

UNITED STATES OF AMERICA 117 FERC ¶ 61,325  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman;  
Sudeen G. Kelly, Marc Spitzer,  
Philip D. Moeller, and Jon Wellinghoff.

Midwest Independent Transmission  
System Operator, Inc.

Docket No. ER06-1552-000

ORDER ADDRESSING PROPOSED TARIFF REVISIONS

(Issued December 22, 2006)

1. On September 29, 2006, Midwest Independent Transmission System Operator, Inc. (Midwest ISO) submitted, pursuant to section 205 of the Federal Power Act (FPA),<sup>1</sup> proposed revisions to Midwest ISO's Open Access Transmission and Energy Markets Tariff (TEMT or tariff), FERC Electric Tariff, Volume No. 1, to provide for make-whole payments to certain generation resources when real-time prices are insufficient to cover their incremental energy costs and to clarify procedures to manually redispatch and compensate certain generation resources (September 29 Filing).

**I. Background**

**A. Midwest ISO**

2. Midwest ISO is a not-for-profit corporation authorized by the Commission to independently operate Midwest ISO transmission system.<sup>2</sup> Midwest ISO transmission system spans a 15-state region and the Canadian Province of Manitoba, with an approximately 1.1 million square mile service area and over 97,000 miles of transmission

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<sup>1</sup> 16 U.S.C. §§ 824b and 824d (2000), *as amended* by the Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594, 983-84 (2005) (EPAAct 2005).

<sup>2</sup> *See Midwest Independent Transmission System Operator, Inc.*, 97 FERC ¶ 61,326 (2001), reh'g denied, 103 FERC ¶ 61,169 (2003).

lines. The generation capacity located within Midwest ISO is approximately 135,000 megawatts.

3. Midwest ISO's TEMT was filed and accepted by the Commission,<sup>3</sup> providing for a market-based congestion management program in Midwest ISO region, including day-ahead and real-time energy markets, locational marginal pricing (LMP) and a market for financial transmission rights. The TEMT also provided for revenue sufficiency guarantee (RSG) payments under certain well-defined circumstances. Midwest ISO defines RSG charges as a guarantee by the transmission provider to ensure the minimum recovery of start-up, no-load and energy offer costs for a resource committed and scheduled by the transmission provider.<sup>4</sup> On April 1, 2005, the energy markets began operation.

#### **B. The Instant Filing**

4. Midwest ISO proposes (1) new section 40.3.5 of the TEMT to provide a real-time price volatility make-whole payment (PV MWP) to certain generation resources when the real-time LMP is insufficient to cover their incremental energy costs and (2) new section 33.8 of the TEMT to clarify the circumstances under which Midwest ISO can manually redispatch generation resources, equitably compensate manually redispatched generation resources, and ensure adequate cost recovery.

#### **C. Price Volatility Make-Whole Payments**

5. In its filing, Midwest ISO asserts that there would be many operational and reliability benefits associated with making PV MWP available to generators, by providing them with appropriate incentives to offer flexibly into the market. Midwest ISO states that the current tariff methodology creates a financial incentive for some generators to make inflexible offers in cases when RSG payments do not guarantee recovery of their costs. In particular, such generators tend to submit real-time offers that

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<sup>3</sup> *Midwest Independent Transmission System Operator, Inc.*, 108 FERC ¶ 61,163 (TEMT II Order), *order on reh'g*, 109 FERC ¶ 61,157 (2004) (TEMT II Rehearing Order), *order on reh'g*, 111 FERC ¶ 61,043 (2005) (Compliance Order III), *order on reh'g*, 111 FERC ¶ 61,176 (2005).

<sup>4</sup> *See* section 1.227 of the TEMT, Midwest ISO, FERC Electric Tariff, Third Revised Volume No. 1, Second Revised Sheet No. 109.

minimize the spread between the economic maximum and economic minimum<sup>5</sup> or decrease their ramp rates<sup>6</sup> in order to maintain their dispatch at the levels at which they cleared in the day-ahead market or, in the case of real-time must-run units, at the levels they expect to be most profitable.<sup>7</sup> They do so to minimize the risk of being cleared by the real-time dispatch system under conditions where the ex post real-time LMP would be insufficient to permit full recovery of their incremental energy costs for any movements from their day-ahead dispatch levels. As a result of generators squeezing the spread between their economic maximum and economic minimum and/or decreasing their ramp rates in the real-time market, Midwest ISO is left with fewer dispatch options to manage the reliability of the transmission system. This may result in additional price volatility and cause it to commit extra, more expensive units that may entail additional RSG payments.

6. Midwest ISO asserts that generators have not been offering flexibility with respect to range and/or ramp rates in their real-time offers, due to price volatility in the real-time prices that may leave the generators unable to recover their incremental energy costs given the LMPs that result in the market.<sup>8</sup> It believes that proposed tariff section 40.3.5

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<sup>5</sup> A generation resource's economic minimum and economic maximum are the minimum and maximum megawatt (MW) levels, respectively, at which a generation resource may operate under normal system conditions. The generator submits these parameters in its offer.

<sup>6</sup> Section 1.251 of the TEMT defines ramp rate up/ramp rate down as "the expected response rate of an Energy supplying Resource measured in MW/minute."

<sup>7</sup> Not surprisingly, because the day-ahead market process is based on expectations of where the operating day will clear, the actual (real-time) market clearing quantities may be different. Reasons for this include virtual bids, levels of loop flows, imports and exports, and simply that the weather was not what was expected. When generators clear at different quantities in the real-time market they must either produce any additional units at the real-time LMP, or buy back any decrease in output from the day-ahead market at the real-time LMP.

<sup>8</sup> Generally generators which are dispatched in the real-time market at levels different than the day-ahead market should be happy with the dispatch decision, as they will only be dispatched up if the LMP is at least as high as the (marginal) energy costs on their offer curve. The same is true for the real-time must-run generators. Similarly, they will be dispatched at lower levels when the LMP is lower than their offer, allowing them to buy those units back at a savings. However, generators are committed in real-time at a 5 minute ex ante LMP, and are paid the integrated hourly average LMP. On occasion,

(continued)

will provide market participants with an incentive to make flexible offers by providing a mechanism to recover incremental energy costs, incurred as a result of following Midwest ISO's dispatch instructions, which are not otherwise collected from the real-time LMP.<sup>9</sup> In proposed tariff section 40.3.5.1, Midwest ISO clarifies the PV MWP does not include any compensation for lost opportunity costs based on avoided real-time LMP revenues.<sup>10</sup> Midwest ISO also states that generation resources that are already entitled to RSG payments are ineligible for the PV MWP.<sup>11</sup> Midwest ISO specifies in proposed section 40.3.5.2 that generation resources are eligible for the PV MWP if they are (1)

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there can be substantial price volatility in the 5 minute ex post prices, which result in the real-time hourly prices differing substantially from the ex ante prices at which the generators were committed. The result can be that generators which offer flexibility in the real-time market may lose money (for example when they offer their energy cost). For example, a generator which was committed in the day-ahead market at 100 MW may be dispatched at 120 MW in the real-time market, and thus paid the ex post real-time LMP for the 20 MW. If it offers its cost of \$60/MW for those MW, it will only be taken if the ex ante LMP is \$60 or higher. However, due to price volatility within that hour, the ex post LMP may be only \$50, causing the generator to take a loss on those 20 units. Such price volatility may cause them to try to lock in their day-ahead LMPs and quantities, setting their offered economic minimum and economic maximum right at their commitment level for the day-ahead market, and/or to provide low ramp rates to move off these levels.

<sup>9</sup> Under this mechanism, generators are made whole with respect to their incremental energy offer on their energy offer curve.

<sup>10</sup> In addition, the PV MWP is not intended to compensate generators for start-up and no-load costs for its regular real-time operations. These costs are covered by either the day-ahead RSG associated with day-ahead economic commitment of generation resources or, in the case of real-time must run generators they have already committed to absorb these costs.

<sup>11</sup> Additionally, Midwest ISO points out that the PV MWP is not available to generators called upon during energy shortages under Midwest ISO Adequate Ramp Capability (ARC) procedures (ARC procedures call on a generator to operate above its Economic Maximum but beneath its Emergency Maximum during an energy shortage of operating reserves). Dispatch under ARC procedures involves reserved capacity whereas the PV MWP applies only to ordinary dispatchable capacity.

real-time dynamically dispatchable (RDD),<sup>12</sup> (2) committed in the day-ahead energy market, (3) committed as must-run in the real-time energy market, or (4) manually redispatched pursuant to proposed tariff section 33.8 of the tariff. However, to qualify for such payments they must meet all applicable offer fixity, offer flexibility, performance, and offer continuity eligibility criteria described below.

7. Midwest ISO establishes offer fixity eligibility criteria for day-ahead committed units in proposed tariff section 40.3.5.4.b and for real-time must-run units in proposed tariff sections 40.3.5.5.b, 40.3.5.5.c, and 40.3.5.5.d. For day-ahead committed units to be eligible for the PV MWP, Midwest ISO proposes that day-ahead offer data must remain unchanged when submitted as real-time offer data for each interval within a given hour. For real-time must-run units to be eligible for the PV MWP, Midwest ISO proposes that offer data must be the same for each consecutive real-time must-run committed hour within a commitment period. Midwest ISO proposes that a real-time must-run unit's offer data for the first hour of a commitment period must be the same as the previous hour, if there was a commitment in the previous hour, and that its offer data for the last hour of a commitment period must be the same as the following hour, if there was a commitment in the following hour.

8. Midwest ISO proposes offer flexibility eligibility criteria for day-ahead committed and real-time must-run units in tariff sections 40.3.5.4.a and 40.3.5.5.a, which requires a generation resource to have a dispatch range greater than 1 MW and a ramp rate greater than 0 MW per minute in order to be eligible for the PV MWP. In tariff sections 40.3.5.4.c, 40.3.5.5.e, and 40.3.5.5.f, Midwest ISO proposes performance eligibility criteria for day-ahead committed and real-time must-run units. The performance criteria require both day-ahead committed and real-time must-run units to comply with Midwest ISO dispatch instructions within a specified tolerance band.

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<sup>12</sup> In proposed tariff section 1.253a, Midwest ISO defines RDD as “a special type of dispatchable import transactions submitted at an external interface that satisfy the necessary requirements, as described in the [Midwest ISO's] Business Practices Manual for Physical Scheduling. These transactions are analogous to a Generation Resource that is Real-Time Must-Run committed in every Hour, with zero commitment costs, but dispatched between an economic minimum limit of zero and an economic maximum limit.”

9. In proposed tariff sections 40.3.5.3 and 40.3.5.8, Midwest ISO outlines the offer continuity eligibility criteria.<sup>13</sup> Specifically, Midwest ISO proposes that, if a generation resource does not meet any applicable offer fixity or performance criteria in one interval of a given hour, the generation resource is not eligible for the PV MWP for the entire hour. Midwest ISO also proposes to determine PV MWP eligibility on an hourly basis, and, if a generation resource does not meet any applicable offer flexibility, offer fixity, or performance criteria during a given hour, the resource will be ineligible for the PV MWP in all subsequent hours.<sup>14</sup>

10. Midwest ISO argues that the eligibility criteria are necessary to limit the risk of anti-competitive conduct that might otherwise improperly create windfall PV MWP. Midwest ISO emphasizes that the importance of preventing gaming behavior outweighs any potential benefit provided by increasing the flexibility of the dispatchable range of a generation resource. Midwest ISO asserts that market participants seeking the PV MWP will be subject to monitoring and mitigation by Midwest ISO's Independent Market Monitor (IMM) to prevent or resolve anti-competitive behavior pursuant to section 63 of the TEMT. Accordingly, Midwest ISO proposes section 40.3.5.10 which would allow it to seek Commission approval to remove PV MWP eligibility for any generation resource that the IMM determines to be manipulating or gaming the PV MWP mechanism.

11. Midwest ISO specifies in proposed section 40.3.5.9 of the TEMT that the "costs resulting from PV MWP shall be allocated to all Market Participants *pro-rata*, based on their Load Ratio Share across the Transmission Provider Region." Midwest ISO argues

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<sup>13</sup> Proposed section 40.3.5.3 further provides that the contiguous day-ahead committed hours are referred to as the day-ahead commitment period, and contiguous real-time must-run committed hours are referred to as the real-time must-run commitment period. It provides that the contiguous hours having day-ahead commitments and/or real-time must-run commitments constitute the PV MWP contiguous commitment period. Further, with respect to real-time must-run resources, section 40.3.5.5.c provides that the offer parameters for the first hour of the real-time must run commitment period must be the same as those of the previous hour if there was a commitment in the previous hour, while section 40.3.5.5.d provides that the offer data parameters for the last hour of the real-time commitment period must be the same as those of the following hour if the generator has any commitment in the following hour.

<sup>14</sup> Because RDD generators are flexible as to their operating parameters and must follow dispatch instructions given by Midwest ISO, Midwest ISO proposes in section 40.3.5.6 that RDD generators should be eligible to receive the PV MWP provided that they maintain the same offer data for each hour of the operating day.

that the proposed mechanism would provide it with greater capability to efficiently and reliably balance supply and demand in the real-time energy market thereby benefiting the Midwest ISO system.

**D. Manual Redispatch**

12. Midwest ISO proposes section 33.8.1 of the TEMT which would allow it to manually redispatch generation resources in response to contingencies when the automated real-time energy market generation dispatch system cannot adequately maintain system reliability. This includes situations when the five-minute automated dispatch process is unable to appropriately respond or when Midwest ISO lacks sufficient operational flexibility, due to a market participant's failure to follow dispatch instructions or due to the narrow dispatch range made available by market participants' offers. Midwest ISO states that manual redispatch may be needed during transmission system conditions requiring immediate action, including to avoid or mitigate system operating limit violations or to avoid exceeding an interconnection reliability operational limit.

13. To the extent that the real-time LMP is insufficient to enable manually redispatched generation resources to completely recover incremental energy costs incurred as a result of following Midwest ISO's manual redispatch instructions, Midwest ISO proposes section 33.8.2 of the TEMT to compensate manually redispatched generation resources pursuant to certain eligibility requirements discussed above. New section 33.8.3 of the TEMT recovers the costs associated with manual redispatch according to the allocation methods specified in current sections 39.3.2, 40.2.13, and 40.3.3 and proposed section 40.3.5 of the TEMT. Midwest ISO proposes to directly assign manual redispatch costs where circumstances conclusively demonstrate that the action or inaction of one or more transmission customers or market participants, in violation of a Midwest ISO directive or Good Utility Practices, proximately caused the circumstances necessitating manual redispatch. Prior to any such direct assignment of costs, however, Midwest ISO states that it will seek Commission approval pursuant to a filing under section 205 of the FPA. Proposed section 33.8.3 also provides that manually redispatched generation resources shall be exempted from RSG distribution charges and uninstructed deviation penalties during manual redispatch periods.

14. Midwest ISO proposes new section 33.8.4 of the TEMT to relay manual redispatch instructions to the appropriate balancing authorities and market participants. Midwest ISO also proposes to post manual redispatch information on its Open-Access Same-Time Information System (OASIS), including the identity of any entities that are directly allocated production costs associated with manual redispatch events pursuant to proposed tariff section 33.8.3.

### **E. Requested Effective Date**

15. Midwest ISO states that it must make significant information system modifications in order to automate the settlement process to properly implement the proposed PV MWP. Midwest ISO estimates that from a practical standpoint software changes will take at least 60 days to develop, test and implement. Accordingly, Midwest ISO requests that the effective date of the proposed tariff sheets submitted herein be ten (10) days after Midwest ISO files with the Commission a notice that the necessary software and other systems are in place to implement the proposed provisions.

### **II. Notice of Filing and Responsive Pleadings**

16. Notice of the proposed tariff revisions was published in the *Federal Register*, 71 Fed. Reg. 59,769 (2006), with answers, interventions, or protests due on or before October 20, 2006.

17. Wisconsin Electric Power Company (Wisconsin Electric), Duke Energy Shared Services (Duke), Dynegy Power Marketing, Dynegy Power Marketing, Dynegy Midwest Generation, and Dynegy Power Corp. (collectively, Dynegy), Ameren Services Company (Ameren), Indianapolis Power & Light Company (IPL), Detroit Edison Company (Detroit), Wisconsin Public Service Corporation, Upper Peninsula Power Company, WPS Energy Services Inc., and WPS Power Development, LLC (collectively, the WPS Companies) filed timely motions to intervene and protests. FirstEnergy Solutions Corp. (Solutions) filed a motion to intervene out of time and comments.

18. American Municipal Power-Ohio, Inc., Consumers Energy Company, Illinois Municipal Electric Agency filed timely motions to intervene.

19. Midwest ISO filed an answer to the protests of the September 29 Filing. Ameren filed a response to Midwest ISO's answer.

### **III. Discussion**

#### **A. Procedural Matters**

20. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2006), the timely unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. The Commission will also grant Solutions' late-filed motions to intervene given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay.

21. Rule 213(a)(2) of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.213(a)(2) (2006), prohibits an answer to a protest and/or answer unless otherwise ordered by the decisional authority. We will accept the answers of Midwest ISO and Ameren because they have provided information that assisted us in our decision-making process.

## **B. Price Volatility Make-Whole Payments**

### **1. Intervenors' Concerns**

22. Most commenters are generally supportive of the PV MWP but express concern primarily that its eligibility criteria inappropriately limit its application. Comments address the underlying rationale of the program and of eligibility criteria, and the interaction of those criteria with deratings, fuel issues, and other operational issues. Other issues raised include the applicability of the program when a unit is dispatched down in the real-time market, and the potential for seams issues.

23. Regarding the program's underlying rationale, IPL argues that a broader solution is necessary, including modification of the offer curve template to include more unit characteristic information and implementation of fundamental market software changes. Duke, IPL, and Wisconsin Electric express concern that the PV MWP process will prove ineffective in eliciting more flexible offers, but will still cause PV MWP costs to be uplifted to market participants. Wisconsin Electric requests that the Commission require Midwest ISO to establish a 60-day trial period and file a report describing any unintended consequences of implementation and proposals to address them.

24. Several intervenors contend that the proposed PV MWP eligibility criteria designed to prevent market manipulation are overly rigid and (1) lack sufficient support and examples illustrating problems; (2) should be more tailored for gaming; and (3) are redundant with current market monitoring and mitigation tools which are sufficient to protect against market manipulation. For example, Ameren states that the rigidity of Midwest ISO's continuity eligibility criteria amounts to a "sledge hammer" approach to mitigating gaming, asserting that the Commission has rejected proposals that would result in over-mitigation where an identified problem was unlikely to occur or would only occur infrequently.<sup>15</sup> To prevent gaming, Ameren and Dynegy recommend that Midwest ISO measure a unit's losses, and thus the need to provide make-whole payments, against a

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<sup>15</sup> *Citing Midwest Indep. Transmission Sys. Operator, Inc.*, 109 FERC ¶ 61,157 at PP 219-221 (2004) (November 8 Order).

unit's reference price, rather than its incremental energy cost. Solutions suggests that the IMM should establish procedures and measures to identify suspected gaming activity.

25. Some comments focus on the interaction between the eligibility criteria and derated units. Ameren and Duke claim that the offer fixity and continuity eligibility criteria unfairly render unexpectedly derated day-ahead committed units ineligible for the PV MWP.<sup>16</sup> Ameren notes that the continuity requirement indicates that, because a derated unit is ineligible in one hour, such a unit would also be ineligible for the PV MWP in all subsequent hours on that day. Thus, Ameren and Duke argue that, if the generator is repaired and becomes available, the unit won't have the incentive to offer additional capacity during the remainder of the day (as all of the offer would lose the PV MWP for the rest of the day), and will likely offer inflexibly. Duke concludes that a derating either is withholding contrary to current anti-market manipulation rules or it is not, and should be eligible for PV MWP.

26. Regarding real-time committed must-run generators, Ameren argues that the offer fixity requirement unfairly renders ineligible for the PV MWP must-run generators that return to service after an outage ahead of schedule. Because must-run units generally must slowly add to their dispatch range following an outage, it contends that following a unit derate, such must-run units cannot retain identical offer data for each consecutive real-time committed hour within a given commitment period, as required.

27. Dynegy argues that there are valid reasons to change a generator's offer in real-time, including changes in fuel costs from day-ahead to real-time because of changes in both pricing and availability and fuel nominations due to penalties that are not covered by day-ahead pricing resulting from differences between real-time dispatch versus day-ahead schedules. Dynegy also contends that changes in fuel burned, such as dual fuel units switching to the alternate fuel, can necessitate changes to the real-time offer. As such, it believes that it is unfair that the generator loses PV MWP payments.

28. Several intervenors argue that generating units' physical operating characteristics are not accommodated, when ineligibility in one interval makes a unit ineligible for the hour or all subsequent hours, as the continuity eligibility criteria require. They argue that the offer fixity eligibility criterion unfairly excludes day-ahead committed generators that

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<sup>16</sup> A derating exists whenever a generator is limited to some output less than its maximum capacity. The derating starts once the generator is not capable of operating at full capacity and ends when the equipment causing the derating is returned to service. The available capacity is based on the output of the generator and not on dispatch requirements.

must adjust their real-time offer data due to physical operating limitations. Detroit and Dynegy contend that generation resources should not be ineligible for the PV MWP during an hour for failure to satisfy the performance eligibility criteria, which require generation resources to follow Midwest ISO's dispatch instructions within a specified tolerance band during a single interval. Detroit avers that units may need to make real-time offer adjustments due to changes in mill points or to a transition from one to two boiler feed pump operation. Further, Dynegy argues that units may need to adjust their ramp rates, including ramp rate blocks that accommodate auxiliary equipment or manually established operator limits on unit ramping. Dynegy also states that units that are transitioning from one operating range to another, have multiple operating ranges with different characteristics, or have exclusion zones (or zones of instability that an operator must manually ramp through) may be unable to maintain a consistent ramp rate. Dynegy asserts that generators may have difficulty complying with dispatch instructions when Midwest ISO issues late instructions, or does not provide them at all. Ameren cites to timing issues associated with putting mills or other equipment back into service in opposing fixity eligibility criterion for day-ahead committed units. It also contends that a real-time must-run unit must change its offer parameters because it must ramp from zero to some minimum dispatch level at the beginning of a given commitment period.

29. Ameren argues that the offer fixity eligibility requirement for day-ahead committed units creates an incentive for generators to offer less flexibly in the day-ahead market and avoid changing real-time offer parameters when operationally necessary, resulting in price spikes, increased divergence between day-ahead and real-time prices, and reliability issues due to Midwest ISO's reliance on inaccurate offer data. Ameren asserts that Midwest ISO should provide incentives to elicit real-time offers of greater capacity or flexibility versus day-ahead offers. Ameren also suggests that Midwest ISO recognize generators' operational issues and provide a bandwidth associated with their actual operations.

30. Ameren, Dynegy, and Solutions also argue that eligibility for the PV MWP should be evaluated on an hourly basis to allow a unit that is ineligible in one hour to potentially be eligible in subsequent hours, if it later returns to its scheduled offer parameters and satisfies the other eligibility criteria. Ameren, Wisconsin Electric, and WPS Companies argue that the continuity eligibility criteria should be consistent with both the day-ahead and real-time RSG settlement procedures in which an ineligible hour within a commitment period does not make subsequent hours ineligible for make-whole payments.

31. WPS Companies argues that Midwest ISO should compensate generation resources for "replacement energy charges" if the generator is manually dispatched down below its cleared day-ahead energy market schedules and real-time LMPs are higher than

the day-ahead LMPs. Wisconsin Electric recommends that the Commission consider whether Midwest ISO's September 29 Filing aligns with corresponding processes at PJM and avoids the inadvertent creation of seams that would hinder the development of a Joint and Common Market.

## 2. Responsive Pleadings

32. Midwest ISO contends that the proposed PV MWP will be effective and provide generation resources with a financial incentive to make more flexible offers to give a wider dispatch range, facilitating better unit commitments. In response to the request for a 60 day trial period, Midwest ISO advises against giving the program little chance to gain market traction, because market participants may offer inflexibly during the brief trial period in order to create the impression that their offers will remain inflexible unless the Commission permits offer parameter changes. Midwest ISO states that it is amenable to reporting to the Commission the results of the PV MWP program after the first year of its implementation and will refine the rules and procedures as appropriate as it gains more experience administering the PV MWP provisions proposed in the instant filing.

33. Midwest ISO states that none of the comments have refuted that there are potential PV MWP gaming opportunities, which thus require the eligibility criteria. Midwest ISO argues that utilizing the eligibility criteria to prevent gaming activity is more appropriate than after-the-fact mitigation (*e.g.*, using the market behavior rules administered by the IMM and the Commission's civil penalty authority). Specifically, Midwest ISO contends that, because it is difficult to predict potential methods of abuse until the program is implemented, relying solely upon the market behavior rules and the Commission's civil penalty authority or developing an additional mitigation plan in advance could permit unmitigated gaming activity. Furthermore, Midwest ISO states that the protesters have not proposed any specific measures to deter the gaming examples it provided, or that would readily detect other potential gaming. Midwest ISO suggests more complicated eligibility requirements could preclude automation of such requirements, and any possible gains could be outweighed by the cost of design and implementation. Midwest ISO concludes that the proposed eligibility criteria are the simplest approach to prevent potential PV MWP gaming.

34. With respect to unit derates, Midwest ISO argues that a unit derate is not necessarily a valid reason for a unit to change its offer parameters and violate the offer fixity requirement in real-time. Because many derates involve maintenance events that are readily forecasted, Midwest ISO contends that such derates can be appropriately reflected in a unit's day-ahead and real-time offers without violating the offer fixity requirement.

35. Midwest ISO notes it has not identified any seams issues, particularly in relation to PJM, that could be caused by the proposed PV MWP. Moreover, it says that it is unaware of comparable make-whole payments in other RTOs relating to what the PV MWP seeks to address. Midwest ISO adds that none of the protesters or intervenors has mentioned any seams issues.

36. In its answer, Ameren argues that the proposed eligibility requirements will undermine the PV MWP's goal of correcting existing market inefficiencies, because they are overly restrictive. It asserts that Midwest ISO has not presented actual evidence that gaming has or is likely to occur, or that current market behavior rules and monitoring by the IMM will be inadequate. It argues that it is counterproductive to implement the eligibility criteria if they also prevent market participants from receiving the PV MWP. Ameren claims that compensating generators based on their costs (or reference levels), rather than their energy offers, removes the ability of generators to over-generate in order to extract additional PV MWP during the ramp down period, because the PV MWP would only allow recovery of costs, not profit. Ameren further contends that the Commission should direct Midwest ISO to work with stakeholders to amend the continuity criteria, as they are overly restrictive.

### **3. Commission Determination**

37. We find the PV MWP will be an important mechanism to create a financial incentive for generation resources to make more flexible offers and provide Midwest ISO with a wider dispatch range to optimize unit commitments and dispatch, and therefore will approve the proposal. Midwest ISO has taken an important step by proposing the PV MWP to provide an incentive to market participants to provide greater offer flexibility, thus appropriately addressing price volatility in the market.

38. While we believe the PV MWP will produce an incentive for market participants to offer flexibly into the market, we cannot discern the full extent of the program's potential effectiveness until it is implemented. It is in the interests of both market participants and Midwest ISO that the PV MWP procedures operate in a manner that encourages market participants to provide the offer flexibility needed for the market to operate efficiently at the lowest possible cost. We thus agree with Midwest ISO that it is in the best interests of all market participants to implement this new program in a somewhat conservative mode to monitor its results before attempting to expand it to cover additional operational circumstances as the protesters request.

39. We find the eligibility criteria are required to address the potential PV MWP gaming risks identified by Midwest ISO to prevent such activity from occurring. We agree that there are a number of ways that market participants could potentially game the PV MWP process to increase their make-whole payments. Such gaming activity could

inappropriately increase payments to individual market participants, thus increasing overall market costs, without providing additional offer flexibility.

40. We will require that, as Midwest ISO acquires operational experience with the PV MWP program, it should endeavor to loosen the eligibility criteria to encourage greater participation without undermining their effectiveness at preventing gaming of PV MWP payments. We also encourage Midwest ISO to explore alternate ways to handle some of these issues raised in the comments.

41. We agree with Midwest ISO's answer that a 60-day trial period provides insufficient time to test and evaluate the procedure, because market participants may need more time to determine whether and how to adjust their current offer behavior. We will accept Midwest ISO's offer to report to the Commission the results of the PV MWP program after the first year of its implementation and that it will refine the rules and procedures as appropriate as it gains more experience administering the PV MWP provisions proposed in the instant filing.

42. We will require Midwest ISO to file a report no later than 12 months from the effective date of the PV MWP that discusses the effectiveness of the program, identifies any problems, and addresses other issues such as alternative ways of meeting intervenor concerns on the issues, as outlined below. If Midwest ISO determines that there are modifications that would improve the program, we encourage Midwest ISO to file such modifications with the Commission, pursuant to section 205 of the FPA. As a part of this report, we will direct Midwest ISO to examine and explore alternate ways of addressing whether (1) the eligibility requirements effectively address gaming; (2) ineligibility in hours subsequent to a unit derate under the continuity eligibility requirement undermines the efficacy of the PV MWP; (3) whether the treatment of changes in fuel costs, nominations, and the fuel burned undermines the efficacy of the PV MWP; (4) generation units should be exempt from the offer fixity requirement when providing additional offer flexibility or unit capacity to the market (while considering any associated gaming risks); (5) must-run units should remain eligible when ramping up at the beginning and ramping down at the end of their commitment period; (6) generation resources should remain eligible when they have difficulty complying with late or incomplete dispatch instructions; and (7) generation resources rendered ineligible due to their physical operating characteristics (including ramping limitations) should be accommodated by the proposed PV MWP. We note that in certain circumstances the program may result in a situation where the compensation to the generator may exceed or not be reflected in the real-time market price signal (RT LMP). In these situations, the LMP will not provide the appropriate price signal for investment in demand response, generation or transmission. Therefore, we further direct Midwest ISO to examine and explore ways of ensuring transparency associated with the PV MWP so that investors in generation,

transmission, and demand response receive appropriate price signals. To the extent that Midwest ISO considers proposing the release of PV MWP information to address transparency, it should only consider proposals that make such information available in a manner so as to preclude disclosure of proprietary offer information.

43. In order to implement the proposal, we direct Midwest ISO, in its compliance filing due within 30 days after the issuance of this order, to modify Module D of the TEMT to ensure that potential manipulation of the PV MWP is clearly covered by the IMM's market monitoring and mitigation procedures. While we do not believe that monitoring by the IMM alone will be sufficient to prevent gaming (and thus we are requiring the eligibility criteria), we do expect the IMM to monitor for PV MWP gaming activities as a part of its market monitoring and manipulation duties defined in the tariff.<sup>17</sup>

44. We also direct Midwest ISO to define the term incremental energy cost in the TEMT, and also to revise section 40.3.5.1<sup>18</sup> such that it is consistent with PV MWP for dispatches both up and down in the real-time energy market in its compliance filing due within 30 days of the issuance of this order. Other sections of the proposal already provide for such compensation, while section 40.3.5.1 does not appear to do so. For example, section 40.3.5.7 allows for PV MWP in an eligible hour "during which the unit's cost of following dispatch exceeds the value of the payment for following dispatch." This would include circumstances when a unit is dispatched down and would need a make-whole payment so as not to be hurt by that decrease in dispatch. Likewise, schedule 27 appears to allow for such payments including in circumstances when the unit is dispatched down.

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<sup>17</sup> We note that sections 40.2.3.b.iii and 40.2.3.b.iv of the TEMT require that the economic minimum and economic maximum component of a generator's offer "shall be based on the actual capability of the Resource to operate on its Offer curve and may not be used to withhold a portion of the Capacity of a Resource from the Real-Time Energy Market."

<sup>18</sup> Proposed section 40.3.5.1 of the TEMT provides the rationale for the PV MWP. It states that the mechanism protects a generation resource from the financial impact of being dispatched in circumstances under which the generation resource is unable to fully recover its incremental energy cost (not defined) from the hourly real-time LMP. It continues stating that the PV MWP provides a market participant with a method to recover incremental energy costs incurred in following dispatch instructions that are not otherwise collected from the real-time LMP.

45. With respect to potential seams issues, PJM does not have a comparable make-whole payment mechanism that deals with the kind of real-time LMP volatility that the proposed PV MWP seeks to reduce. PJM's Balancing Operating Reserve Credits program is more akin to Midwest ISO's RSG payments than to the PV MWP.<sup>19</sup> In fact, PJM's website indicates that the PJM's Market Working Group is currently discussing issues similar to those presented in the instant proceeding. It does not appear that the proposed PV MWP will create any seams issues. If such seams issues are revealed with the experience of administering the PV MWP, Midwest ISO should indicate such concerns in the report due no later than 12 months after the effective date of the PV MWP.

### C. Manual Redispatch

#### 1. Intervenors' Concerns

46. WPS Companies argue that assignment costs for manually redispatched units should not include the start-up cost, because the redispatched units have already been started-up, and those costs should not be paid twice. Wisconsin Electric and WPS Companies argue that generators should be exempt from uplift charges (RSG and UDP) for the period of time covering the transition from its regular dispatch instructions to the manual redispatch instructions and when returning to its regular dispatch instructions after satisfying the manual redispatch instructions, depending on whether the generator was incremented or decremented. Ameren argues that such units should be held harmless in a similar manner to those following security constrained economic dispatch (SCED) generated dispatch instructions. Regarding proposed tariff section 33.8.2, Wisconsin Electric contends that, for settlement purposes, Midwest ISO should consider partial hour redispatch as a whole hour.

47. Wisconsin Electric also recommends that only Midwest ISO direct redispatch instructions to generator operators. Wisconsin Electric claims that the additional use of a balancing authority creates potential communications and settlement problems and may make it difficult to retrace a transaction to determine who said what and when after settlement. It also argues that Midwest ISO should clarify or provide a mechanism to communicate information regarding manual redispatch to affected market participants and to the day-ahead real-time (DART) system to reduce the potential for disputes and for research to be required after the fact.

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<sup>19</sup> PJM Interconnection, LLC, *Operating Reserve Revised Business Rules* (Apr. 2006), available at <http://www.pjm.com/committees/working-groups/rmwg/rmwg.html#2>.

48. Wisconsin Electric argues that proposed tariff section 33.8.2.a should specify that the real-time RSG make-whole payment tolerance band test for determining whether a resource is operating within dispatch will be forgiven during periods of manual redispatch. Wisconsin Electric also requests clarification regarding whether in section 33.8.2.a, the uninstructed deviation exempt flag will be set to “yes” during the redispatch period. Additionally, Wisconsin Electric claims that proposed tariff section 33.8.2.b should be amended to permit a generation resource to make changes to the no-load offer.

49. Wisconsin Electric suggests that Midwest ISO should define compensation for load shedding such that any load serving entity that is instructed to shed load during a period for which it has a day-ahead schedule should be exempt from real-time RSG First Pass Distribution Charges<sup>20</sup> during the load shed period, which should include the time for the load to return to pre-load shed levels.

## **2. Responsive Pleadings**

50. Midwest ISO agrees with the observation that the compensation for manual redispatch should exclude start-up costs. Midwest ISO also notes that no-load costs should be removed as well and states that compensation should include only incremental energy cost.

51. Midwest ISO also clarifies that it is always the entity that issues manual redispatch instructions, but occasionally, under established communication protocols, conveys such instructions to Generation Resources through Balancing Authorities. In response to the query of Wisconsin Electric, Midwest ISO clarifies that during the manual redispatch period, Real-Time RSG will be forgiven, and the UDP exempt flag will be set to “yes.”

52. Midwest ISO claims that Wisconsin Electric’s suggestion to include compensation for load shedding is beyond the scope of this proceeding and would be more appropriately addressed in proceedings pertaining to Maximum Generation Emergency.

## **3. Commission Determination**

53. We believe it is important that generators not be penalized for complying with manual redispatch instructions. This includes exemption from UDP and RSG uplift charges, as well as exemption from Real-Time RSG and PV MWP tolerance band tests for all time periods in which the generator is starting, implementing, or completing a

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<sup>20</sup> TEMT at section 40.3.3.a.

manual redispatch instruction. We believe this will allow units to be held harmless in a similar manner to those following normal SCED dispatch.

54. Midwest ISO indicates that start-up and no load costs are covered by RSG payments rather than PV MWP payments, thus these costs will not be counted a second time. We believe it is appropriate that the proposed PV MWP, as applied to manual redispatch, be restricted to the recovery of incremental energy costs, as long as generators can recover start-up and load costs through RSG payments. Therefore, section 33.8.2.b should not be amended to permit a generation resource to make changes to the no-load offer.

55. Midwest ISO should clarify in the compliance filing ordered herein that they have the capability to handle partial hour dispatch. Manual redispatch periods can last various amounts of time, including less than an hour. Midwest ISO should demonstrate how they compensate generators for various time periods that can occur in the compliance filing ordered in this proceeding.

56. We agree that Midwest ISO, as Reliability Coordinator, is the entity that issues manual redispatch instructions under its established communication protocols. Midwest ISO should clarify in the compliance filing that they have a mechanism to communicate manual redispatch information to the system that calculates RSG charges to prevent duplication charges. We are satisfied with Midwest ISO's explanation that it will always issue manual redispatch instructions.

57. We agree with Midwest ISO that compensation for load-shedding is beyond the scope of this proceeding. Neither manual redispatch nor PV MWP payments are directly related to load shedding procedures. Accordingly, we will not address such issues here.

#### **D. Cost Recovery for PV MWP and Manual Redispatch**

##### **1. PV MWP**

##### **a. Intervenors' Concerns**

58. Cost recovery for the PV MWP is proposed to occur *pro rata* on a Load Ratio Share basis across Midwest ISO Region. IPL takes issue with this proposed cost recovery. IPL begins with the premise that the September 29 Filing is aimed at addressing the real-time RSG problem and compares the cost recovery of real-time RSG charges and proposed PV MWP. IPL points out that while real-time RSG charges are recovered through direct assignment based on cost-causation principles, the proposed PV MWP will be socialized across the region. IPL asserts that this difference will reallocate the make-whole payment burden by allocating a share of PV MWP charges to parties that

did not previously face a significant cost burden associated with real-time RSG charges. IPL further claims that this outcome is inconsistent with cost-causation principles because Midwest ISO would increase the costs for parties that are blameless, while lessening the cost impact on the parties causing the costs.<sup>21</sup> Ameren and Duke articulate similar cost-causation arguments and assert that PV MWP costs should be allocated in the same manner as RSG costs.<sup>22</sup> Wisconsin Electric argues that PV MWP costs should be included in the calculation of the real-time RSG first pass distribution rate.

59. IPL also states that Midwest ISO has provided insufficient evidence regarding the interplay between RSG and PV MWP cost allocations and has not demonstrated that the proposed PV MWP plan will lower the overall make-whole payment burden and submits that these cost allocation effects are sufficient to warrant rejection of Midwest ISO's September 29 Filing.

60. Wisconsin Electric states that it is unclear whether the cost allocation is based on the time during the period of redispatch, or whether such allocation is similar to Schedule 10 billing determinants, monthly or annual MW-hours of transmission service.

#### **b. Responsive Pleadings**

61. Midwest ISO argues that it is appropriate to allocate the cost of PV MWP to all load on a load ratio share because there is a benefit to all load that results from increased generator offer flexibility, and savings do not go only to those that pay for units committed during the Reliability Assessment Commitment. Price volatility that necessitates PV MWP, says Midwest ISO, is most commonly due to total ramp restrictions of *all* generation resources within Midwest ISO's market, and not just a few generating units.

62. Midwest ISO's answer states that while in an RSG context it is feasible to determine specific parties whose generation or load deviated from Day-Ahead Schedules so as to cause commitment of additional units by Midwest ISO (and incurrence of RSG

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<sup>21</sup> IPL also postulates that while Midwest ISO would claim that direct assignment is not possible, Midwest ISO should not be permitted to avoid direct assignment of PV MWP costs due to software limitations, noting that the software for the entire PV MWP has not been developed yet.

<sup>22</sup> See *Transmission Access Study Policy Group v. FERC*, 225 F.3d 667, 707-08 (D.C. Cir. 2000), *aff'd sub nom. N.Y. v. FERC*, 535 U.S. 1 (2002); *Pac. Gas & Elec. Co.*, 113 FERC ¶ 61,084 at P 63 (2005).

charges), it is not as easy to determine specific causes of the price volatility that cause the inflexibility of real-time offers, necessitating this filing. Such causes, says Midwest ISO, do not necessarily involve the behavior or misbehavior of individual market participants.

63. Ameren's response submits that while it may be the case that a widespread market dysfunction led to the need for increased generator offering flexibility and the proposed PV MWP mechanism, Ameren contends that their costs can be recovered on the same basis as RSG costs. Ameren argues that it is incorrect to say that "all load benefits" since load that clears in the day-ahead market is not exposed to real-time RSG charges and the benefits of flexibility. Rather it is only the real-time load that benefits, and it is only this load that is allocated RSG costs. Thus, Ameren argues, real-time load should be allocated PV MWP costs.

### c. Commission Determination

64. We disagree with the premise that this proposal is designed solely, or even primarily, to reduce RSG costs. Market participants who transact in the real-time market should see a reduction in price volatility due to existing on-line resources providing additional flexibility in range and ramp rate as a result of this proposal. Midwest ISO will have additional choices in resolving congestion and thus, it is likely that more efficient solutions will be implemented. Market participants that have day-ahead commitments, as well as surplus capacity, benefit from being able to submit eligible offers in real-time for that surplus capacity,<sup>23</sup> and if cleared and operated in accordance with Midwest ISO instructions, knowing that they will be made whole for their costs. Finally, all market participants will receive reliability benefits from PV MWP because generation made available through flexible offers in real-time will more reflective of unit capabilities; this in turn, means that Midwest ISO will be better able to manage frequency fluctuations.

65. As to the cost-causation arguments made here, the price volatility necessitating this filing arises from total ramp rate restrictions of all generation resources transacting in Midwest ISO's real-time market and not select generating units. Regarding the means of cost recovery for RSG real-time payments (direct assignment) that is suggested by protesters, we note that these parties do not propose a method for identifying the specific sources of price volatility that cause inflexible real time offers, which in turn cause the need for PV MWP. The aim of this proposal is to remove impediments that exist for all

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<sup>23</sup> Market participants still bear financial risk under PV MWP if their offers are below the marginal costs for their generation resource.

market participants to offer flexibly. This proposal seeks to benefit all market participants.

66. Finally, we believe that cost allocation would not be based on Schedule 10 billing determinants but would instead be based on market participants transacting in the market, cleared either day-ahead or real-time, on the day in question. We will direct Midwest ISO to either: (1) indicate how the proposed language provides this information and modify section 40.3.5.9 to reference this information accordingly, or (2) modify section 40.3.5.9 to specify the mechanics of cost allocation. To the extent that cost allocation would be based on Schedule 10 billing determinants, Midwest ISO must further support such proposed means of cost allocation.

## **2. Manual Redispatch**

67. Under proposed section 33.8.1, Circumstances Requiring Manual Redispatch, generation resources may be manually redispatched only in circumstances where automated Real-Time Energy Market generation dispatch procedures are inadequate to maintain reliability. Such circumstances arise when the five-minute dispatch process utilized in Real-Time Energy Market Operations is unable to respond timely to maintain reliable operations, or when the Bids or Offers of Market Participants, or their failure to follow Dispatch Instructions, result in insufficient operational flexibility for Midwest ISO to maintain reliable operations.

68. Under proposed section 33.8.2, Compensation for Manual Redispatch, an eligible generator that receives and complies with Manual Redispatch instructions, and is not otherwise compensated through Real-Time Revenue Sufficiency Guarantee payments, will be compensated so as to fully recover its incremental energy cost through PV MWP.

69. Proposed section 33.8.3, Manual Redispatch Cost Recovery, states that cost recovery for manual redispatch payments is allocated based upon the methods specified in sections 39.3.2, 40.2.13, 40.3.3 and 40.3.5. Regarding the last referenced section, costs for PV MWP are covered *pro rata*, on a load ratio share basis across Midwest ISO region.

70. Costs for Manual Redispatch may also be directly assigned, under proposed section 33.8.3, to “individual Transmission Customer(s), or a Market Participant(s) owning any Generation Resource(s), where circumstances conclusively demonstrate that the action or inaction of one or more such Transmission Customer(s) or Market Participant(s), in violation of a Transmission Provider directive or in contravention of Good Utility Practices, proximately caused the circumstances necessitating Manual Redispatch,” provided that prior to such direct assignment Midwest ISO must receive

approval from the Commission pursuant to a filing under section 205 of the Federal Power Act.

**a. Intervenors' Concerns**

71. Wisconsin Electric suggests that instead of the string of cross references to tariff sections, proposed section 33.8.3 should specify which cost allocation methods will be used.

72. Regarding proposed section 33.8.3, Wisconsin Electric argues that Midwest ISO should specify the standard for a conclusive demonstration that a market participant's behavior has proximately caused the circumstances necessitating manual redispatch. Wisconsin Electric also suggests that the phrase "in violation of a Transmission Provider directive or in contravention of Good Utility Practices" should be changed to "in violation of a Transmission Provider directive *and* in contravention of Good Utility Practices." Duke also asserts that the cost causation standards are not clear enough to make violations self-evident at the time they occur.

73. Ameren and Dynegy argue that any market participants directly assigned the costs of manual redispatch pursuant to proposed section 33.8.3 should be made aware of this fact, if operational factors permit. Duke argues that Midwest ISO should attempt to notify the transmission customer to provide an opportunity for the transmission customer to cure the behavior leading to manual redispatch. Duke further requests that the Commission should consider not only cost causation, but also the extent to which the market participant knew, or should have known, of its violation, and the amount of time, if any, it had to appropriately alter its behavior, consistent with the Commission's Enforcement Policy Statement.

74. Dynegy requests that Midwest ISO clarify that it will assign costs to generators after the fact via a section 205 filing to the Commission, pursuant to proposed tariff section 33.8.3, only if a generator does not respond to a request for manual redispatch from Midwest ISO dispatchers.

**b. Responsive Pleadings**

75. Midwest ISO agrees with Wisconsin's Electric's assertion that with regard to the potential for direct assignment of Manual Redispatch costs, the demonstrated action or inaction must have been "in violation of a Transmission Provider directive and in contravention of Good Utility Practice."

**c. Commission Determination**

76. We agree with Wisconsin Electric and find that the cost recovery language in proposed section 33.8.3 is inadequate. Referencing a series of tariff provisions and not explaining the cost allocation methods to be used is unclear and confusing. Moreover, it appears that three references could create confusion in that they apply in part to the RSG program. We will require that Midwest ISO describe in section 33.8.3, the cost allocation methods to be used for Manual Redispatch, and to the extent that Midwest ISO believes it is appropriate to continue to reference sections 39.3.2, 40.2.13, and 40.3.3, the tariff language should explain what subsections or substantive content those provisions are applicable in section 33.8.3. Midwest ISO is directed to make these changes in the compliance filing specified in this order.

77. Regarding concerns on the language related to direct assignment of manual redispatch costs, proposed tariff language at section 33.8.1 addresses the circumstances that can require manual redispatch. Behaviors by market participants that can lead to manual redispatch include their bids or offers, or their failure to follow dispatch instructions, either of which results in insufficient operational flexibility for Midwest ISO to maintain reliable operations. We agree with intervenors' assertions that if operational factors permit, Midwest ISO should attempt to inform an entity and provide an opportunity for that entity to cure its behavior that can lead to manual redispatch. We will require that Midwest ISO modify its proposed tariff language regarding this finding in the specified compliance filing.

78. We understand Dynegy's suggestion to mean that any response, even a negative response, would shield a generator from potential direct assignment. We disagree that such a generator should be shielded from financial risk of direct assignment merely because it communicates its rejection to Midwest ISO.

79. We agree that to be directly assigned the manual redispatch costs, an entity's actions or inactions, proximately causing the circumstances giving rise to the manual redispatch costs, should both be in violation of the Transmission Provider's directive and in contravention of Good Utility Practice. Thus, we will direct Midwest ISO to make this change to its tariff in the aforementioned compliance filing.

**E. Opportunity Costs**

**1. Intervenors' Concerns**

80. Ameren notes that proposed section 40.3.5.1 indicates that the PV MWP does not include any compensation for lost opportunity costs based on avoided real-time LMP revenues. Ameren argues that generation resources that are harmed by positive price

spikes through lost opportunity costs should receive compensation similar to that afforded to generators harmed by negative price spikes through the PV MWP. Ameren argues that Midwest ISO should base the PV MWP on the actual costs of generation resources, which include the generator's forgone opportunity costs, to avoid creating a disincentive to flexibly offer resources.

## **2. Responsive Pleadings**

81. Regarding lost opportunity costs, Midwest ISO states in its answer that it is not feasible for the PV MWP to include compensation for lost opportunity costs. Midwest ISO adds that such costs are highly speculative, and as such are extremely difficult to calculate. It says that to accurately calculate lost opportunity costs, one would need to calculate hypothetical LMPs – those that would have resulted if the unit(s) in question did not respond to the price signal that was calculated and sent it in the ex ante dispatch, and instead calculate the LMP that would result from dispatching other units to make up for such a unit's lack of response.

82. Ameren's response states that lost opportunity costs are legitimate costs of providing the underlying service, as the generator will forego the opportunity to make other sales and therefore the costs should be recoverable. Thus recovery of lost opportunity costs is necessary to provide the appropriate incentives to offer flexibly.

## **3. Commission Determination**

83. Ameren has not explained how such opportunity costs would be incurred or how it could be calculated. Ameren does not suggest how hypothetical LMPs can be determined based on the generation resource in question not responding as it did and based on other units being dispatched in the alternative. Accordingly, Ameren has not demonstrated that lost opportunity costs, are appropriate in this instance.

## **F. Process Arguments**

### **1. Intervenor's Concerns**

84. Wisconsin Electric argues that Midwest ISO made no attempt to engage a stakeholder process to present and discuss the completed details of the September 29 Filing. Specifically, Wisconsin Electric claims that, while a draft was sent to the Tariff Working Group prior to filing, there was no interactive exchange during which the details of the filing could be discussed.

85. IPL and Wisconsin Electric request that the Commission convene a technical conference to examine Midwest ISO's September 29 Filing. IPL argues that there is

ample time to convene a technical conference, because Midwest ISO has not yet developed the necessary PV MWP software changes. IPL contends that a technical conference is an appropriate forum for the Commission to examine whether, instead of the PV MWP mechanism, a more fundamental software fix addressing problems with Midwest ISO's security-constrained unit commitment software and its manual out-of-economic-merit process that originally necessitated RSG payments. Wisconsin Electric suggests that a technical conference could examine the details of the proposed PV MWP mechanism and real-world examples of its application in order to demonstrate whether the PV MWP will be of value to the Midwest ISO market.

86. Finally, Wisconsin Electric suggests that the manual redispatch proposal contained in the September 29 Filing can be more efficiently implemented through a compliance filing process, rather than being tied to the relatively more complex approval of the PV MWP.

## **2. Responsive Pleadings**

87. Addressing protestors' concerns regarding the need for an additional stakeholder process or technical conference, Midwest ISO notes that the central concepts of the proposed PV MWP and Manual Redispatch proposals were discussed and voted on at meetings of the Market Subcommittee (MSC) and the Advisory Committee and stakeholders, during those processes, had ample opportunity to provide feedback to Midwest ISO. Midwest ISO also argues that there is no need for a technical conference in this proceeding because there is enough legal and factual basis on record for the Commission to resolve and act on the proposal for PV MWP and Manual Redispatch.

88. In its response to Midwest ISO's answer, Ameren states that the Commission should direct Midwest ISO to work with stakeholders to develop a better solution.

## **3. Commission Determination**

89. The Commission agrees with Midwest ISO that there is no need for an additional stakeholder process or technical conference at this time in the proceeding. The Commission finds that Midwest ISO has taken adequate measures to ensure that stakeholders have had ample opportunities to discuss and contribute to the proposed revisions through a variety of forums, including the MSC, a Tariff Working Group, and an Advisory Committee. As Midwest ISO states, during an April 6, 2006 MSC meeting, it introduced proposals intended to encourage Market Participants to make more flexible offers. Additionally, on April 12, 2006, after reviewing the recommendations of the MSC, a special meeting of the Advisory Committee approved the MSC's proposal to amend the TEMT to provide for the PV MWP and MSC's related proposal to use the PV MWP mechanism to compensate manually redispatched generation resources. At both

the MSC and Advisory Committee meetings, stakeholders voted to approve the proposals regarding manual redispatch and the PV MWP. Accordingly, the Commission finds that these forums provided sufficient opportunity for stakeholder participation and therefore rejects protestors' requests to hold an additional stakeholder process or technical conference.

90. We note that Wisconsin Electric's concerns about the need to split off manual redispatch are moot, as both PV MWP and manual redispatch will be dealt with in the same compliance filing.

### **G. TEMT Clarifications**

#### **1. Intervenors' Concerns**

91. Wisconsin Electric notes that proposed section 40.3.5.1 states, in part, "The Price Volatility Make-Whole Payment ("PV MWP") mechanism protects a Generation Resource from the financial impact of being dispatched in circumstances under which the Generation Resource is unable to fully recover its incremental energy cost from the hourly Real-Time LMP during the period the Transmission Provider has directed the Generation Resource to operate." Wisconsin Electric suggests adding to the end of the sentence "*via* the 5-minute dispatch process used in the Real Time Energy Market Operations. Compensation for Manual Redispatch is as stated in section 33.8," to clarify the rationale for the proposed PV MWP.

92. Wisconsin Electric notes that proposed sections 40.3.5.4 and 40.3.5.5 that list offer parameters specify "Ramp Rate Up/Ramp Rate Down." Wisconsin Electric recommends that Midwest ISO submit a correction or explanation to the Commission, because offer parameters include regulation up and down, but not ramp rate up or down.

93. Wisconsin Electric recommends that, when Midwest ISO refers to the "Offer" in several proposed TEMT provisions related to the PV MWP, Midwest ISO should specify whether it is referring to a real-time or day-ahead offer.

94. Wisconsin Electric observes that, while proposed sections 40.3.5.4 and 40.3.5.5 require that offered limits have a dispatch range of greater than one MW, the transmittal letter and supporting testimony in the September 29 Filing specify that the range must be 2 MW. Wisconsin Electric requests that the Commission require Midwest ISO to explain this discrepancy.

95. WPS Companies requests that the Commission order Midwest ISO to clarify or modify: (1) the reference to "Instructions," in Sheet 330B, line 2 because the term should

not be capitalized unless Midwest ISO defines the term, and (2) the repetitive period after section “a..” in proposed section 33.8.2.

## **2. Responsive Pleadings**

96. Midwest ISO states in its answer that it will make typographical and other corrections proposed by the some of the intervenors. Specifically, regarding Wisconsin Electric’s concerns, Midwest ISO has stated that it will make the following changes: (1) regarding Tariff Sheet No. 587F, Offer parameter no. 6, and Tariff Sheet No. 587J, Offer parameter no. 6: “Ramp Rate Up/Ramp Rate Down” will be changed to “Regulation Up/Regulation Down” and (2) regarding sections 40.3.5.4 and 40.3.5.5: As appropriate, “Day Ahead” or “Real Time” will be added to references to “Offer.” Midwest ISO also notes that the reference to “1 MW” in proposed Tariff Sheet No. 587E, Section 40.3.5.4(a).i, is correct, and will cause a Generation Resource to be set to a minimum of 2 MW.

97. Additionally, in its answer, Midwest ISO also proposes making the following corrections proposed by intervenors: (1) regarding Tariff Sheet No. 330B, second line: “Instructions” should be changed to “instructions”; (2) regarding Tariff Sheet No. 330C, first line: Delete second period in “a..,” (3) regarding Tariff Sheet No. 330E, 15th and 18th lines: With regard to assignment of Manual Redispatch costs, “Production Costs” should be changed to “incremental energy costs.”

98. Midwest ISO notes, for example, the references in the proposed Tariff Sheets to “Commitment Period” should be “Transmission Provider Commitment Period” (section 1.322 of TEMT), involving all or some of the hours within an Operating Day; and “Contiguous Commitment Period” should be “contiguous Transmission Provider Commitment Period,” referring to two or more adjacent, shorter Transmission Provider Commitment Periods within the same Operating Day.

## **3. Commission Determination**

99. We find that the additional language proposed by Wisconsin Electric is helpful to clarify how the dispatch process used in the real-time energy market Operations specifically applies to the use of PV MWP. Consequently, we will direct Midwest ISO to incorporate Wisconsin Electric’s proposed language into this section in the compliance filing ordered below. We find that Midwest ISO’s explanation of the discrepancy of dispatch range for offered limits is sufficient.

100. The Commission notes that in schedule 27, B.3.a on sheet 1050Z.11, Midwest ISO needs to remove “to recover” within the phrase “... then the unit needs to receive to recover incremental energy costs.” In the proposed PV MWP sections of the TEMT,

Midwest ISO variously refers to “offer parameters,” “offer data parameters” and “offer data,” seemingly to refer to the same concepts. We will require Midwest ISO to modify these sections such that there is consistent language on this topic in the specified compliance filing.

101. The Commission directs Midwest ISO: (1) to make the typographical or formatting corrections that Midwest ISO references in its answer; and (2) to also make any additional necessary typographical or formatting corrections. For example, the tariff sheets included in the filing are incorrectly paginated. Specifically, the sheets should be reviewed to ensure that the sheet numbers and effective dates are consistent with the rest of the rate schedule. Midwest ISO is directed to submit in a compliance filing revised tariff sheets that reflect the actual effective date, within 7 days of the date the software has been implemented. Additionally, proposed section 40.3.3 Real-Time Energy Market Settlement, starting on Sheet No. 575 and ending on Sheet No. 581 contains subsections A and C, but not a subsection B. Accordingly, Midwest ISO is directed to amend and resubmit the signature sheets so that they are in compliance with the Commission’s Order No. 614 in their compliance filing.<sup>24</sup> These changes are necessary to clarify and correct the proposed tariff language to provide consistency and predictability throughout the tariff.

102. We will direct Midwest ISO to revise the September 29 Filing to reflect the typographical and clarifying revisions discussed above in the compliance filing order herein. From Midwest ISO’s discussion of contiguous commitment period in its answer, we ascertain that Midwest ISO is limiting the continuity requirement for eligibility for PV MWP to a single day. However, we are concerned that while generators are committed on a daily basis at most, other proposed language could be read as requiring offer parameters to remain unchanged across a number of days for a unit to remain eligible. For example, proposed section 40.3.5.3 could be read that if a generator is committed in hours 24 of day one, hour 1 through 24 of day two, and hour 1 to 5 of day 3, that these are all a part of the contiguous commitment period because they are all contiguous hours that have been committed, despite Midwest ISO’s intent that the contiguous commitment period refer to adjacent, shorter transmission periods within the same day. Similarly, the language in proposed sections 40.3.3.5.c and d could be read to require unchanged offer parameters over extended periods of time when a unit is committed throughout the day, and into the next day.

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<sup>24</sup> *Designation of Electric Rate Schedule Sheets*, Order No. 614, 65 Fed. Reg. 18,221 (March 31, 2000) FERC Stats. & Regs. ¶ 31,096 (2000).

103. We will require Midwest ISO to revise its tariff such that it changes the references to “Commitment Period” and “contiguous Commitment Period” to “Transmission Provider Commitment Period” and “contiguous Transmission Provider Commitment Period”, respectively. We will also require Midwest ISO to state in the tariff that the contiguous commitment period refers to adjacent, shorter commitment periods within the operating day. In addition, Midwest ISO must either remove the requirements that the offer parameters (1) remain unchanged from the last hour of the previous day, and (2) be the same as the first hour of the subsequent day for a real-time must run unit to be eligible for PV MWP, or justify these requirements in the compliance filing directed below.

104. We will require that Midwest ISO revise its tariff in the compliance filing specified below to define the term lost opportunity cost. Similarly, we will require Midwest ISO to refer to stated tariff definitions for the terms economic maximum and economic minimum (such as the defined Hourly Economic Maximum Level or Hourly Economic Minimum Level). We will also require Midwest ISO to correct the TEMT’s table of contents (sheet 14) which should cite to “1.230 Pseudo Tie” as being on Sheet 115.01, rather than sheet 115.

The Commission orders:

(A) Midwest ISO’s September 29 Filing is conditionally accepted, to become effective ten (10) days after Midwest ISO files with the Commission a notice that the necessary software and other systems are in place to implement the proposed filing, as requested and subject to further Commission action on the informational report directed in Ordering Paragraph (B).

(B) Midwest ISO is directed to submit an informational report, no later than one year from the effective date of the PV MWP program, as discussed in the body of the order.

(C) Midwest ISO is hereby directed to make a compliance filing within 30-days of the date of issuance of this order modifying its proposed tariff revisions as discussed in the body of this order.

By the Commission. Commissioner Wellinghoff concurring with a  
separate statement attached.

( S E A L )

Magalie R. Salas,  
Secretary.

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Midwest Independent Transmission .  
System Operator, Inc

Docket No. ER06-1552-000

(Issued December 22, 2006)

WELLINGHOFF, Commissioner, concurring:

Today, the Commission approves a real-time price volatility make-whole payment (PV MWP) provision proposed by the Midwest Independent Transmission System Operator (Midwest ISO) to provide make-whole payments to qualifying generators when real-time prices are insufficient to cover their incremental energy costs, and to similarly compensate generators that are manually dispatched for reliability purposes. Midwest ISO has identified situations where insufficiently flexible dispatch offers have made it more difficult to manage the reliability of the transmission system and, by having to call upon extra and more expensive units, caused prices to increase at times. To provide a financial incentive to generators to offer more flexible ranges of dispatch levels, Midwest ISO will offer payments to make the generator whole for any of its incremental energy costs that are not compensated by the prices in the real-time market (Real-Time LMP). The Independent Market Monitor is directed to monitor this program and use applicable mitigation procedures. The costs of this program will be allocated to all market participants. I vote to approve the proposal because it is designed to address a reliability problem experienced by the ISO and it is an approach that was widely supported by the Midwest ISO stakeholders to rectify the problem.

I also vote to approve because the order provides for a process to address a

potential unintended effect of this make-whole payments program. If the generator's incremental costs exceed real-time market price (RT LMP) then, under the program, that make-whole payment will not be reflected in the RT LMP. In these situations, the LMP will not provide the appropriate price signal for investment in demand response, generation or transmission. Therefore, we direct Midwest ISO to examine and explore ways of ensuring transparency associated with the PV MWP so that investors in generation, transmission, and demand response receive appropriate price signals. I believe providing efficient and accurate price signals is key to ensuring efficient investment is made in electric system infrastructure, including in demand response. It is also particularly timely, as the Midwest ISO and its stakeholders and state commissions embark on a region-wide effort to develop demand response resources.

For these reasons, I respectfully concur with the Commission's order.

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Jon Wellinohoff  
Commissioner