UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Dynegy Inc.; Dighton Power, LLC; Elwood Energy LLC; EquiPower Resources Management, LLC; Kincaid Generation, L.L.C.; Lake Road Generating Company, L.P.; Liberty Electric Power, LLC; MASSPOWER; Milford Power Company, LLC; Richland-Stryker Generation LLC; Brayton Point Energy, LLC	)	Docket No. EC14-140-000
Dynegy Resource I, LLC; Duke Energy Commercial Asset Management; Duke Energy Retail Sales, LLC	)	Docket No. EC14-141-000
	)	(not consolidated)

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"), submits this answer to, and moves for leave to answer, the answers filed by Dynegy Inc. and the other parties (including the affiliates and subsidiaries of Duke and ECP Utilities captioned above) ("Applicants") on November 21 and 24, 2014, in connection with Applicants' request for authorization to complete a certain multi-step transaction (the "Transaction").[2] Applicants dispute the Market Monitor's claim that

1 18 CFR § 385.212 & 213 (2014).

2 Applicants' answers each include a Supplemental Affidavit of Julie R. Solomon that are substantially the same ("Affidavit").

Transaction "will have an adverse impact on competition in the PJM Markets" and that there is "no basis for imposing mitigation measures over and above the extensive measures already applicable." Applicants' criticisms of the Market Monitor's Review and Analysis of Dynegy's Proposed Purchase of Duke and ECP Assets attached to the Market Monitor's comments filed November 10, 2014, ("IMM Report") have no merit. The IMM Report shows an adverse impact on competition and proposes modest mitigation to address it. The Transaction should be approved only subject to the mitigation recommended.

I. ANSWER

A. The Market Monitor's Market Power Analysis Is Superior to the Geographic Market Based Delivered Price Test Employed by Applicants Because It Is Based on the Results in the Markets Actually Affected by the Transaction.

Applicants state that the IMM Report asserts market power concerns "based on assumptions and analysis that are inconsistent with the Commission's regulations and precedent for analyzing transactions under section 203 of the FPA."[3] Applicants state "the IMM Comments provide no basis for adopting an alternative mode of analysis."[4]

The Market Monitor disagrees with these assertions.

As discussed in the IMM Report (at 1–14), any 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. By relying on markets defined by geographic proximity, Applicants' analysis fails to recognize relevant markets within PJM's energy markets and is clearly inferior to an analysis based on actual market results.

The Appendix A analysis applies to all electricity markets in the United States, and it is intended to define, as narrowly and precisely as possible, relevant market definitions

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3 Dynegy/Duke Answer at 4.

4 *Id*. at 3.

even where system based market data is not available or only crudely reported. Where there is no actual system dispatch based market data, geographic, seasonal, peak and off peak analysis is the best that can be accomplished in terms of market definitions. The Commission has not suggested, however, that more granular and precise market definitions are not appropriate, where more granular and precise market definitions are possible, as they are in PJM markets. The Commission routinely accepts and considers such analysis.[5]

Within organized markets data are available, and should be used, to define markets based on how the units are evaluated and actually 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 and, therefore, as markets actually exist. Evaluated in this manner, the substitutability or lack of substitutability among supply options in a market is 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 Market Monitor's analysis, the definition of the relevant market is based on the actual substitutability among available, relevant resources, which in turn is based on the physical facts of the system and how the PJM markets defined the substitutability among available resources in the relevant markets over the analysis period. Rather than limit its

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5 *See Exelon Corporation, Constellation Energy Group, Inc.*, 138 FERC ¶ 61,167 (2012); *NRG Energy Holdings, Inc., Edison Mission Energy*, 146 FERC ¶ 61,196 (2014); *see also Analysis of Horizontal Market Power under the Federal Power Act*, 138 FERC ¶ 61,109 (2012) ("We reiterate, however, that the Commission may consider arguments that a proposed transaction raises competitive concerns that have not been captured by the Competitive Analysis Screen. Likewise, while applicants must continue to provide a Competitive Analysis Screen, we will also consider any alternative methods or factors, if adequately supported.").

analysis to a predefined range of load and price levels, the IMM has analyzed every actual relevant market defined by a constraint and the system software.

The IMM analysis of the relevant markets reflects the information available based on the actual operation of the PJM wholesale power markets, rather than approximations of seasonal geographic markets that ignore local transmission constraints, distribution factors and relative dispatch costs.

Unlike structural tests that define markets by geographic proximity, the relevant markets in the Market Monitor's analysis are defined based on the incremental, effective MW of raise relief supply available to relieve each market defining constraint based on the actual operation of PJM's system. This definition of the market allows the identification of resource owners in a position to exercise market power by directly affecting locational prices when a transmission constraint binds.

Applicants' suggestion that Applicants' stylized approach to market analysis is a better indicator of realized market conditions is clearly not correct. The best available data are the data based on the actual operation of the PJM markets. Applicants would substitute the judgment of its consultant about market definitions for actual markets defined by the actual operation of the PJM system. Such substitution is not appropriate.

B. The Market Monitor's Market Power Analysis Clearly Shows Market Power Concerns Associated with the Transaction in the Energy Market.

Applicants assert that the IMM does not "call into question Ms. Solomon's earlier conclusion that the Duke Transaction, on its own or together with the ECP Transaction, 'will not have an adverse impact on competition in any relevant market.'"[6]

The Market Monitor disagrees with this assertion. The IMM analysis examined market structure metrics in order to quantify the expected impact of the Transaction on the market structure of constraints defined markets within PJM. The analysis concludes that the

6 Dynegy/Duke Answer at 3.

Transaction would significantly increase concentration in specific, highly concentrated, repeating locational energy markets and would therefore have a negative impact on the competitiveness of the markets.

C. The IMM's Use of Confidential Data is Not a Rationale to Reject the IMM Analysis.

Applicants argue that "the IMM's analysis fails to meet the Commission requirements for considering claims raised by intervenors for alternative geographic markets in section 203 proceedings as it relies upon confidential data, includes almost no supporting information or workpapers, and claims to produce results that generally cannot be replicated, or even verified for accuracy, based on available data and information."[7] Applicants assert that based on this, "the Commission should reject the IMM's proposed alternative geographic markets."[8]

The IMM disagrees with these assertions. First, Applicants can request access to the data and supporting papers if they enter into sufficiently protective agreements. Second, the Commission can independently request and review the data. Third, in its role as the Independent Market Monitor for PJM, Monitoring Analytics has unique access to relevant confidential information regarding the PJM markets that the Transaction will affect. This information can be used to analyze impacts on PJM markets with extraordinary precision. Applicants provide no argument why such information, when it is available, should not be used to assist the Commission in fulfilling its regulatory responsibilities under Section 203 of the Federal Power Act.

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[7] Dynegy/ECP Answer at 6.

[8] *Id*.

D. **The IMM Report Meets the Commission's Requirement to Provide Evidence of Binding Transmission Constraints that Define the Identified Relevant Markets.**

Applicants argue that the Commission has previously rejected the IMM's constraint based market designation.[9] Applicants state:

> The 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 within the proposed alternative geographic market. This demonstration could be made by providing evidence of binding transmission constraints or price separation data. However, the [IMM] has not made such a demonstration.[10]

The Market Monitor disagrees with Applicants' assertions. In the NRG Energy Holdings proceeding, the Market Monitor identified only one very small sub market of concern (Lanesville). This fact was identified in the IMM Report (at 1): "[t]he analysis concludes that the proposed merger would increase concentration in a specific, highly concentrated PJM locational energy market." The IMM Report indicated (*id*.) that the effect of the NRG acquisition was limited. This conclusion did not preclude the Market Monitor from making this information available to the Commission or for asking for behavioral mitigation measures consistent with competitive behavior. In this proceeding, the IMM Report provides specific evidence of several binding transmission constraints that define significant markets that can have significant price separation effects and these findings are in the context of a PJM energy market with continually increasing concentration levels due to continued restructuring of ownership within the PJM footprint.

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9 Affidavit at 2, Dynegy/Duke Answer at 6, Dynegy/ECP Answer at 7.

10 Affidavit at 2, citing *NRG Energy Holdings, Inc.*, 146 FERC ¶ 61,196 at P 80 (2014) (citations and footnotes omitted).

E. The Markets Identified in the Market Monitors Analysis are Significant.

Applicants' argue that the markets defined in the IMM Report are not sufficient for defining significant markets and are arbitrarily defined.[11] Applicants state that "[t]he IMM's 100 hour threshold relative to a total of 13,079 hours in the period studied is entirely arbitrary and wrongly implies that a constraint occurring less than 1% of the time is a frequently binding transmission constraint."[12]

The Market Monitor disagrees with these assertions. First, 100 hours is a reasonable cut off for identifying a significant market for a constraint in an organized electricity market. Second, several of the constraint based markets of identified concern were constrained well in excess of 100 hours in the January 2013 through June 2014 period and bound repeatedly and consistently through the study period.

The PJM wholesale electricity market is cleared, priced and settled on an hourly basis. This means that every hour in the PJM wholesale electricity market represents a complete market period for wholesale electricity. Every market hour has significance. Further, due to resources' limited flexibility, the ability to exercise market power within one market interval can affect the results of subsequent market intervals both in terms of LMPs and uplift. For example, a combustion turbine with a four-hour minimum run time affects the results of the commitment in the first hour it is committed and in the three subsequent hours. Not all of those effects will be realized in the locational marginal prices (LMPs) on the system. In addition, the use of constraint hours can underrepresent market hours, as the commitment and dispatch of inflexible relief units often eliminates constraints before they actually bind. The importance of the hourly markets is, in part, the rationale for a real-time TPS test and real-time mitigation. For these reasons, a local market for energy, created by

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11 Affidavit at 2, Dynegy/Duke Answer at 6, Dynegy/ECP Answer at 8.

12 *Id*. at 3.

constraints, that exists for one hundred hours or more within a 16-month period is a reasonable and conservative basis upon which to define a significant market.

Table 1 shows, for the January 2013 through December 2013 period and the January 2014 through June 2014 period, by constraint, the number of peak real-time constraint hours and the number of peak hours the market was defined in PJM's look ahead software (Market Hours). While binding constraint-contingency pairs represents a separate market for relief in the solution engine, the IMM Report groups constraint-contingency pair results, for purposes of the analysis, by defining facility/constraint. Contingencies for a particular constraint can occur concurrently in an hour and relief MW for these contingencies can be provided by common or conflicting assets, with constraint-contingency pair specific shadow prices associated with the relief of each constraint-contingency pair. Contingency defined constraints were only included if the Applicant's assets appeared in the supply stack for relief.

Table 1 Constraint hours and market hours by period: peak, off peak and year

Facility	Period	Total Peak RT Constraint Hours	Peak Market Hours (all companies)	Total Off Peak RT Constraint Hours	Off Peak Market Hours (all companies)	Total RT Constraint Hours	Total Market Hours (all companies)
5004/5005 Interface	January - December 2013	184	81	182	115	366	196
	January - June 2014	245	162	223	151	468	313
AP South	January - December 2013	902	624	727	514	1,629	1,138
	January - June 2014	704	471	541	408	1,245	879
Bedington - Black Oak	January - December 2013	131	77	135	87	266	164
	January - June 2014	285	152	162	101	447	253
Benton Harbor - Palisades	January - December 2013	21	18	72	99	93	117
	January - June 2014	31	40	84	89	115	129
Breed - Wheatland	January - December 2013	221	202	456	456	677	658
	January - June 2014	174	138	311	318	485	456
Bunsonville - Eugene	January - December 2013	74	73	143	214	217	287
	January - June 2014	132	191	159	299	291	490
Central East	January - December 2013	105	121	32	46	137	167
	January - June 2014	22	64	20	57	42	121
Cook - Palisades	January - December 2013	0	0	0	0	0	0
	January - June 2014	89	101	187	207	276	308
Dickerson - Pleasant View	January - December 2013	138	86	27	14	165	100
	January - June 2014	0	0	0	0	0	0
Nelson - Cordova	January - December 2013	121	92	183	152	304	244
	January - June 2014	114	122	94	105	208	227
West	January - December 2013	86	57	46	38	132	95
	January - June 2014	326	204	167	141	493	345

As noted in the IMM Report (at 16) a market instance exists each time the PJM dispatch software runs the TPS test on the market for incremental relief of a constraint in the Real-Time Energy Market and either Dynegy or Duke/ECP or both Dynegy and Duke/ECP were in the pre-Transaction supply stack for raise relief MW. There can be multiple market instances in an hour and there can be hours with no market instances. Market instance results were rolled up and averaged by hour, with each hourly result termed a market hour event. Market hours with both Dynegy and Duke/ECP in the pre-Transaction supply stack are counted as one hour in the analysis.

As shown in Table 1, market hours can exceed the number of constraint hours due to the look ahead nature of PJM's systems and the inflexible nature of the resources used to control for the constraints. The commitment and dispatch of inflexible units to relieve constraints often result in the elimination of the causal constraint. Due to the look ahead nature of PJM's system, in many cases the constraint is eliminated before it actually binds. While eliminated constraints do not affect LMP directly, inflexible resources that caused the elimination generally add to uplift costs.

F. The Constraint Defined Markets Are Predictable.

Applicants' argue that "there is no evidence that these constraints are predictable events with respect to occurrence or duration."[13]

The IMM disagrees with this assertion. The constraints and related markets are structural elements of the PJM system. While the relative magnitude of price and congestion effects can vary by constraint from year to year due to changing system conditions and relative fuel costs, the list of constraints that have significant effects on price and congestion in PJM remains largely unchanged year after year. Further, conditions occur in repeated patterns that cause recognizable system conditions with recognizable results. Further these recognizable system conditions tend to occur on sequential days. For example, high load conditions and their related market effects tend to come, predictably, on

13 *Id*.

sequential days within the year, rather than randomly and unpredictably throughout the year.

G. The Constraints Studied Have Significant Price Effects on the PJM Energy Market.

Applicants' argue that "the IMM has not explained why the mere identification of 'constraints' without demonstration of any price separation or other measurable market effects is sufficient to postulate a relevant geographic market."[14]

The Market Monitor agrees that specific price effects of the constraint defined markets were not provided in its report. However, the basis of Applicants' argument is unclear as all binding constraints have an effect on system prices, causing price separation. All of the constraints defined as markets of concern in the IMM Report have a significant effect on system prices in downstream zones where Applicants have raise help (downstream) supply. Table 2 shows the maximum, minimum, average and standard deviation of the peak hour shadow prices of the facilities included in the study from January 2013 through June 2014. Table 3 shows the maximum, minimum, average and standard deviation of the off peak hours shadow prices of the facilities included in the study from January 2013 through June 2014. The shadow price of a constraint is the incremental cost of controlling the constraint using marginal resources. (Shadow prices associated with binding constraints are typically presented as negative numbers as a result of the way in which they are included in the least cost, security constrained optimization problem.) The LMP at any bus is a function of the system marginal price (SMP) plus the sum of the distribution factor adjusted shadow prices of all binding constraints.

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14 Dynegy/ECP Answer at 8.

Table 2 Shadow prices by facility: peak hours January 2013 through June 2014

Facility	Year	Total RT Constraint Hours	Market Hours (all companies)	RT Shadow Price Peak Minimum	Maximum	Average	Median
5004/5005 Interface	January - December 2013	184	81	$0.29	$1,283.21	$80.14	$49.82
	January - June 2014	245	162	$3.58	$1,499.08	$312.13	$213.12
AP South	January - December 2013	902	624	$0.02	$962.94	$69.57	$24.93
	January - June 2014	704	471	$0.07	$3,505.72	$398.68	$242.27
Bedington - Black Oak	January - December 2013	131	77	$0.14	$1,463.60	$82.48	$26.10
	January - June 2014	285	152	$0.10	$2,475.41	$331.89	$149.37
Benton Harbor - Palisades	January - December 2013	21	18	$1.97	$1,381.89	$115.04	$17.76
	January - June 2014	31	40	$0.39	$1,982.45	$349.91	$154.19
Breed - Wheatland	January - December 2013	221	202	$0.13	$1,357.55	$48.90	$16.18
	January - June 2014	174	138	$0.34	$1,978.46	$183.61	$71.51
Bunsonville - Eugene	January - December 2013	74	73	$1.00	$1,709.90	$37.75	$15.01
	January - June 2014	132	191	$0.22	$1,452.96	$58.43	$25.57
Central East	January - December 2013	105	121	$1.09	$605.09	$47.07	$29.48
	January - June 2014	22	64	$1.91	$1,408.32	$186.08	$181.69
Cook - Palisades	January - December 2013	0	0				
	January - June 2014	89	101	$0.06	$2,000.11	$217.44	$63.06
Dickerson - Pleasant View	January - December 2013	138	86	$0.37	$933.57	$109.15	$39.98
	January - June 2014	0	0				
Nelson - Cordova	January - December 2013	121	92	$0.38	$937.86	$192.77	$174.98
	January - June 2014	114	122	$3.21	$971.93	$287.94	$328.14
West	January - December 2013	86	57	$0.20	$859.24	$60.44	$23.15
	January - June 2014	326	204	$0.25	$1,460.30	$315.31	$201.07

Table 3 Shadow prices by facility: off peak hours January 2013 through June 2014

Facility	Period	Total RT Constraint Hours	Market Hours (all companies)	Shadow Price Off-Peak Minimum	Maximum	Average	Median
5004/5005 Interface	January - December 2013	182	115	$0.04	$1,114.56	$73.47	$31.28
	January - June 2014	223	151	$0.43	$1,466.10	$196.49	$99.42
AP South	January - December 2013	727	514	$0.01	$955.69	$56.16	$19.12
	January - June 2014	541	408	$0.04	$2,674.09	$288.41	$76.29
Bedington - Black Oak	January - December 2013	135	87	$0.14	$1,281.58	$82.09	$28.54
	January - June 2014	162	101	$0.16	$2,006.60	$305.47	$98.62
Benton Harbor - Palisades	January - December 2013	72	99	$0.79	$2,000.00	$86.53	$17.95
	January - June 2014	84	89	$0.17	$1,984.54	$268.07	$69.79
Breed - Wheatland	January - December 2013	456	456	$0.02	$1,721.57	$48.25	$10.86
	January - June 2014	311	318	$0.23	$2,004.58	$142.40	$21.06
Bunsonville - Eugene	January - December 2013	143	214	$0.81	$1,854.50	$39.87	$14.31
	January - June 2014	159	299	$0.06	$1,989.60	$53.02	$23.54
Central East	January - December 2013	32	46	$0.50	$645.80	$52.49	$34.16
	January - June 2014	20	57	$11.17	$1,606.83	$319.97	$267.79
Cook - Palisades	January - December 2013	0	0				
	January - June 2014	187	207	$0.55	$1,993.10	$195.31	$64.82
Dickerson - Pleasant View	January - December 2013	27	14	$0.18	$631.03	$94.36	$40.41
	January - June 2014	0	0				
Nelson - Cordova	January - December 2013	183	152	$0.41	$893.15	$189.60	$175.70
	January - June 2014	94	105	$0.88	$400.86	$278.66	$320.97
West	January - December 2013	46	38	$0.04	$545.30	$84.07	$60.68
	January - June 2014	167	141	$2.37	$1,429.75	$141.44	$73.92

H. The IMM's TPS Analysis Indicates that the Transaction Would Have a Significant Anti-Competitive Effect on the Identified Markets.

Applicants' assert the TPS results provided in the IMM Report do not support the conclusion that the Transaction causes a significant number of TPS failures in the affected markets.[15] Applicants argue that absent an increase in the number of pivotal hours resulting from the merger, the TPS results presented by the Market Monitor do not support a conclusion that the merger exacerbates market power.[16] Applicants state that the IMM fails,

15 Affidavit at 5.

16 *Id*. at 4.

in the RSI/TPS analysis, "to specify a standard by which to evaluate the reported results."[17] Applicants also are state that observed changes the TPS scores are small, that "with one exception, the percentage change in the TPS score ranges from only 3 to 9%."[18]

The IMM disagrees with these assertions. The IMM's reported results support the assertion that the Transaction has a significant effect on several of the identified, significant markets.

As stated in the IMM Report (at 11–13), a three pivotal supplier RSI of less than 1.0 defines the existence of local market power. The lower the score below 1.0, the more market power the participant has in the market. The lower a participant's RSI score, the more important, and the more pivotal, the participant is in meeting the expressed demand in the defined market. A reduction in a participant's RSI score indicates that the participant has become more important, more pivotal, in meeting the demand in the defined market.

A reduction in a merging participant's RSI score indicates an increase in market power. The absence of a change in the number of hours in which the merging participant is pivotal is not an indicator that a merger does not have an anticompetitive effect on the tested market. For example, if the merging participant had an RSI score of less than 1.0 in a market hour prior to the merger (indicating a TPS failure for the hour) and a lower RSI score post merger, this would indicate that the merger increased the market power of the merging participant. There would be no change in the number of market hours that the merging participant failed the TPS test, as the same hour is failed pre and post merger. In order for a merger to affect the number of hours failed by the participants, the merger would have to change participant RSI score from a pass to a fail result for an hour.

Therefore, the RSI results have a straightforward interpretation. As stated in the IMM Report (at 17–20), analysis of the results indicates that, prior to the Transaction (or any

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[17] *Id*. at 6.

[18] *Id*.

of its alternative scenarios), a number of the relevant markets for raise help relief are highly concentrated, with Dynegy, ECP and/or Duke holding a dominant position in raise help relief capability. This is evidenced by the significant number of relevant market hours (hours in which Dynegy, ECP and/or Duke provided relief MW) in which market participants, including Dynegy, ECP and/or Duke, failed the TPS test.

Table 4 shows, for the January 2013 through June 2014 period, by constraint, the number of peak real-time constraint hours, the number of peak hours the market was defined in PJM's look ahead software (Market Hours) and the number of hours that Dynegy did/would fail the TPS test pre and post merger in the defined market hours. Table 5 shows, for the January 2013 through June 2014 period, by constraint, the number of peak real-time constraint hours, the number of peak hours the market was defined in PJM's look ahead software (Market Hours) and the number of hours that Dynegy did/would fail the TPS test pre and post merger in the defined market hours.

Table 4 and Table 5 show that the Transaction has a significant effect on Dynegy's market position within the identified markets, causing a significant increase in Dynegy's market power in several of the identified markets. Of concern, for example, is the effect of the Transaction on the significant market defined by the 5004/5005 constraint and the AP South Constraint. In the January 2013 through June 2014 period, pre-Transaction Dynegy fails the three pivotal supplier test in 61.3 percent (263 hours) of peak market hours for the 5004-5005 defined market. In the January 2013 through June 2014 period, post-merger Dynegy fails 70.4 percent (302 hours) of the peak market hours peak market hours for the 5004-5005 defined market, a 14.8 percent increase in market hours failed by Dynegy due to the Transaction. In the January 2013 through June 2014 period, pre-Transaction Dynegy fails the three pivotal supplier test in 13.8 percent (221 hours) of peak market hours for the AP South defined market. In the January 2013 through June 2014 period, post-merger Dynegy fails 26.1 percent (419 hours) of the peak market hours peak market hours for the 5004-5005 defined market, an 89.6 percent increase in market hours failed by Dynegy due to the Transaction.

Table 4 Constraint hours, market hours and TPS results for peak constraint hours by constraint: January 2013 through June 2014

			Pre Merger		Post Merger		Change	
Facility	Total RT Constraint Hours	Market Hours (all companies)	Hours Failed Dynegy	Percent of Market Hours Failed by Dynegy	Hours Failed Dynegy	Percent of Market Hours Failed by Dynegy	Hours Failed Dynegy (Pre Merger) vs. Hours Failed Dynegy (Post Merger)	Change in Percent of Market Hours Failed by Dynegy
5004/5005 Interface	243	429	263	61.3%	302	70.4%	39	14.8%
AP South	1,095	1,606	221	13.8%	419	26.1%	198	89.6%
Bedington - Black Oak	229	416	202	48.6%	252	60.6%	50	24.8%
Benton Harbor - Palisades	58	52	34	65.4%	37	71.2%	3	8.8%
Breed - Wheatland	340	395	0	0.0%	194	49.1%	194	NA
Bunsonville - Eugene	264	206	0	0.0%	46	22.3%	46	NA
Central East	185	127	39	30.7%	81	63.8%	42	107.7%
Cook - Palisades	101	89	43	48.3%	45	50.6%	2	4.7%
Dickerson - Pleasant View	86	138	79	57.2%	91	65.9%	12	15.2%
Nelson - Cordova	214	235	129	54.9%	160	68.1%	31	24.0%
West	261	412	250	60.7%	290	70.4%	40	16.0%

Table 5 Constraint hours, market hours and TPS results for off peak constraint hours by constraint: January 2013 through June 2014

			Pre Merger		Post Merger		Change	
Facility	Total RT Constraint Hours	Market Hours (all companies)	Hours Failed Dynegy	Percent of Market Hours Failed by Dynegy	Hours Failed Dynegy	Percent of Market Hours Failed by Dynegy	Hours Failed Dynegy (Pre Merger) vs. Hours Failed Dynegy (Post Merger)	Change in Percent of Market Hours Failed by Dynegy
5004/5005 Interface	266	405	233	61.3%	254	70.4%	21	14.8%
AP South	922	1,268	182	13.8%	259	26.1%	77	89.6%
Bedington - Black Oak	188	297	141	48.6%	159	60.6%	18	24.8%
Benton Harbor - Palisades	188	156	90	65.4%	120	71.2%	30	8.8%
Breed - Wheatland	774	767	0	0.0%	422	49.1%	422	NA
Bunsonville - Eugene	513	302	0	0.0%	121	22.3%	121	NA
Central East	103	52	11	30.7%	27	63.8%	16	107.7%
Cook - Palisades	207	187	95	48.3%	102	50.6%	7	4.7%
Dickerson - Pleasant View	14	27	14	57.2%	18	65.9%	4	15.2%
Nelson - Cordova	257	277	124	54.9%	165	68.1%	41	24.0%
West	179	213	100	60.7%	120	70.4%	20	16.0%

The anti-competitive effect of the merger can also be seen in the change in the pre and post merger TPS scores for Dynegy in the identified markets. Contrary to Applicants' assertion, these changes are not small. Table 6 shows the peak hour pre and post merger TPS scores for Dynegy for the January 2013 through June 2014 period. Table 7 shows the off peak hour pre and post merger TPS scores for Dynegy for the January 2013 through June 2014 period. In the AP South Market, for example, the merger causes Dynegy to go from an average TPS score of 0.68 (evidence of market power) to a 0.43 (evidence of market power), a decrease in the joint pivotal score (evidence of increased market power) of 0.25 or 36.3 percent.

Table 6 Peak hour pre and post merger TPS scores for Dynegy: January 2013 through June 2014

Facility	Peak Pre Merger Average TPS Score Dynegy	Peak Post Merger Average TPS Score Dynegy	Change in Peak Average of Dynegy TPS Score (Pre Merger) vs. (Post Merger)	Percent Change in Peak Average of Dynegy TPS Score (Pre Merger) vs. (Post Merger)
5004/5005 Interface	0.31	0.28	(0.02)	-7.9%
AP South	0.68	0.43	(0.25)	-36.3%
Bedington - Black Oak	0.25	0.22	(0.03)	-10.6%
Benton Harbor - Palisades	0.11	0.11	0.00	0.5%
Breed - Wheatland	0.00	0.03	0.03	NA
Bunsonville - Eugene	0.00	0.01	0.01	NA
Central East	0.19	0.11	(0.08)	-40.1%
Cook - Palisades	0.11	0.10	(0.00)	-4.4%
Dickerson - Pleasant View	1.76	1.49	(0.27)	-15.1%
Nelson - Cordova	0.04	0.01	(0.03)	-69.2%
West	0.37	0.34	(0.03)	-8.7%

Table 7 Off peak hour pre and post merger TPS scores for Dynegy: January 2013 through June 2014

Facility	Off Peak Pre-Merger Average TPS Score Dynegy	Off Peak Pre-Merger Average TPS Score Dynegy	Off Peak Average of Dynegy TPS Score (Pre Merger) vs. (Post Merger)	Percent Change in Off Peak Average of Dynegy TPS Score (Pre Merger) vs. (Post Merger)
5004/5005 Interface	0.28	0.24	(0.04)	-14.5%
AP South	0.20	0.17	(0.04)	-17.4%
Bedington - Black Oak	0.17	0.14	(0.03)	-17.0%
Benton Harbor - Palisades	0.26	0.21	(0.05)	-18.7%
Breed - Wheatland	0.00	0.01	0.01	NA
Bunsonville - Eugene	0.00	0.03	0.03	NA
Central East	0.18	0.08	(0.09)	-53.1%
Cook - Palisades	0.11	0.11	(0.00)	-2.7%
Dickerson - Pleasant View	0.51	0.45	(0.06)	-12.0%
Nelson - Cordova	0.01	0.00	(0.00)	-45.6%
West	0.24	0.20	(0.04)	-16.3%

I. The HHI Results in the identified markets are clear.

Applicants state that the IMM fails, in the HHI analysis, "to specify a standard by which to evaluate the reported results."[19] Applicants state "[t]he IMM Report has not proposed any specific metrics for evaluating such results."[20] Further, Applicants argue that

[19] Affidavit at 4.

[20] *Id*. at 5.

“the number of annual market hours when the HHI changes exceed 50 points is quite small.”[21]

The IMM disagrees with these assertions.

The IMM’s HHI results indicate, particularly in the case of the 5004/5004, Nelson and West constraints, that the Transaction will have a significant anti-competitive effect on the identified markets.

The IMM Report shows, for example, that of the 384 pre Dynegy Acquisition 5004/5005 market event hours with an HHI of 2000 or more, the merger would cause 78 (20.3 percent) of these market event hours to have an increase of 50 or more points, 60 (15.6 percent) of these market event hours to have an increase of 100 or more points, 41 (10.7 percent) of these market event hours to have an increase of 200 or more points and 28 (7.3 percent) of these market event hours to have an increase of 300 or more points.

Figure 1 shows pre and post merger relevant market hours by HHI range category for the market define by the 5004-5005 constraint. Figure 2 shows pre and post merger relevant market hours by HHI range category for the market defined by the Nelson constraint. Figure 3 shows pre and post merger relevant market hours by HHI range category for the market defined by the West constraint. Comparing the number of pre and post relevant market hours by HHI range category in the figure shows that the Transaction would cause a uniform shift in market hours from the lower HHI ranges to the higher HHI ranges. These results indicate that the Transaction would significantly increase the market concentration in the 5004-5005, Nelson and West constraint defined markets in all relevant market hours.

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21 *Id*. at 7.

Figure 1 Pre and post merger relevant market hours by HHI category: 5004-5005

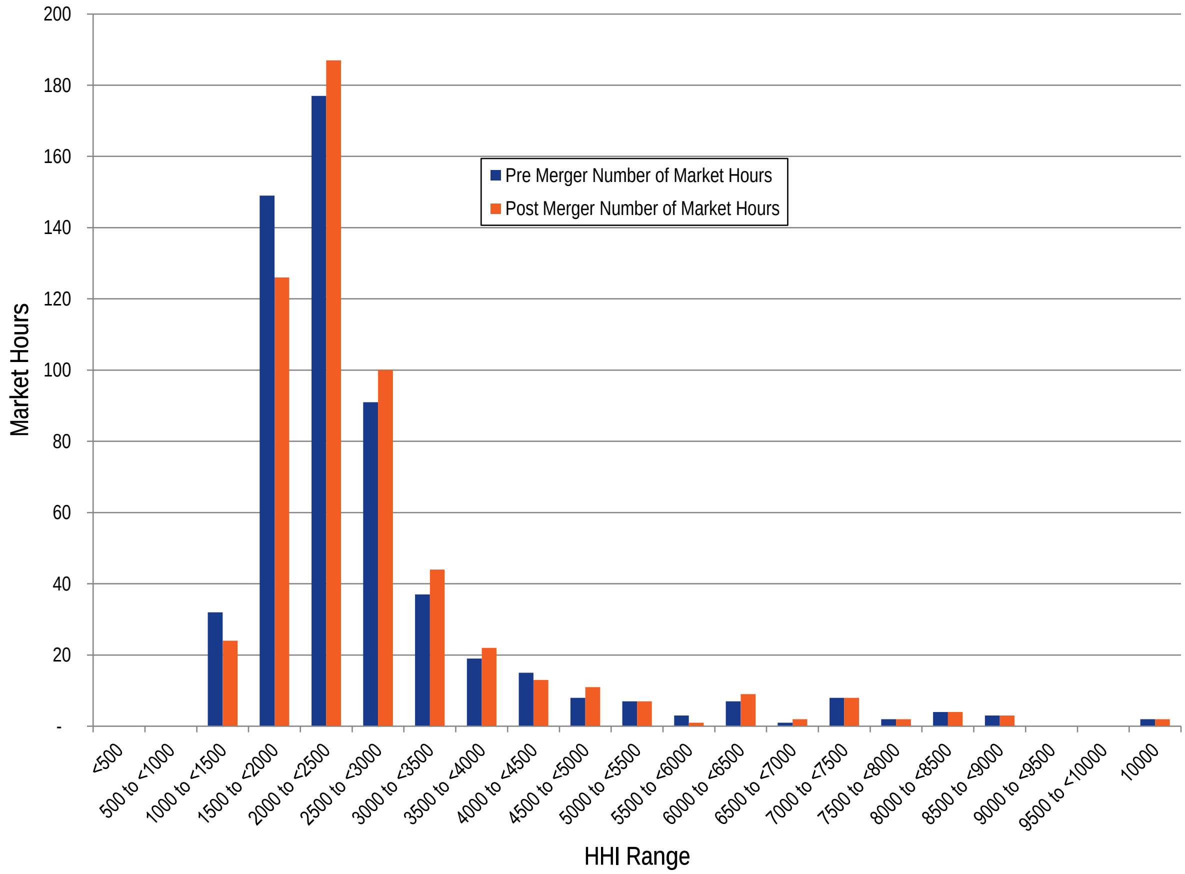


Figure 2 Pre and post merger relevant market hours by HHI category: Nelson

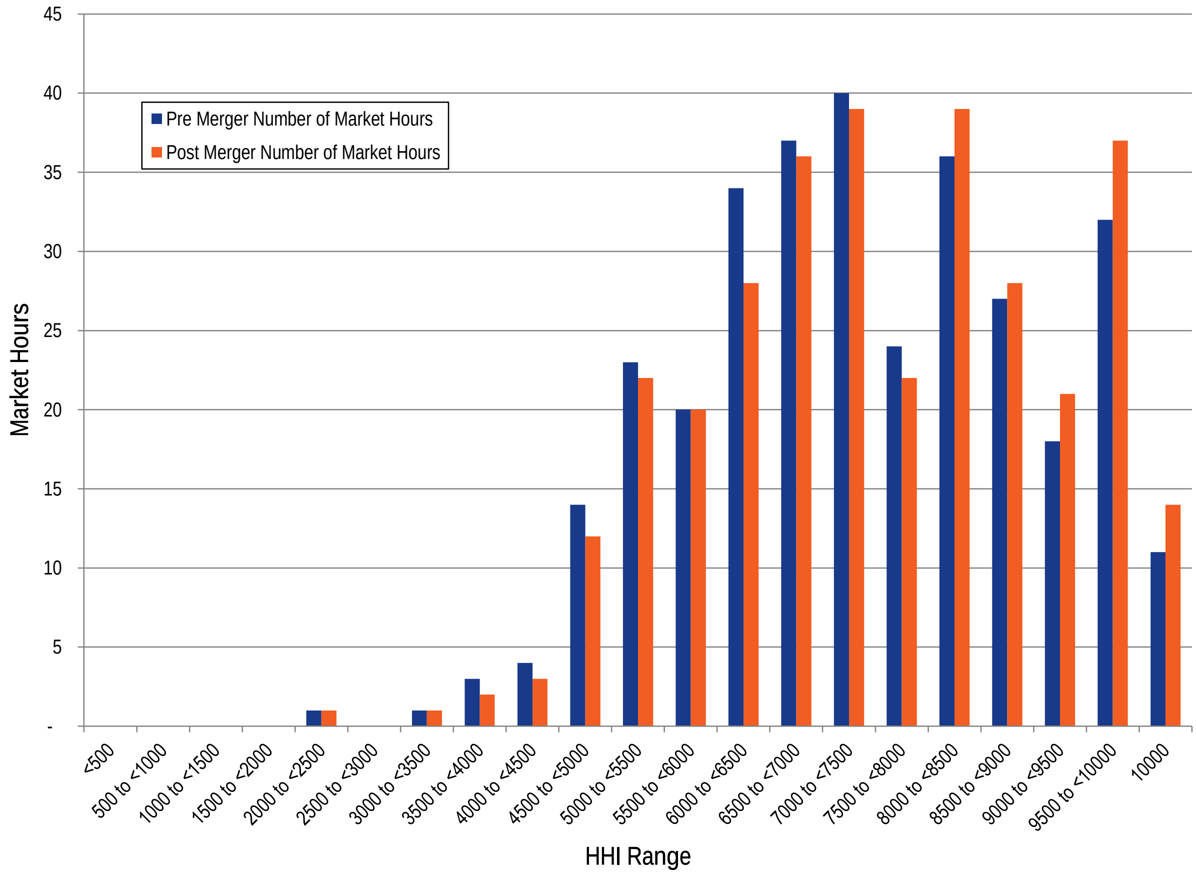
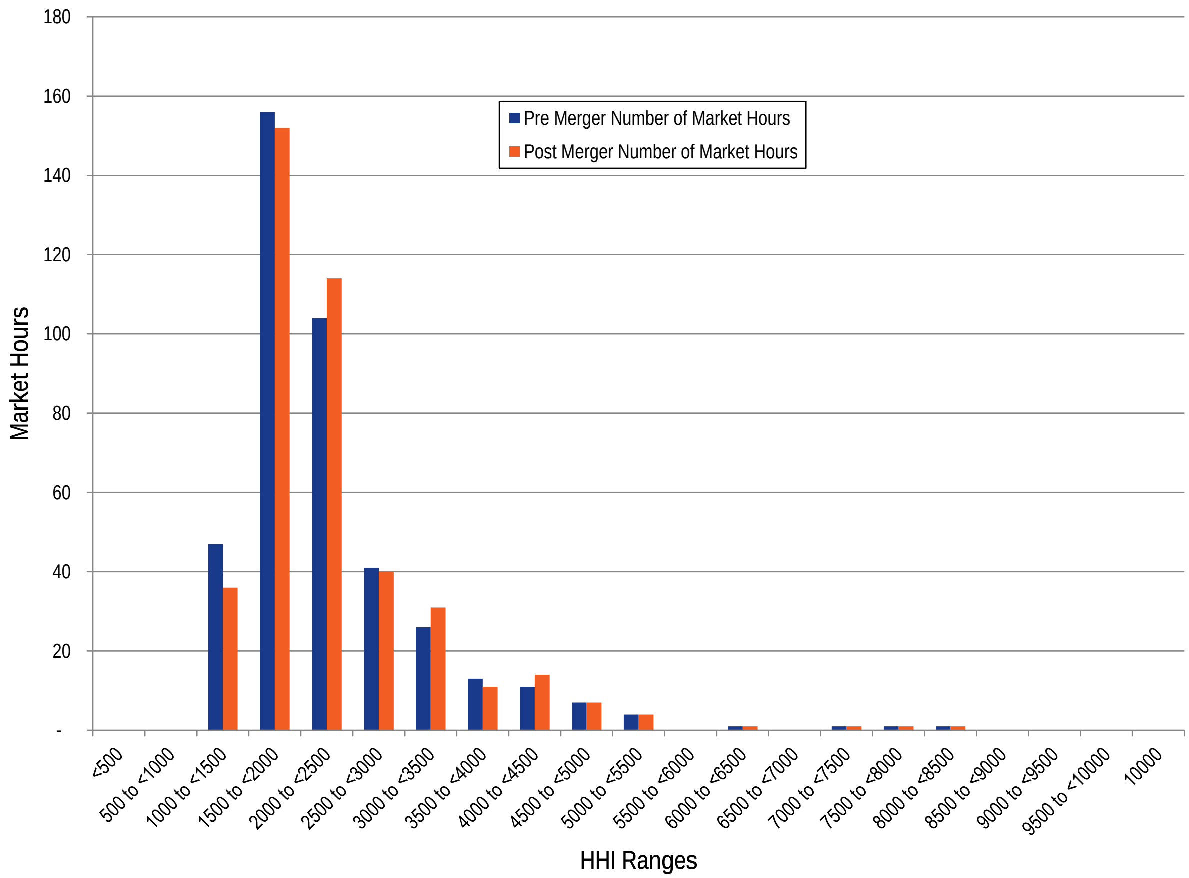


Figure 3 Pre and post merger relevant market hours by HHI Category: West



J. RTO Based Mitigation Does Not Eliminate the Need for Behavior Mitigation in the Energy Market.

Applicants argue, "the IMM fails to explain why its proposed mitigation is necessary when localized markets become constrained as there are already extensive market power mitigation protocols and offer caps that address such situations under the PJM Tariff."[22] Applicants assert, based on this, that "the IMM behavioral mitigation proposals are overly broad, unsupported by the record, and unnecessary."[23]

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22 Dynegy/ECP Answer at 10–11.

23 Dynegy/ECP Answer at 11.

The Market Monitor disagrees with this assertion.

The Market Monitor plays a significant role in implementing PJM's market power mitigation program.[24] The Market Monitor plays an important role in assisting market participants to develop cost inputs and in disputing excessive inputs or incorrectly calculated inputs with the Commission. Neither the Market Monitor nor PJM has the ability to prevent an offer because they believe it is excessive and involves a potential exercise of market power.[25] The Market Monitor can only request that the Commission take action to prevent such offers. Market Participants have final control of and responsibility for the level of their offers.

Mitigation rules for PJM markets apply only to local constraints and local market power. The mitigation rules do not address aggregate market power that affects the whole PJM market. For example, the mitigation rules do not address aggregate market power during system peak conditions when every supplier is pivotal. Large suppliers with assets pivotal in the PJM regional market are not subject to mitigation for the regional market under the current rules. Accordingly, whether or not sellers in PJM have aggregate market power remains an issue, and should be considered when considering the Transaction and all applications that require market power analyses.

K. The IMM's Analysis of the Capacity Market Appropriately Identifies Resources that Would Be Included in the Specified LDAs.

Applicants state, "the IMM's HHI calculations were performed not on the basis of "all capacity" in, and imports into, the LDA, but rather on the basis of "total cleared supply of capacity in the LDA."[26] Applicants assert that "this approach significantly understates the size of the market, because there are more than 4,000 MW of generation in the ComEd

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[24] *See* OATT § 12A, Attachment M, Attachment M-Appendix.

[25] *See, e.g.*, OATT § 12A.

[26] Affidavit at 9.

LDA that was offered but did not clear in the 2017/2018 auction."[27] Applicants also state, "the IMM's analysis did not account for imports, and it is unclear whether the IMM analysis includes demand resources and energy efficiency resources."[28] Applicants note that "Ms. Solomon could not confirm whether the IMM included capacity for Dynegy's Havana 1-5 units listed in the IMM's Appendix A as a capacity resource for Dynegy in the ComEd LDA."[29]

The Market Monitor's LDA based analysis was based on resources available within the LDA, to the extent they cleared the specified auction. The Market Monitor's LDA based analysis is a study of the LDA specific market structure. As capacity resources are largely fixed, the LDA based analysis is relevant to the extent that the LDA can separate in historic or future capacity auctions.

The Market Monitor's analysis did take account of demand resources and energy efficiency resources in its analysis. The Market Monitor's analysis excluded Dynegy's Havana units. Dynegy's Havana 1-5 units have never been capacity resources and were not included.

The Market Monitor's analysis did not include LDA specific capacity that did not clear the market. There is an argument that an LDA, considered on its own, could clear at a different price level, however, that does not appear to be the argument made by Ms. Solomon. The Market Monitor used the clearing prices, and cleared resources, as they occurred in the actual market. The Market Monitor therefore based the associated HHI analysis on the resulting actual LDA specific market shares. HHIs are based on market shares within the relevant, defined markets. The definition of a relevant market is based on the determination of the relevant price levels and the resources that clear at those prices

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27 *Id*.

28 *Id*.

29 Dynegy/Duke Answer at 12.

levels. In the IMM Report, the relevant price levels were the actual price levels observed in each LDA and the actual cleared resources within each LDA. Ms. Solomon does not provide a suggested price level that would make the 4,000 MW of uncleared generation relevant to the ComEd LDA's market share and HHI calculations. Rather she appears to assume that price is not relevant to the definition of the market and that any and all capacity, cleared or not, should be considered in HHI analysis. This would not be an appropriate market definition and would dramatically overstate the size of the market.

The Market Monitor's LDA specific analysis did not include imports. The LDA specific analysis is, by design, a standalone analysis of each LDA. It is not clear how imports would be included in the LDA specific analysis without double counting the imports in every LDA. It is also not clear why import capability, rather than actual cleared external resources, would be considered in the analysis of the market structure of the RPM market whether it be LDA specific or of the PJM-wide market analysis. Imports are included in the TPS analysis.

L. The IMM's Analysis of the Regulation Market Is Appropriate and Consistent with Commission Guidelines and Precedent.

Applicants state that "in analyzing the regulation market, the IMM ignores excess supply and apparently bases it conclusions solely on cleared MW."[30] Applicants' state by ignoring the excess supply of regulation in the market, the IMM "grossly understates the size of the market."[31] Applicants state "in 2013, the ratio of offered and eligible regulation to regulation required averaged 3.40, indicating substantial supply of regulation."[32]

The Market Monitor does not dispute that there is a substantial, potential supply of regulation in the PJM market. The Market Monitor disagrees with the assertion that all of

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30 Dynegy/ECP Answer at 13.

31 Affidavit at 11.

32 *Id*. at 11.

this potential supply of regulation is relevant to the structure of the market in any given market hour. A market with excess capacity is not necessarily synonymous with a competitive market. A monopolistic market with excess capacity is not considered a competitive market, regardless of the level of excess capacity. The relevance of available supply is dependent on the realized price levels and related offers in the hour, and, in the case of the Regulation Market, these prices and offers reflect the continual joint optimization of energy and ancillary services.

In the IMM Report, the definition of the relevant market is based on the actual (not theoretical) substitutability among available, relevant resources which in turn is based on the physical facts of the system and how the PJM markets defined the substitutability among available resources in the relevant markets over the analysis period. Rather than limit its analysis to a predefined range of load and price levels, the Market Monitor has analyzed every actual relevant market defined by a constraint and the system software. The relevant ancillary services markets are those defined by the actual operation and clearing of PJM markets over the study period, over every relevant price and optimization point that occurred in the study period. The market conditions studied by the Market Monitor in its report ranged from minimum generation conditions to shortage pricing conditions, all based on PJM's actual joint optimization of energy and ancillary services. The effective supply stack for regulation is not fixed through these changing conditions, nor are the relative positions of the resources in that stack, as resources that were available and cleared for regulation in one hour may be more economic as energy only dispatch in the next. Any relevant analysis has to account for varying market conditions given the actual market structure.

HHIs are appropriately based on actual market shares within actual, defined markets. Ford Motor's actual market share, for example, is based on its actual sales in a defined period, not the amount it could have sold had all of its inventory and maximum output from its factories been purchased. In the IMM analysis, actual market shares were the result of actual price levels and the actual cleared resources that occurred over the entire study period.

M. The Anti-Competitive Effect of the Transaction on PJM's Regulation Market is Significant.

Applicants assert that the impact of the Transaction on the Regulation Market is not significant.[33]

The Market Monitor disagrees with this assertion. As provided in the IMM Report (at 36–37), Dynegy, pre-merger, was jointly pivotal in the Regulation Market in 6,680 of the 11,120 relevant market hours (60.0 percent). Post-merger, Dynegy is jointly pivotal in the regulation market in 10,885 of the 11,120 relevant market hours (97.9 percent). This represents a 62.9 percent increase in failed hours (4,205 hours) for Dynegy. Not surprisingly, this is a result of the merger causing Dynegy to dramatically increase its portion of the relevant supply stack (supply available up to 1.5 times the clearing price for purposes of the TPS). Pre merger, Dynegy's TPS score for the period was 0.87. The merger causes Dynegy's TPS score to drop 27.6 percent to 0.63.

The merger causes a significant increase in HHI levels in the relevant market hours. The IMM Report shows (at 37), for example, that of the 9,613 pre Dynegy Acquisition relevant regulation market event hours with an HHI of 1500 or more, the merger would cause 4,551 (40.9 percent) of these market event hours to have an increase of 50 or more points, 3,951 (35.8 percent) of these market event hours to have an increase of 100 or more points, 2,984 (26.8 percent) of these market event hours to have an increase of 200 or more points and 2,129 (19.0 percent) of these market event hours to have an increase of 300 or more points.

Figure 4 shows the pre and post merger relevant market hours by HHI category. Comparing the number of pre and post relevant market hours by HHI range category in

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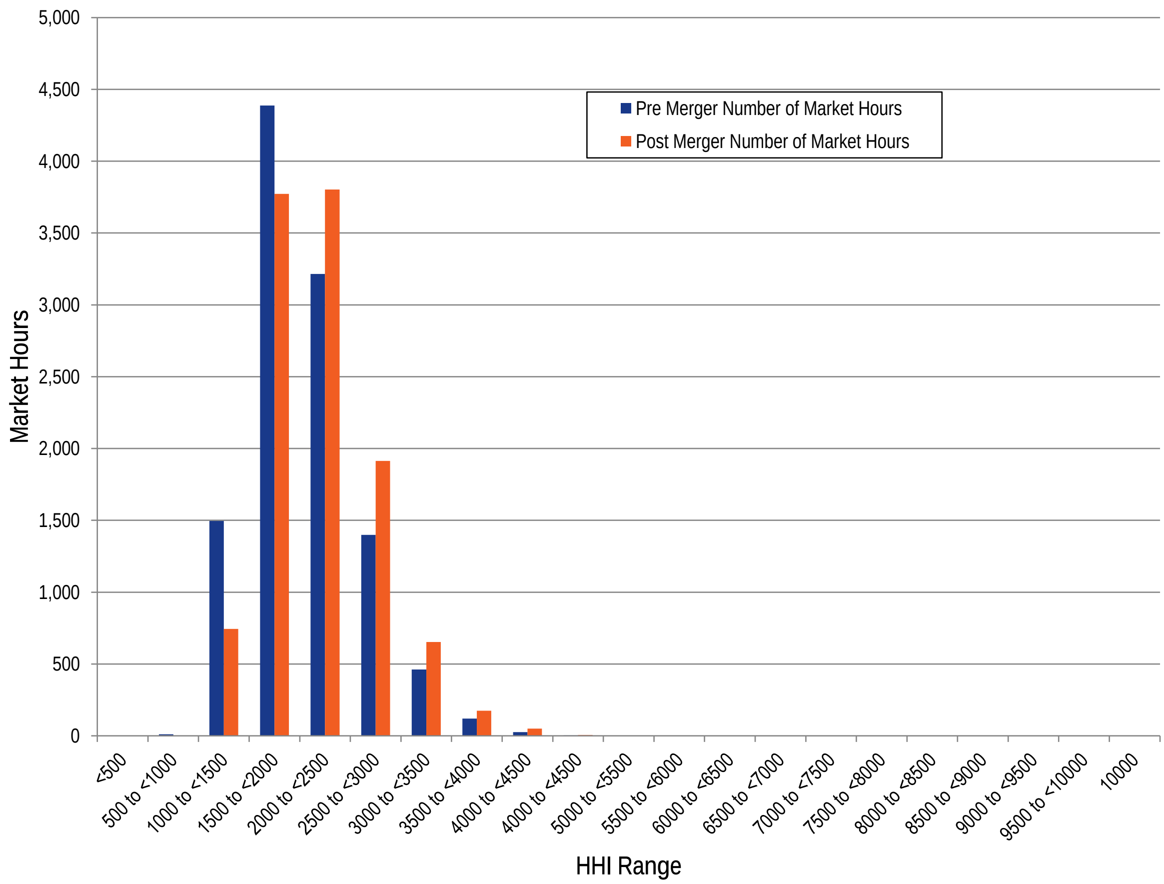
33 *Id*.

Figure 4 shows that the Transaction would cause a significant shift in market hours from the lower HHI ranges to the higher HHI ranges.

The analysis shows that the Transaction has a significant anti-competitive effect on the Regulation Market.

Figure 4 Pre and Post Merger Relevant Market hours by HHI category: Regulation Market



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.[34] 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.

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[34] *See, e.g., 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); *N.Y. Independent System 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).

III. CONCLUSION

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

Respectfully submitted,

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Dated: December 9, 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 9th day of December, 2014.

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