

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Pat Wood, III, Chairman;  
Nora Mead Brownell, Joseph T. Kelliher,  
and Suedeem G. Kelly.

Northern Indiana Public Service Co.

Docket No. EL05-103-000

v.

Midwest Independent Transmission System  
Operator, Inc. and PJM Interconnection, L.L.C.

ORDER ON COMPLAINT

(Issued June 27, 2005)

1. In this order, we address a complaint (Complaint) filed by Northern Indiana Public Service Company (Northern Indiana), on May 2, 2005, under sections 206 and 306 of the Federal Power Act,<sup>1</sup> against the regional transmission organizations (RTOs), Midwest Independent Transmission System Operator, Inc. (Midwest ISO) and PJM Interconnection, L.L.C. (PJM). Northern Indiana fears continuation during summer 2005 of the harmful effects of increased system congestion, experienced since October 2004, that it associates with the reconfigured seams between the two RTOs resulting from the integration of new companies into the PJM footprint. Northern Indiana asks the Commission to monitor the RTOs' transmission studies, now underway, assessing the matter, and to require their expedited conclusion. Northern Indiana also asks the Commission to order any necessary modifications to Midwest ISO-PJM's Joint Operating Agreement (JOA) that will mitigate adverse impacts on Northern Indiana's system. For the reasons discussed below, we will require the RTOs to make periodic filings informing the Commission of the results of the ongoing transmission studies, including temporary or permanent solutions recommended, based on such results. This order benefits customers by providing Commission oversight of the issues raised by Northern Indiana.

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<sup>1</sup> 16 U.S.C. §§ 824e and 825e (2000).

## **Background**

2. In 2002, the Commission conditionally accepted the choices of Commonwealth Edison Company and Commonwealth Edison Company of Indiana (ComEd) and certain operating company subsidiaries of American Electric Power Corporation (AEP)<sup>2</sup> to join PJM. Because these RTO choices would leave Midwest ISO and PJM highly interconnected, with operations in each RTO significantly impacting the other, the Commission imposed conditions. A prominent condition was the requirement that the RTOs develop a coordination agreement through which they would ensure efficient and reliable operation of their systems across the seams between them, with the ultimate goal being the creation of a joint and common market across the two RTOs. Additionally, because the record indicated that imperfect coordination across the seams created by ComEd's and AEP's RTO choices might cause adverse impacts that would fall disproportionately on utilities in Wisconsin and Michigan, the Commission required ComEd and AEP to hold these utilities harmless from the effects of their choosing to join PJM.<sup>3</sup>

3. In 2004, the Commission approved the requisite coordination agreement, the JOA,<sup>4</sup> and the integration of ComEd into PJM, to take effect simultaneously on May 1, 2004,<sup>5</sup> and approved the integration of AEP into PJM to take effect October 1, 2004.<sup>6</sup>

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<sup>2</sup> The AEP operating companies in PJM are: Appalachian Power Company, Columbus Southern Power Company, Indiana Michigan Power Company, Kentucky Power Company, Kingsport Power Company, Ohio Power Company, and Wheeling Power Company.

<sup>3</sup> *Alliance Cos.*, 100 FERC ¶ 61,137 (2002), *order on clarification*, 102 FERC ¶ 61,214, *order on reh'g and clarification*, 103 FERC ¶ 61,274, *order denying reh'g and granting clarification*, 105 FERC ¶ 61,215 (2003), *appeal docketed sub nom. American Electric Power Service Corp. v. FERC*, No. 03-1223 (D.C. Cir. Aug. 1, 2003).

<sup>4</sup> *Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C.*, 106 FERC ¶ 61,251 (JOA Order), *order on reh'g and clarification*, 108 FERC ¶ 61,143, *order denying reh'g*, 109 FERC ¶ 61,166 (2004).

<sup>5</sup> *PJM Interconnection, L.L.C.*, 106 FERC ¶ 61,253, *order accepting compliance filing and conditionally accepting service agreement*, 107 FERC ¶ 61,087, *order on reh'g*, 109 FERC ¶ 61,094 (2004).

<sup>6</sup> *PJM Interconnection, L.L.C.*, 108 FERC ¶ 61,318 (2004), *reh'g denied*, 110 FERC ¶ 61,395 (2005). *See also PJM Interconnection, L.L.C.*, 108 FERC ¶ 61,317, *clarification granted*, 109 FERC ¶ 61,311 (2004).

4. The JOA was implemented in phases. During Phase 1, the market-to-non-market phase, the JOA provisions for inter-RTO coordination reflected that PJM operated a market based on locational marginal prices (LMP) while Midwest ISO did not operate a market. On March 3, 2005, the Commission approved amendments to the JOA to establish the protocols by which the RTOs would jointly coordinate the operation of their respective markets, beginning April 1, 2005, when Midwest ISO would commence operation of its LMP-based market (Phase 2 or the market-to-market phase). The RTOs' additional cooperative measures in Phase 2 include consistency in calculating LMP at coordinated flowgates and the RTOs' interfaces with each other, and coordinated generation redispatch to manage congestion on coordinated flowgates.<sup>7</sup>

### **Complaint**

5. Northern Indiana explains that, because ComEd and AEP chose to join PJM while it joined Midwest ISO, Northern Indiana's service territory has become a Midwest ISO peninsula jutting up between ComEd and AEP, with its interconnections to the transmission networks of ComEd and an AEP subsidiary, Indiana Michigan Power Company, located at the seams where Midwest ISO and PJM meet. Northern Indiana states that its transmission system consists of 138 kV and 345 kV lines whereas ComEd and AEP transmission lines that traverse Northern Indiana's service territory include 765 kV lines. Northern Indiana continues that the low impedance of its lower voltage lines, combined with proximity to these higher-voltage third-party lines having large west to east flows, results in considerable unscheduled power flows (parallel flows or loop flows) onto its transmission system.

6. Northern Indiana states that between May 1, 2004 and September 30, 2004, it experienced intermittent increases in unscheduled west to east power flows, mostly during off-peak hours, which it attributes to increased west to east transfers of power from the ComEd system to eastern PJM. When parallel flows were high, Midwest ISO invoked Transmission Loading Relief (TLR) procedures<sup>8</sup> that required Northern Indiana to back-off generation, purchase more expensive power from other sources, reconfigure its transmission system, and make last minute cancellations of scheduled maintenance. On October 1, 2004, when AEP joined PJM, Northern Indiana experienced such serious operational problems that Midwest ISO declared a TLR Level 6, or system emergency procedures, so that Northern Indiana was required to curtail non-firm transactions, implement emergency redispatch of its generating units,

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<sup>7</sup> See *Midwest Independent Transmission System Operator, Inc. and PJM Interconnection, L.L.C.*, 110 FERC ¶ 61,226 (2005).

<sup>8</sup> TLRs are procedures used in the Eastern Interconnection to relieve potential or actual loading on a constrained facility.

and reconfigure a portion of its system. To serve its customers while lowering cross-system flows, Northern Indiana had to purchase higher cost power from the northeast side of its system to compensate for lowered production from its other units. Northern Indiana states that nearly every day during the fall of 2004, after October 1, Midwest ISO issued a TLR Level 3a<sup>9</sup> or greater on the Northern Indiana system.

7. Northern Indiana explains that, as a result of the October 1, 2004 events, it and Midwest ISO developed two interim Standing Operating Guides (SOGs), to remain in force until at least March 31, 2006, to mitigate the effect of the parallel flows on the Northern Indiana system, and that these SOGs have prevented system emergencies. It states also that Midwest ISO assigned a dedicated engineer to work on Northern Indiana's reliability problems, and that, with this engineer's help, the SOGs have been improved. It states that Midwest ISO and PJM have designated Northern Indiana flowgates as coordinated flowgates (*i.e.*, subject to coordinated congestion management), under the JOA.

8. Since the April 1, 2005 commencement of Phase 2, or market-to-market operation under the JOA, Northern Indiana reports that it is experiencing fewer TLR events, attributing this experience to the fact that much of ComEd's low-cost nuclear generation has been out of service for some time. Northern Indiana states that Midwest ISO and PJM have agreed to perform a study of the Northern Indiana transmission system that will review the recent operational and reliability problems, determine whether changes are needed to Midwest ISO's and PJM's operations, including flow entitlements under the JOA and the RTOs' models for understanding system flows.

9. Northern Indiana emphasizes that Midwest ISO and PJM have been cooperative, and that it does not oppose continued efforts to create a joint and common market between the two RTOs. Rather, its immediate concern is that reliability problems do not occur during the 2005 summer peak season similar to those that it experienced in the fall of 2004. Additionally, Northern Indiana seeks to avoid adverse impacts on the security and reliability of its transmission system or on the cost of electric power to its customers.

10. Northern Indiana asks the Commission to monitor and oversee the transmission study, which Midwest ISO and PJM are currently performing, and to ensure that the study is completed on an expedited basis by June 1, 2005. Northern Indiana also asks that the RTOs be required to amend the JOA to incorporate any measures recommended by the transmission study, at its conclusion, as necessary to ensure reliable and efficient

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<sup>9</sup> TLR level 3a requires reallocation of transmission service by curtailing interchange transactions using non-firm point-to-point transmission service to allow interchange transactions using high-priority transmission service.

operation of its transmission system. In addition, Northern Indiana asks that the Commission require the RTOs to take whatever steps are needed to ensure that Northern Indiana and its customers are not harmed because of the adverse consequences of ComEd and AEP joining PJM, citing as precedent the Commission's institution of hold harmless conditions regarding Michigan and Wisconsin utilities. Northern Indiana requests expedited processing of its Complaint to ensure that the issues it raises are addressed prior to the summer peak season.

### **Notice and Responsive Filings**

11. Notice of Northern Indiana's Complaint was published in the *Federal Register*, 70 Fed. Reg. 24,422 (2005), with answers to the Complaint and comments, interventions, or protests due on or before May 19, 2005. Midwest ISO and PJM filed answers. Filing a motion or notice to intervene were: Ameren Services Company; Cinergy Services, Inc.; Detroit Edison Company (Detroit Edison); Edison Mission Energy, Edison Mission Marketing & Trading, Inc., and Midwest Generation EME, LLC (collectively, Edison Mission); Exelon Corporation (Exelon);<sup>10</sup> FirstEnergy Service Company; the Indiana Utility Regulatory Commission; the Midwest Stand-Alone Transmission Companies;<sup>11</sup> and Mittal Steel USA ISG Inc. Consumers Energy Company (Consumers Energy) filed a motion to intervene out-of-time.

12. Detroit Edison, Edison Mission, and Exelon filed comments. Exelon's filing included a motion that the Commission hold Northern Indiana's Complaint in abeyance, pending completion of the transmission study. On May 25, 2005, Northern Indiana filed a response to Midwest ISO's and PJM's answers and to Detroit Edison's, Edison Mission's, and Exelon's comments (May 25 Response). On June 6, 2005, Midwest ISO filed a response to Northern Indiana's May 25 Response (June 6 Response).

### **Answers, Comments & Responses**

#### **Midwest ISO's and PJM's Answers**

13. PJM asserts its expectation that the west to east flows this summer will not cause reliability concerns. Midwest ISO states that the temporary measures that are being implemented provide sufficient mitigation while a permanent solution is developed, a view echoed by PJM. PJM also asserts that the RTOs are better equipped to coordinate

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<sup>10</sup> Exelon owns ComEd and also PECO Energy Company of Philadelphia.

<sup>11</sup> American Transmission Company LLC, International Transmission Company, and Michigan Electric Transmission Company, LLC.

and effectively address loop flows now that Midwest ISO employs an LMP-based market to manage congestion. PJM states that the designation of Northern Indiana's flowgates as coordinated flowgates subjects these flowgates to coordinated redispatch by the two RTOs to control transmission flows on them.

14. The RTOs argue that the JOA provides the appropriate framework, and has been working well, for developing solutions to Northern Indiana's concerns. Midwest ISO explains that Northern Indiana participated in the development of the planned transmission study, and that the study will examine the coordinated flowgate allocations and congestion management under the JOA, as well as the need for transmission expansions. Midwest ISO states that, because power flow analyses often take four to six months to complete, the transmission study cannot be completed *in toto* by June 1, 2005, as Northern Indiana requests. Midwest ISO attaches the study scope plan to its filing, and describes a timeline that includes, "Issue report on items to be completed by June 1, 2005." It offers to file the results of the completed transmission study on an informational basis in Docket No. ER04-375.<sup>12</sup> Midwest ISO asks the Commission not to create a parallel process or to interfere with the RTOs' fulfillment of their responsibilities under the processes established in the JOA. The RTOs criticize the Complaint as premature, given Northern Indiana's requests for approval of solutions in advance of their development. Midwest ISO and PJM ask the Commission to deny the Complaint, objecting to Commission involvement in the transmission study, fast-track processing of the Complaint, and Northern Indiana's request to be held harmless.

### **Commentors' Positions**

15. Exelon joins the RTOs in calling the Complaint premature and objecting to the requests for Commission involvement, fast track processing, and hold harmless protection for Northern Indiana from the financial impact of loop flows. Exelon disputes Northern Indiana's assertion that reliability problems exist and Northern Indiana's description of the TLR events. Exelon asks the Commission to reject piecemeal approaches to loop flow issues and to allow the RTOs to develop comprehensive solutions. Exelon urges the Commission to hold the Complaint in abeyance, pending completion of the transmission study and implementation of remedial actions, if any, recommended by the study.

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<sup>12</sup> In the JOA Order, issued March 18, 2004 in Docket No. ER04-375, the Commission required the RTOs to make an informational filing on or about every 60 days with a detailed description of the progress they are making in implementing the JOA, including whether implementation of the JOA is resulting in efficient and reliable operation of their combined transmission systems, whether any modifications to the JOA or its attachments are necessary to result in more efficient and reliable operation across their seams, and any plans to adopt such modifications. JOA Order, 106 FERC ¶ 61,251 at P 105. *See* note 4, *supra*.

16. Edison Mission suggests that Northern Indiana, as an alternative to its requested relief, redispatch its system to allow the transfer of off-peak energy from ComEd to the eastern portion of PJM. It recommends further that the redispatch costs should be borne by Midwest ISO or PJM load that directly benefits, and that the Commission should direct the RTOs to identify the benefiting load and assign costs accordingly.

17. In support of the Complaint, Detroit Edison states that TLRs issued on Northern Indiana's system can significantly affect the flows into and out of Michigan. It asks that it and any affected party be allowed to participate in efforts to alleviate the operational problems that Northern Indiana is experiencing. Detroit Edison states also that during the upcoming summer peak season, the natural path of west to east flows created by the new PJM configuration could create analogous problems for Detroit Edison at the border of Midwest ISO and Ontario Independent Electricity System Operator (Ontario), where Detroit Edison is located. It cites Northern Indiana's experience of TLRs, despite Midwest ISO and PJM's coordination under the JOA, as evidence that Midwest ISO will not be able to solve operational problems associated with the Midwest ISO-Ontario seam without an effective seams agreement with Ontario. Detroit Edison asks the Commission to require periodic reports of Midwest ISO's progress in developing an effective seams arrangement with Ontario.

#### **Northern Indiana's and Midwest ISO's Responses**

18. In its May 25 Response, Northern Indiana notes that parties do not dispute the importance of this seams issue or the need for the current transmission study. Northern Indiana clarifies that it is not asking the Commission to immediately change the JOA or supplant the RTOs' role, and offers a "roadmap" to gain the necessary information to effect a comprehensive solution to the seams issues along Northern Indiana's borders. It argues that the Commission's involvement can be beneficial in providing transparency to all parties concerned and that keeping the Commission apprised of the situation through this complaint proceeding will facilitate prompt approval and implementation of resulting solutions. Northern Indiana argues that its reliability concerns are not misplaced or premature, and that the likelihood, during summer 2005, that less expensive nuclear and coal-fired generation from western PJM will serve markets in eastern PJM establishes that the potential for reliability problems this summer is not speculative. With respect to Edison Mission's proposed solution, Northern Indiana states that Edison Mission does not explain how its suggestion would remedy the seams issues. It submits that Detroit Edison's request concerning the Midwest ISO-Ontario seam is not relevant to this Complaint.

19. Northern Indiana clarifies that it did not expect that the transmission study would be completed *in toto* by June 1, 2005, but that it expects substantial progress by that date. Northern Indiana modifies its request by adopting Midwest ISO's offer to make an informational filing on the study. It asks the Commission to require the RTOs to file

a detailed description of the study within seven days of the date that the Commission issues its order on the Complaint. Further, Northern Indiana asks the Commission to require the RTOs to file bi-weekly reports during the summer period on the progress of the transmission study and any preliminary findings made to date, and detailed results and recommendations upon completion of the study. Northern Indiana also asks the Commission to hold an informal technical conference 15 days after the filing of the final study results, although it acknowledges that such a conference would be obviated if it and the RTOs agreed on the transmission study's recommendations.

20. In its June 6 Response, Midwest ISO states that Northern Indiana's proposed bi-weekly reporting would be unnecessarily burdensome and would take time away from completing the transmission study. It asks the Commission to deny Northern Indiana's request for a technical conference as having no basis at this time, stating that no one should presuppose that there will be disagreements among the parties upon completion of the study. Further, Midwest ISO states that the issues raised by Northern Indiana can be addressed through the filing of the transmission study's conclusions and recommendations on an informational basis in Docket No. ER04-375.

## **Discussion**

### **Procedural Matters**

21. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2004), the notice of intervention and timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. Given the early stage of this proceeding, the absence of any undue prejudice or delay, and Consumers Energy's interest in this proceeding, we will grant its motion to intervene out-of-time.

22. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2004) prohibits an answer to an answer unless otherwise ordered by the decisional authority. We will accept Northern Indiana's May 25 Response and Midwest ISO's June 6 Response because they have provided information that assisted us in our decision-making process.

### **Commission Decision**

23. We find that all parties are in substantial agreement that additional study and more information is required before a decision can be made as to what specific adjustments, if any, to current practices are necessary to address the issues raised in Northern Indiana's Complaint. We are pleased to see that the coordination processes in the JOA have provided a forum for exploring the Complainant's concerns and pursuing solutions. It is clear that the studies are already underway and that the preliminary

assessment, scheduled for June 1, 2005, will inform subsequent developments. Therefore, it is premature at this time for us to rule on the merits of the Complaint and the counter-arguments, motion, and recommendations of the parties.

24. However, we agree with Northern Indiana that the circumstances it describes are worthy of attention. Also, we agree with the RTOs that the resolution of these matters is occurring, as it should, pursuant to the JOA. To stay abreast of the situation and to ensure that timely and appropriate process and effort continue through the study's completion, we will require the RTOs to make several informational filings in this docket, as follows below.

25. On July 15, 2005, the RTOs shall file the preliminary results associated with the items that were to be completed by June 1, 2005, and a list of the remaining study items to be completed with and the dates scheduled for their completion.

26. On July 15, August 15, and September 15, 2005, the RTOs shall file status reports on further progress made by the study. These reports should include:

- a. an updated list of remaining items to be completed and the dates of their scheduled completion;
- b. a description of additional information that has come to light to better understand the nature of this seams issue;
- c. interim solutions that have been developed, if any, and progress on development of long-term solutions, including whether or not changes to the JOA are or appear to be necessary;
- d. a listing of any instances in which a TLR level 3a or greater was called on the Northern Indiana transmission system and a narrative explanation of why, in these instances, the RTOs used TLR procedures to relieve congestion rather than using redispatch through the RTOs' markets, pursuant the JOA, including for the July report any instances dating back to April 1, 2005; and
- e. a report of the number of instances in which the RTOs used redispatch through their markets, pursuant the JOA, to relieve congestion on the Northern Indiana transmission system and thereby avoided invoking TLR procedures, including for the July report any instances dating back to April 1, 2005.

27. On October 15, 2005, the RTOs shall file in this docket an assessment of their coordinated congestion management under Phase 2 of the JOA with respect to the flowgates on the Northern Indiana system subject to reciprocal coordination. This assessment should address and explain the following:

- a. how often the RTOs used redispatch through their markets pursuant to the JOA to relieve congestion on these flowgates and how often the RTOs invoked TLR procedures to relieve congestion on these flowgates;
- b. whether the coordinated congestion management, including the settlements between the RTOs and between each RTO and its market participants associated with such coordination, is resulting in efficient price signals and efficient dispatch reflecting congestion on these flowgates;
- c. whether the price signals for dispatching generators that impact those flowgates are correct, and whether any issued TLRs are evidence of incorrect price signals with respect to specific generators;
- d. whether any issued TLRs are evidence that generators are failing to adhere to an RTO's dispatch instructions or have not submitted bids into the RTO markets to adjust their output; and
- e. what if any remedies the RTOs believe are warranted, including whether changes to the JOA are needed.

28. By December 31, 2005, the RTOs shall file in this docket the final results and recommendations of the transmission study, including supporting data. Based on the study's final results, the RTOs shall address in the filing what remedies, if any, are warranted, including whether changes to the JOA are needed.

29. We will grant Northern Indiana's request that the Commission monitor the RTOs' performance of the transmission study. Based on the Commission's evaluation of information to be included in the above informational filings, the Commission may issue a substantive order on the Complaint, addressing changes to the RTOs' procedures or the JOA, if and when appropriate.

The Commission orders:

(A) Northern Indiana's May 2, 2005 complaint in this proceeding is hereby granted, as discussed in the body of this order.

(B) Midwest ISO and PJM are hereby directed to file, on July 15, August 15, September 15, October 15, and December 31, 2005, in this docket, the informational reports discussed in the body of this order.

By the Commission.

( S E A L )

Linda Mitry,  
Deputy Secretary.