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

PJM Interconnection, L.L.C. ) Docket No. ER04-539-000

### PJM INTERCONNECTION, L.L.C.'s ANSWER TO PROTESTS

Pursuant to Rule 213 of the Federal Energy Regulatory Commission's ("Commission") Rules of Practice and Procedure, 18 C.F.R. § 385.213, PJM Interconnection, L.L.C. ("PJM") hereby answers protests regarding the proposed market mitigation measures for the Northern Illinois Control Area ("NICA") to become effective when Commonwealth Edison Company, including Commonwealth Edison Company of Indiana ("ComEd"), is integrated into the PJM markets.<sup>1</sup>

## I. Introduction and Summary

In its initial filing in this docket, PJM proposed market mitigation measures for NICA when ComEd joins PJM. As PJM noted in that filing, "while under most market conditions NICA energy markets would be competitive, under certain conditions market mitigation measures are needed to ensure that market power is not exercised."<sup>2</sup> Such

<sup>&</sup>lt;sup>1</sup> While the Commission's Rules of Practice and Procedure generally do not permit answers to protests (see 18 C.F.R. §385.213(a)(2)), the Commission has made exceptions "where an answer clarifies the issues or assists in creating a complete record." <u>Idaho Power Co.</u>, 95 FERC ¶ 61,482, at 62,717 (2001), <u>see also</u> <u>Cambridge Elec. Light Co.</u>, 95 FERC ¶ 61,162, at 61,523 (2001). Here, PJM's answer clarifies certain issues raised by the protesters, which provides a more complete record to assist the Commission in reaching its decision, and therefore should be permitted.

PJM Interconnection, L.L.C. Transmittal Letter, Docket No. ER04-539-000 (Feb. 5, 2004) at p. 2 ("Transmittal Letter").

market conditions are expected to warrant mitigation in only about 5 percent of total hours.<sup>3</sup> Further, the energy market mitigation measures are temporary in duration. They are proposed to be in effect only during the period commencing when ComEd joins PJM until American Electric Power Company ("AEP") is integrated into PJM. In its order concerning the integration of AEP into PJM, the Commission stated its intent for such integration to occur by October 1, 2004.<sup>4</sup> The NICA capacity market mitigation measures similarly are short term, covering a single planning year (commencing when the ComEd Zone is added to the PJM West Region and concluding on May 31, 2005).

While temporary in nature, the NICA market mitigation measures are important to ensuring well functioning markets in the ComEd region and therefore should be approved.<sup>5</sup> The protesters' criticisms do not square with the analysis performed by the PJM market monitor. Specifically, contrary to protesters' claims:

- The PJM market monitor specifically analyzed imports into NICA in evaluating the need for mitigation in the NICA markets. Upon such consideration, the PJM market monitor found that, under current market conditions, when the 500 MW pathway from PJM to NICA is constrained, imports into NICA will not be competitive with NICA generation;
- The NICA market mitigation measures address real structural issues in the NICA markets; and
- The level of the offer caps for the NICA capacity market is appropriate and based on sound data.

<sup>&</sup>lt;sup>3</sup> Declaration of Joseph E. Bowring (March 12, 2004) at ¶ 2 ("Bowring Dec.").

<sup>&</sup>lt;sup>4</sup> <u>The PJM New Cos.</u>, 105 FERC ¶ 61,251 (2003).

<sup>&</sup>lt;sup>5</sup> On December 31, 2003, in Docket No. ER04-521-000, PJM filed PJM Tariff and Operating Agreement amendments to facilitate the full integration of ComEd into PJM. Accordingly, the market mitigation provisions filed herein will apply to ComEd, once approved. In addition, the market mitigation measures filed herein will be subject to any pertinent orders by the Commission in Docket Nos. PL04-2-000 and EL03-236-000.

# II. The PJM Market Monitor's Analyses of the NICA Markets Justify the Proposed Market Mitigation Measures

# A. The PJM Market Monitor Analyzed Imports into NICA in Determining the Need for Mitigation in the NICA Markets

Contrary to some protesters,<sup>6</sup> the PJM market monitor specifically analyzed the impact of imports on NICA when analyzing the need for market mitigation measures. As stated on page one of the NICA Competitiveness Report, the "PJM Market Monitoring Unit (MMU) has performed an analysis of expected market conditions in the Northern Illinois Control Area (NICA) after integration into PJM, <u>including the expected role of competition from the surrounding control areas</u>."<sup>7</sup> The NICA Competitiveness Report further explained that "[r]elevant competitive pressures can come both from the PJM area via the pathway and from the areas around the NICA, including PJM, via non-pathway imports."<sup>8</sup>

<sup>&</sup>lt;sup>6</sup> <u>See e.g.</u>, Motion for Leave to Intervene and Protest of Edison Mission Energy, Edison Mission Marketing & Trading, Inc. and Midwest Generation EME, LLC, Docket No. ER04-539-000 (Feb. 26, 2004) at p. 3 ("EME Protest"); Motion to Intervene of Duke Energy North America, LLC and Duke Energy Trading and Marketing, L.L.C., Docket No. ER04-539-000 (Feb. 26, 2004) at pp. 4-6 ("Duke Protest"); Motion to Intervene and Protest of Dynegy Power Marketing, Inc. and Dynegy Midwest Generation, Inc., Docket No. ER04-539-000 (Feb. 26, 2004) at p. 6 ("Dynegy Protest").

<sup>&</sup>lt;sup>7</sup> "Report Regarding the Expected Competitiveness of Markets in the Northern Illinois Control Area after Integration into PJM" (Aug. 7, 2003) at p. 1 ("NICA Competitiveness Report") (emphasis added) (footnote omitted). The report is attached as Exhibit 1 to PJM's February 5, 2004 transmittal letter in this docket and also is available at http://www.pjm.com/markets/marketmonitor/downloads/mmu-reports/20030807-nica-integration.pdf.

<sup>&</sup>lt;sup>8</sup> <u>Id.</u> at p. 2.

Therefore, to better evaluate such external competitive pressures, the PJM market monitor ran a series of analyses using the GE MAPS model.<sup>9</sup> One of these analyses was a sensitivity test to evaluate the expected role of imports more directly. In this sensitivity test, 3,000 MW of mid-merit generation were eliminated from NICA and then the entire Eastern Interconnection was redispatched to determine how the generation would be replaced. The results of this sensitivity test clearly showed that competition from areas external to NICA had a very limited impact on the mid-merit segment of the supply curve.<sup>10</sup> Based on an economic dispatch of the entire Eastern Interconnection, the mid-merit generation removed from NICA was replaced by other NICA generation rather than by external sources. This occurs because the generation in the surrounding area was not competitive with available internal NICA generation. The PJM market monitor's focus on the base load and mid-merit portions of the supply curve is critical, as these generators are the marginal units in NICA in over 90 percent of the hours of the year.<sup>11</sup>

Contrary to the protests, the PJM market monitor did not "ignore[] literally thousands of megawatts of import capability into NICA which, in and of themselves, presumably are more than adequate to compete with internal base-load and mid-merit units."<sup>12</sup> The GE MAPS sensitivity analysis performed by the PJM market monitor demonstrates that the mere existence of import capability in NICA does not assure

<sup>&</sup>lt;sup>9</sup> <u>Id.</u> The results of this sensitivity test were presented to the PJM stakeholders at a stakeholder meeting on October 7, 2003. This presentation is available on the PJM website at http://www.pjm.com/markets/market-monitor/downloads/mmu-presentations/20031007-stakeholders-rev.pdf.

<sup>&</sup>lt;sup>10</sup> Bowring Dec. at  $\P\P$  14-15.

<sup>&</sup>lt;sup>11</sup> Bowring Dec. at  $\P$  9.

<sup>&</sup>lt;sup>12</sup> EME Protest, Exh.A (Affidavit of Roy J. Shanker PH.D) at ¶ 17 ("Shanker Aff.").

competition. Simply put, imports must be demonstrably competitive with the NICA generation in order to discipline the NICA market. The GE MAPS model demonstrates that they are not.<sup>13</sup>

The PJM market monitor disagrees with Dr. Shanker's contention that the data presented in the the NICA Report Appendix showing changes in imports in response to reductions in hurdle rates is evidence that imports can provide an effective source of competition for NICA mid-merit generation.<sup>14</sup> As explained by Mr. Bowring in his declaration, comparison of data for higher hurdle rate and lower hurdle rate cases during the hours when the pathway is constrained from PJM to NICA shows a maximum difference in imports between scenarios of 750 MW, occurring during off peak hours and lasting only 18 hours. This increase in imports represents only about 6 percent of the average NICA load and is about 8 percent of the capacity controlled by the EME Companies. The PJM market monitor determined that this small increase in imports and the limited duration of that increase "was not large enough to displace a significant level

<sup>&</sup>lt;sup>13</sup> Dr. Shanker did not perform any analysis to demonstrate that there are viable competitive alternatives to NICA base load and mid-merit generation in external areas; nor has he otherwise made such a showing. Rather, Dr. Shanker "presumed" that because imports exist, competition exists. Protesters' claims that competition exists are simply assumptions unsupported by the rigorous empirical analysis conducted by the PJM market monitor.

<sup>&</sup>lt;sup>14</sup> On September 24, 2003, the PJM market monitor released an appendix to the NICA Competitiveness Report with additional information regarding the methods used, the assumptions, and the results of its NICA market power analysis ("NICA Report Appendix"). This appendix is attached as Exhibit 2 to PJM's transmittal letter filed on February 5, 2004 in this docket and also is available at http://www.pjm.com/markets/market-monitor/downloads/mmu-reports/20030925-mmu-appendix-nica-report.pdf.

of NICA generator resources and thus does not represent a significant level of competition."<sup>15</sup>

As PJM stated in its initial filing, the PJM market monitor intends to monitor imports into NICA and their impact on the markets to determine whether circumstances change.<sup>16</sup> The PJM market monitor also will continue to monitor the overall structure of the NICA markets to determine whether there is any change in competitiveness. In the event that NICA market conditions change such that energy market mitigation is no longer required, PJM will make an additional filing as appropriate to address such circumstance.<sup>17</sup> If the Commission prefers, it could authorize PJM to suspend mitigation rules immediately upon such a determination by the PJM market monitor, without an advance filing. In any event, the NICA market mitigation measures are temporary and will only be in effect for a short period (for the energy market until the integration of AEP into PJM slated to occur on October 1, 2004 and for the capacity market for one planning year).

Additionally, should generators believe that conditions in the NICA market have become sufficiently competitive as to not warrant mitigation, they are free at any time to file with the Commission pursuant to section 6.4.1(d) of the Appendix to Attachment K of the PJM Tariff and Schedule 1 of the Operating Agreement (which provides for exceptions to offer capping) requesting that the PJM-NICA pathway constraint be

<sup>&</sup>lt;sup>15</sup> Bowring Dec. at ¶ 21.

<sup>&</sup>lt;sup>16</sup> Transmittal Letter at p. 6.

<sup>&</sup>lt;sup>17</sup> Bowring Dec. at  $\P$  25.

excluded from market mitigation. This would follow the same course that the Commission followed when it initially authorized PJM markets.<sup>18</sup>

#### B. The Proposed NICA Mitigation Measures Address Structural Issues In The NICA Markets

Protesters further erroneously assert that the proposed NICA market mitigation measures are flawed because the PJM market monitor identified no structural problem in the NICA markets requiring mitigation.<sup>19</sup> As noted, the PJM market monitor in fact analyzed the market structure of NICA on both a stand alone basis and accounting for imports and exports. Its analysis showed that there is a structural issue in the NICA market based on high ownership concentration levels of base load and mid-merit segments of the supply curve.<sup>20</sup> Simply stated, PJM is not proposing mitigation measures in a vacuum; rather, the measures are proposed to address identified structural issues within the NICA markets.

<sup>&</sup>lt;sup>18</sup> <u>See Atlantic City Elec. Co.</u>, 86 FERC ¶ 61,248 at fn 50 (1999) (Offer caps intended to address market power in load pockets where customers are dependent on must run generators "will not apply to generators used to relieve... the Western, Central and Eastern segments that are defined by transmission limits – because these larger areas are served by many generators.").

<sup>&</sup>lt;sup>19</sup> <u>See e.g.</u>, EME Protest at pp. 4-5; Duke Protest at p. 7; Dynegy Protest at p. 5.

<sup>&</sup>lt;sup>20</sup> Contrary to EME, the PJM market monitor evaluated the generation ownership and dispatch control within NICA. <u>See</u> EME Protest fn 30. In its analysis, the PJM market monitor considered existing power purchase agreements between ComEd and generation owners providing that the output of specified generating stations would be available to ComEd for a specified capacity and energy price. The impact of these power purchase agreements, while important, should not be overstated as their duration is finite (many with expiration dates in 2004).

III. The Proposed Offer Cap For The NICA Capacity Market Is Reasonable And Required Based On Market Conditions

The proposed offer cap for the NICA capacity market is reasonable and required based on capacity market conditions in NICA. As PJM noted in its initial filing and as Mr. Bowring reiterates in his declaration attached hereto, ownership of generation in NICA is highly concentrated (e.g., ComEd owns 96 percent of base load capacity in NICA; EME owns 77 percent of the mid-merit generation; HHI for mid-merit generation is 6508).<sup>21</sup> This high ownership concentration creates a need for mitigation in the NICA capacity markets.

Similarly, the level of the offer caps (\$30 per MW-day or \$160 per MW-day when scarcity exists) is appropriate and based on sound data. As explained in Mr. Bowring's declaration attached hereto, the PJM market monitor independently developed the \$30 per MW-day cap to reflect "going forward" cost estimates based on current manufacturers' data.<sup>22</sup> The \$160 offer cap is consistent with the current PJM design and appropriately reflects 100 percent of the total going forward and carrying costs of a new combustion turbine without any energy market net revenue offset.<sup>23</sup> Contrary to EME and other protesters, <sup>24</sup> the offer caps are not based on costs set forth in an earlier study regarding New England units.

<sup>&</sup>lt;sup>21</sup> See Bowring Dec. at  $\P$  8.

<sup>&</sup>lt;sup>22</sup> Bowring Dec. at  $\P$  30.

<sup>&</sup>lt;sup>23</sup> Bowring Dec. at  $\P$  31.

<sup>&</sup>lt;sup>24</sup> <u>See e.g.</u>, EME Protest at pp. 15-16; Dynegy Protest at pp. 7-8.

With respect to EME's claim that the 1 percent margin as a trigger for the higher scarcity capacity offer cap is inappropriate,<sup>25</sup> PJM notes that the PJM stakeholders approved this trigger. It is based on historical analyses of pricing in the PJM capacity markets and is designed to permit scarcity pricing in the capacity markets when conditions warrant, while maintaining protections against market power. However, in the NICA Capacity Report, the PJM market monitor noted that, "[i] may be appropriate to have two steps in the offer price limits as the available capacity approaches the total demand, with an intermediate step at a two percent excess point."<sup>26</sup> In the event that the Commission believes that there also should be an intermediate step at a two percent excess point, PJM could develop a proposal to include such a trigger and could supplement the capacity market mitigation rules with such a proposal in time for the May 1, 2004 integration of ComEd into PJM.

### IV. Claims That The NICA Market Mitigation Measures Do Not Provide Adequate Cost Recovery Are Inappropriate Here

Claims that the proposed offer caps for the NICA market preclude sufficient cost recovery are off the mark. To illustrate, the capacity offer capping provisions specifically provide that capacity is offer capped at \$30 per MW-day, <u>plus</u> such additional amounts as are shown to the satisfaction of the PJM market monitor to compensate the seller of capacity for its opportunity costs or any other actual annual avoidable incremental costs

<sup>&</sup>lt;sup>25</sup> EME Protest at p. 16.

<sup>&</sup>lt;sup>26</sup> PJM MMU Proposed Market Power Mitigation Protocol for NICA Capacity Markets, at p. 4 (Dec. 8, 2003) ("NICA Capacity Market Report"). The report is attached as Exhibit 3 to the Transmittal Letter and also is available at http://www.pjm.com/markets/market-monitor/downloads/mmu-reports/proposedmarket-power-mitigation-protocol-for-nica-capacity.pdf

of selling its capacity into the PJM Installed Capacity Market.<sup>27</sup> In other words, the proposed offer cap provisions "explicitly allow for units with higher going forward costs to offer capacity at levels consistent with such demonstrated costs."<sup>28</sup> Similarly, as stated above, the \$160 offer cap in times of scarcity appropriately reflects 100 percent of the total going forward <u>and</u> carrying costs of a new combustion turbine, without considering any energy market net revenue offset.<sup>29</sup>

With respect to the claim that extension of the existing cost plus ten percent offer cap to NICA and the proposed capacity market design prevents adequate cost recovery to retain and encourage investment,<sup>30</sup> the PJM market monitor believes there is nothing in the proposed mitigation measures that will limit revenue sufficiency in NICA.<sup>31</sup> In any event, the Commission is addressing offer capping and cost recovery issues on a broader basis in Docket No. PL04-2-000. As the PJM market monitor has demonstrated that the level of cost capping is appropriate for the NICA markets, more general issues of capital cost recovery should be left to the broader inquiry in Docket No. PL04-2-000. It should not interfere with the immediate and short term need for appropriate NICA mitigation here.

<sup>27</sup> <u>See</u> Operating Agreement Sch. 11 proposed § 7.2.

<sup>31</sup> Bowring Dec. at  $\P$  34.

<sup>&</sup>lt;sup>28</sup> Bowring Dec. at ¶ 30

<sup>&</sup>lt;sup>29</sup> <u>Id.</u> at ¶ 31.

<sup>&</sup>lt;sup>30</sup> <u>See e.g.</u>, Motion to Intervene of NRG Companies, Docket No. EL04-539-000 (Feb. 26, 2004) at pp. 5-11.

#### V. Conclusion

For the reasons stated above, in the attached Declaration of Joseph E. Bowring, and PJM's initial filing in this docket, the Commission should accept for filing the PJM Tariff and Operating Agreement amendments establishing the NICA market mitigation measures.

Respectfully submitted,

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# **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 Washington, D.C., this 12th day of March, 2004.

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Carrie L. Bumgarner