excess offers of regulation services 'makes it unlikely that any one market participant would find it profitable to withhold services.'"[12] Nor has NRG provided evidence that market concentration in the Regulation Market is not a concern because "entry is easy in the regulation market."[13]

While regulation offers can be mitigated under the current market rules, there is no obligation to offer or make available a resource's regulation capability in the PJM system. The current market rules, therefore, make it possible to withhold capacity from the regulation market. To the extent that such capacity could otherwise clear the regulation market, withholding capacity can affect regulation market prices in a way that is not possible with offers that are subject to market power mitigation. For this reason, the IMM continues to recommend that, if the merger is approved, the Commission require the merged company to make cost-based offers in the regulation market and be required to continue to offer the same units and quantities historically offered into the regulation market because participation is voluntary and one way to exercise market power is simply not to offer.

Further, to the extent that NRG "has no choice but engage in competitive behavior in each PJM market," the obligation, as a condition of merger, to continue to act in a competitive manner would not appear to be onerous.

With regard to the IMM's recommendation to report after 12 months on any changes in behavior or performance in the ComEd zone, the IMM remains concerned that

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[10] NRG and EME Answer at 3.

[11] NRG and EME Answer at 3.

[12] Morris Response to IMM Report at 10.

[13] Morris Response to IMM Report at 10.

withholding behavior, via unreasonable modification of offer parameters, could affect the performance of the markets for local constraint relief. As NRG "has no choice but engage in competitive behavior in each PJM market,"[14] the IMM's analysis and report would again not appear to be onerous.

Summary

The proposed merger would have a limited impact on the overall competitiveness of PJM markets, but would have a significant impact on one local energy market and a significant impact on the regulation market. The IMM continues to recommend that the Commission require behavioral mitigation measures to address the issues identified in this report. Appropriate mitigation could resolve the identified concerns about competitive impacts. The IMM recommends that, if the merger is approved, the Commission require the merged company to make cost-based offers in the regulation market and that the Commission direct the IMM to monitor and report after 12 months on the merged companies behavior and performance in the ComEd zone. The Market Monitor also recommends that the merged company be required to continue to offer the same units and quantities historically offered into the regulation market because participation is voluntary and one way to exercise market power is simply not to offer.

14 NRG and EME Answer at 3.