

119 FERC ¶ 61,216  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

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

Midwest Independent Transmission  
System Operator, Inc.

Docket Nos. ER04-691-082  
and EL04-104-069

ORDER ACCEPTING COMPLIANCE FILING

(Issued May 31, 2007)

1. On January 30, 2007, the Midwest Independent Transmission System Operator, Inc. (Midwest ISO) submitted a compliance filing (January 30 Filing) analyzing methods proposed by protestors for allocating the refund of over-collected marginal losses, as required by a Commission directive in its order dated November 1, 2006.<sup>1</sup> This order accepts Midwest ISO's January 30 Filing.

**I. Background**

2. On August 6, 2004, the Commission approved Midwest ISO's Transmission and Energy Markets Tariff (TEMT or tariff), which was designed to initiate Day 2 operations in Midwest ISO's 15-state region.<sup>2</sup> Midwest ISO's Day 2 operations include, among other things, a transition period during which market participants that over-pay for losses

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<sup>1</sup> *Midwest Independent Transmission System Operator, Inc.* 117 FERC ¶ 61,142 (2006) (November 1 Order).

<sup>2</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) (April 2005 Order). The TEMT defines "Transmission Provider" as Midwest ISO or any successor organization. *See* Module A, section 1.320, Original Sheet No. 133. For clarity, we will refer to Midwest ISO wherever the TEMT refers to the Transmission Provider.

receive rebates for the difference between their marginal losses and either their historical or average losses, and a procedure for refunding the over-collected losses.<sup>3</sup>

3. Specifically, the TEMT II Order, among other things, directed Midwest ISO to file a marginal loss refund method applicable to the transition period within 60 days,<sup>4</sup> and, after consultation with stakeholders, file a revised marginal loss surplus refund method within 270 days from market start that considered rules that encourage market participants to make efficient purchases from the spot market and addressed concerns of some market participants that will find themselves significantly exposed to marginal loss charges.<sup>5</sup>

4. On October 5, 2004, Midwest ISO made a compliance filing (October 5 Filing) in response to the TEMT II Order's various 60-day requirements, including those relating to a transitional marginal loss refund method. In that October 5 Filing, Midwest ISO proposed to refund over-collected marginal losses based on the share of losses in each balancing authority area rather than through previously proposed "loss pools."<sup>6</sup> On December 20, 2004, the Commission issued an order conditionally accepting Midwest ISO's October 5 Filing, finding the proposal just and reasonable. The Commission found that the refund of marginal loss surpluses on a balancing authority area basis has greater granularity than the previous "loss pools" approach; the Commission determined that Midwest ISO's proposal is consistent with the goal of protecting participants from charges in excess of their average actual losses, has stakeholder support, and can be implemented. The Commission also expressed concern about market participants with remote generation outside the territory of the balancing authority area that would not be eligible for a sufficient refund share and directed Midwest ISO to explain its method for determining the marginal loss surpluses for such entities.<sup>7</sup>

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<sup>3</sup> Marginal loss surpluses, also referred to as over-collected marginal losses, are the difference between marginal losses and historical or average losses that are refunded to load.

<sup>4</sup> TEMT II Order at P 73-76.

<sup>5</sup> *Id.* at P 79, 239, 649.

<sup>6</sup> October 5 Filing at 6-8.

<sup>7</sup> See *Midwest Independent Transmission System Operator, Inc.*, 109 FERC ¶ 61,285 at P 171-72 (2004) (Compliance Order I).

5. On January 21, 2005, Midwest ISO made a compliance filing to address the additional requirements of Compliance Order I. On April 15, 2005, the Commission issued an order that addressed rehearing requests of Compliance Order I and Midwest ISO's January 21, 2005 compliance filing.<sup>8</sup> The April 15 Order reiterated the filing requirements that Midwest ISO had to meet within 270 days after market start. The April 15 Order directed Midwest ISO to submit within 270 days from market start an informational filing that addresses different losses among market participants within a balancing authority area and the possibility that these differences could result in significant cross-subsidies, and to specifically provide information and analysis bearing on the issue of whether certain market participants are paying more in losses in the energy market compared to before the market started and the extent of any cross-subsidies.

6. On March 27, 2006, as supplemented on June 8, 2006, the Midwest ISO submitted a filing to update the Commission on its analysis of marginal loss surpluses. The Midwest Transmission-Dependent Utilities (Midwest TDUs)<sup>9</sup> and Wisconsin Public Service Corporation and Upper Peninsula Power Company (Collectively, the WPS Companies) protested the filing.

7. The November 1 Order accepted the Midwest ISO's filings. However, in view of the protests, the Commission directed the Midwest ISO to analyze the marginal loss surplus refunds calculated by the Midwest TDUs and WPS Companies. The Commission stated that, to the extent the Midwest ISO found their methods acceptable for calculating the marginal loss surplus refunds, the Midwest ISO must determine if their methods could be applied to all market participants and would result in a more equitable allocation of marginal loss surplus refunds than the current allocation.<sup>10</sup>

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<sup>8</sup> *Midwest Independent Transmission System Operator, Inc.*, 111 FERC ¶ 61,053 (2005) (April 15 Order).

<sup>9</sup> For purposes of this proceeding the Midwest TDUs are: Great Lakes Utilities, Indiana Municipal Power Agency, Lincoln Electric System, Madison Gas and Electric Company, Midwest Municipal Transmission Group, Missouri Joint Municipal Electric Utility Commission, Missouri River Energy Services (Missouri River), Southern Minnesota Municipal Power Agency, Upper Peninsula Transmission Dependent Utilities, and Wisconsin Public Power Inc.

<sup>10</sup> November 1 Order at P 28.

## **II. Midwest ISO's Compliance Filing**

8. In the January 30 Filing, the Midwest ISO states that it analyzed the methods for allocating the marginal loss surplus refunds proposed by the Midwest TDUs and WPS Companies, as directed. The Midwest ISO first analyzed a method proposed by WPS Companies, WPSC Method 2. According to the Midwest ISO, this method assumes that the marginal loss cost is twice the average loss cost, with the average lost cost defined as the product of the day-ahead LMP, the balancing authority physical losses, and the average load ratio share of the WPSC load to the balancing authority's load.

9. The Midwest ISO notes two deficiencies in the method. First, the two to one ratio of marginal losses to actual losses ignores the fact that actual real-time losses are different from estimated day-ahead losses. According to the Midwest ISO, the average losses in Method 2 are based on expected losses in the day-ahead market. To the extent actual real-time losses are different from the day-ahead estimates, however, the cost of energy to supply the differences must be covered in the real-time market and reduces the revenue available for refunds. And second, Method 2 assumes the entities causing loop-flows on the Midwest ISO system would pay loss-related charges, whereas in fact the Midwest ISO cannot charge entities outside its markets for the marginal costs imposed by their loop-flows on the Midwest ISO system.

10. The Midwest ISO next evaluated WPS Companies' Method 1 and Midwest TDUs method and describes these methods as evaluations of losses based on bilateral transactions. In WPS Companies' Method 1, the Midwest ISO states that the marginal loss cost is determined by multiplying the quantity of energy injected in either the day-ahead or real-time markets by the marginal loss component of LMP in the respective day-ahead or real-time markets. The Midwest ISO explains the energy injected is comprised of generator, physical schedules, and financial schedules in either the day-ahead and/or real-time markets; the Midwest ISO states that the Midwest TDUs' approach is similar to the WPS Companies' Method 1, but the Midwest TDUs assume a two to one ratio of marginal losses to actual losses to estimate the actual cost of serving the losses caused by the bilateral transactions.

11. The Midwest ISO believes these approaches, which use financial schedules in calculating the marginal cost of losses, are flawed. The source of a financial schedule, according to the Midwest ISO, may not be a physical power source. Rather, the Midwest ISO argues the power may be provided from another location. As a result, the Midwest ISO asserts that the marginal loss cost of moving power from the actual physical source location to the financial schedule source location should be calculated and the party paying for those losses should be eligible for an over-collected marginal losses refund.

12. The Midwest ISO also states that both WPS Companies' Method 1 and the Midwest TDUs' method suffer from the same problem as WPS Companies' Method 2, namely that actual, real-time losses are different than day-ahead losses. To the extent actual, real-time losses differ from day-ahead estimates, the cost of energy to supply the differences must be covered in the real-time market and reduces the revenue available for refunds.

13. The Midwest ISO also explains that over time it has refined its method used to estimate day-ahead losses. The Midwest ISO notes that, prior to the changes to the method of estimating day-ahead losses made at the end of May 2006, its over-collected marginal losses refund was approximately 37 percent of the estimated cost of losses. After the change, the Midwest ISO asserts that the over-collected marginal losses refund was approximately 70 percent of the estimated cost of losses. Sampling the ratio of total marginal losses caused in the day-ahead market by loop flows and the real-time losses, the Midwest ISO determined that the ratio was around 20 percent on average after the modeling changes made in May 2006. If such loop flows paid the marginal loss costs for their transactions, the Midwest ISO contends that the ratio of the over-collected marginal losses refund to the energy component of day-ahead LMP times actual losses would rise to between 80 percent and 90 percent. However, the Midwest ISO states that revenue from loop-flows is not available for refund to market participants.

14. By taking account of the marginal loss related costs that are not paid by the scheduling party and using data provided by Midwest TDUs, the Midwest ISO states that the over-collected marginal losses refund as calculated by the Midwest ISO's over-collected marginal losses protocol is 90 percent of the refund that would be due under the Midwest TDUs' approach once adjusted to properly account for all marginal loss cost effects discussed above.

### **III. Notice, Interventions and Protests**

15. Notice of Midwest ISO's January 30 Filing was published in the *Federal Register*, 72 Fed. Reg. 6,554 (2007), with interventions and protests due on or before February 20, 2007. The Midwest TDUs and WPS Companies filed timely protests. The Midwest ISO, WPS Companies, and Midwest TDUs filed answers.

16. WPS Companies maintain that the day-ahead and real-time loss factors are applied across the entire system, not just to high loss systems. For every location across the market, WPS Companies state that the Midwest ISO assumes a loss factor in the day-ahead market. WPS Companies note that an incorrect Midwest ISO estimate of the day-ahead loss factor, which results in a decrease of funds for over-collected marginal losses, could be based simply on an incorrect assumption by the Midwest ISO of day-ahead data, not due to a marginal loss in a particular area. Since the Midwest ISO's day-ahead loss

assumptions are not a function of areas with higher marginal losses, WPS Companies believe those areas should not be responsible for bearing a disproportionate amount of the under-recovery of over-collected marginal losses. WPS Companies maintain that this is a market flaw that should be uplifted to the entire market, not to an arbitrary subset of the market participants with high losses.

17. Midwest TDUs state that the inter-day differences between the day-ahead and real-time markets do not account for the fact that the Midwest ISO's marginal loss refunds to market participants situated like Missouri River are falling far below 50 percent of the marginal losses charged in the day-ahead market. According to Midwest TDUs, Missouri River depends heavily on generation located outside its control area and delivered without the grandfathered agreement (GFA) Option B protection.<sup>11</sup> Midwest TDUs argue that, so far as the record shows and by all other indications, the shortfall in marginal loss refunds to Missouri River is attributable to the fact that non-control-area utilities like Missouri River are also the utilities more likely to depend disproportionately on remote resources, and are therefore subject to disproportionate marginal loss charges.<sup>12</sup> Yet they have been inequitably required to pool their loss refunds with their host control area utility. Midwest TDUs submit that something other than inter-day loss sensitivity differences must be contributing significantly to the shortfall, and the Midwest ISO needs to demonstrate what it is, or acknowledge that the explanation lies in the forced pooling of import-dependent TDUs with their larger balancing authority area competitors.

18. WPS Companies do not dispute that there is a loss of money because of loop flows, but they dispute the Midwest ISO's implication that it is appropriate to require those who have higher marginal losses to bear the loss in revenues. WPS Companies assert loop flows can occur anywhere on the system and not just in high loss areas. In fact, WPS Companies state that high losses can be caused in part by loop flows. Because

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<sup>11</sup> Option B allows market participants with GFAs to participate in the Day-2 energy markets and receive a congestion hedge. See *Midwest Independent Transmission System Operator, Inc.*, 107 FERC ¶ 61,191 (2004), *order on reh'g*, 111 FERC ¶ 61,042 (2005), *order on reh'g*, 112 FERC ¶ 61,311 (2005).

<sup>12</sup> Citing, e.g., *Midwest Independent Transmission System Operator, Inc.*, 102 FERC ¶ 61,196 at P 51-53 (2003) (finding that marginal losses correlate to distance); *Atlantic City Elec. Co.*, 115 FERC ¶ 61,132 at P 4 (2006) ("Other things being equal, customers near generation centers pay prices that reflect smaller marginal loss costs while customers far from generation centers pay prices that reflect higher marginal loss costs.").

loop flows can be a cause of high losses, WPS Companies contend that the opposite may be true since loop flows by other entities raise the load and as a result the marginal losses. Thus, WPS Companies state that not only are loop flows causing inadequate over-collected marginal losses but they are also causing higher marginal loss costs to the high loss participants. According to WPS Companies, the cost of losses resulting from loop flows should be uplifted to the entire market rather than being borne by those who are experiencing higher marginal losses. WPS Companies state that a market-wide uplift would provide the necessary money to refund over-collected marginal losses to those who have overpaid for losses.

19. The Midwest TDUs agree, asserting that the costs imposed on the Midwest ISO market by the loop flows of non-market transactions are, by definition, not caused by market participants. Rather, they are a cost that the Midwest ISO market must bear due to being interconnected with other regions, which brings offsetting and broadly shared benefits. As such, the Midwest TDUs affirm that the loop flows that others impose on the Midwest ISO present an exceptionally strong case for broad uplift. The Midwest TDUs maintain that they should be charged to all market participants (or at least all load) under a broad uplift like that used for Schedule 17, not taxed disproportionately to those who pay high marginal loss charges to begin with.

20. The Midwest TDUs further note loop flows' significant effect on marginal losses.<sup>13</sup> The Midwest TDUs note that the Midwest ISO attributes approximately 20 percent of marginal losses to loop flows.<sup>14</sup> To at least that extent, the Midwest TDUs assert that marginal loss charges without individualized refunds make only a few bear the burden of loop flow effects that, if not assignable to those causing the loop flows, should be socialized among everyone on the system that absorbs them.

21. WPS Companies note that the January 30 Filing shows that the Midwest ISO has been incorrectly calculating and therefore under-funding the over-collected marginal losses since the start of the energy market.<sup>15</sup> WPS Companies note that, since June 2006, the Midwest ISO has reduced the deviation between day-ahead and real-time loss sensitivities, which has resulted in improved funding for over-collected marginal losses. WPS Companies argue that, while the Midwest ISO has refunded about 70 percent of over-collected marginal losses, this is still less than what WPS Companies claims the

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<sup>13</sup> See TEMT II Order at P 73.

<sup>14</sup> Citing January 30 Filing at 8.

<sup>15</sup> Citing January 30 Filing at 7.

appropriate refund amount should be. WPS Companies argue that between 10 to 20 percent of the over-collected marginal losses is not being refunded due to loop flows, and the effect of loop flows on the over-collection of losses should be borne by the entire market, and not arbitrarily borne by the areas with higher losses. According to WPS Companies, the remainder of the under-funding is due to differences between the day-ahead and real-time markets. WPS Companies maintain that the Midwest ISO needs to improve its day-ahead loss factor forecasting.

22. Midwest TDUs assert that the difference between a 36 percent imputed-total refunds<sup>16</sup> and the 50 percent refunds provided for under the TEMT is significant. According to Midwest TDUs, multiplied by the many similarly-situated load-serving entities and continued over time, that divergence indicates tens of millions of dollars in refund shortfalls. Furthermore, Midwest TDUs note that comparing the outcomes for the months preceding the Midwest ISO's late-May 2006 computational refinements to more recent months indicate the difference is getting worse.

23. Moreover, Midwest TDUs note that, in order to calculate the refund of marginal losses related to inter-day differences, the Midwest ISO assumes that "marginal loss related costs are twice the cost of serving actual losses."<sup>17</sup> If this is the case, then Midwest TDUs assert the simple way to charge each market participant the actual cost of serving its contribution to actual aggregate losses is to refund half of its marginal loss charges. If it is not possible to rely on the 2:1 ratio of marginal to average losses for purposes of quantifying each market participant's contribution to the difference between marginal and average losses, then Midwest TDUs maintain that neither is it possible to rely on that ratio for purposes of minimizing the difference between losses refunded and losses due to be refunded.

24. WPS Companies add that the TEMT provides that "[f]or a transition period not exceeding five (5) years from the start of the Day-Ahead Energy Market, [the Midwest ISO] will refund to Load, the difference between Marginal Losses and average losses on a Balancing Authority basis...."<sup>18</sup> By failing to comply with that tariff provision, WPS

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<sup>16</sup> The 36 percent imputed refund represents a Midwest TDU estimate for June through September 2006 of the actual and imputed refunds received by Midwest TDUs as a percentage of the marginal losses paid. Midwest TDUs at 3.

<sup>17</sup> *Citing* January 30 Filing at 10.

<sup>18</sup> *See* section 40.6.1 in the TEMT.

Companies maintain that the Midwest ISO has violated the filed rate doctrine; therefore, refunds are appropriate.

#### **IV. Discussion**

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

25. 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 unless otherwise ordered by the decisional authority. The Commission is not persuaded to accept the answers filed by the Midwest ISO, WPS Companies, or Midwest TDUs, and accordingly will reject them.

##### **B. Commission Determination**

26. The November 1 Order directed the Midwest ISO to analyze the alternative methods proposed by certain intervenors for refunding the marginal loss surplus. If the Midwest ISO found a particular method to be acceptable, we required Midwest ISO to determine whether that method could be applied to all market participants and achieve a more equitable allocation of marginal loss surplus refunds than the current method. Based on our review of the Midwest ISO's analysis of marginal loss methods, we conclude that the Midwest TDUs' and WPS Companies' proposed methods are not suitable for determining marginal losses and are not a reliable method for assessing refunds. Differences between day-ahead loss estimates and real-time actual losses ensure that loss estimates from the day-ahead market will not accurately reflect the actual losses incurred in the real-time market, and hence will result in differences in the estimate compared to actual results. As well, these proposed methods assume that the entities causing loop-flows pay loss-related charges, which they do not. And finally, methods based on financial schedules do not reflect the actual physical power sources and therefore do not provide a basis to determine physical losses. In sum, these proposed methods do not provide a basis to better estimate the over-collected losses for market participants with distant generation, nor do they provide a more equitable basis than the Midwest ISO's current method for allocating the surplus revenues.

27. With respect to loop flows, we do not consider the broad uplift of the costs associated with loop flows recommended by the Midwest TDUs and WPS Companies to be superior to, or more equitable than, the Midwest ISO's method.<sup>19</sup> The Midwest ISO's

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<sup>19</sup> We consider the Midwest TDUs and WPS Companies comments regarding how the Midwest ISO's current method allocates the costs of loop flows to be outside the scope of this compliance filing. Midwest ISO was only directed to analyze the methods proposed by the intervenors, and our doing so was not intended to provide Midwest

(continued)

method ensures that the relative share of refunds among balancing authorities is not disturbed by loop flows, *i.e.*, a balancing authority receiving 70 percent of the over-collected marginal losses refund before accounting for loop flows continues to receive 70 percent of the refund after accounting for loop flows. The basic rationale of the Midwest ISO's method is that market participants in balancing authorities with the highest losses receive the largest refunds. WPS Companies and the Midwest TDUs are located in high loss areas, and thus receive proportionately more of the refunds and thus they agree with this aspect of the Midwest ISO method. However, inherent in Midwest ISO's method is that, while the highest loss areas receive the highest refunds, they also share in proportionately more of the costs associated with loop flows. WPS and Midwest TDUs therefore take issue with this aspect of the Midwest ISO's method and request that the Commission require Midwest ISO to uplift the costs of loop flows to all market participants. The Midwest TDUs and WPS Companies' methods would shift the refund percentages more favorably toward them, and could result in a balancing authority with a refund before accounting for loop flows either receiving no refunds or owing refunds to other balancing authorities after accounting for loop flows.<sup>20</sup> We do not consider such an outcome equitable for other market participants.

28. We disagree with Midwest TDUs that the record in this proceeding shows that the difference in actual over-collected marginal losses refunds compared to the methods proposed by the protestors is attributable to an inequitable pooling of refunds within the host control area for entities with remote resources.<sup>21</sup> Rather, the record in this proceeding is more supportive of the conclusion that loop flows and differences between day-ahead loss estimates and real-time losses make such cause and effect determinations impossible.

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TDUs and WPS another opportunity to comment on Midwest ISO's method which we already found to be just and reasonable. However, we address their comments on the merits herein.

<sup>20</sup> A simple example illustrates. Assume the over-collected losses for the Midwest ISO are \$100 and inadvertent energy (which includes loop flows) is \$20. Under Midwest TDUs' method, Balancing Authority A, with 10 percent of the cost of losses, would receive \$10 of the refund before inadvertent energy and \$0 after accounting for inadvertent energy (assuming Balancing Authority A represented 50 percent of the load, generation and virtual MWh in the Midwest ISO and the charge was broadly uplifted).

<sup>21</sup> Midwest TDUs at 4 and 5.

29. We also find nothing in the record of this proceeding to indicate the Midwest ISO has been incorrectly implementing its tariff provisions in allocating over-collected losses to market participants, and therefore we see no basis to require further refunds. We do not consider the fact that the Midwest ISO method of determining refunds yields less refunds than the Midwest TDUs' and WPS Companies' proposed methods to be evidence that the Midwest ISO has incorrectly calculated the over-collected marginal losses refunds. As we explain above, the Midwest TDUs' and WPS Companies' proposed methods for determining refunds do not account for factors such as loop flows and therefore do not provide a basis for rejecting the Midwest ISO's method or adopting a different method for assessing refunds.

30. Finally, the purpose of the data and analysis provided in the January 30 Filing, as directed in the November 1 Order, was to evaluate the alternative methods proposed by the Midwest TDUs and WPS Companies for determining refunds. We do not consider the Midwest ISO estimates of loop flows and differences between day-ahead and real-time losses, provided as part of this analysis, to be anything other than rough estimates that may explain the differences between the actual refunds received and the refunds sought by the Midwest TDUs and WPS Companies. Accordingly, these estimates would not, in contrast to what the Midwest TDUs and WPS Companies argue, provide a basis for determining refunds.<sup>22</sup> Similarly, we do not consider the table developed by the Midwest ISO<sup>23</sup> to be an allocation, but rather an illustrative analysis used to evaluate the proposals put forth by WPS Companies and the Midwest TDUs, and we interpret the statements by the Midwest ISO to mean that the refund methods proposed by WPS Companies and the Midwest TDUs do not account for loop flows that are not paid for.

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<sup>22</sup> We also do not consider the rough estimates of the differences between day-ahead and real-time losses provided by the Midwest ISO to be suitable for determining a revised allocation, as WPS Companies argue.

<sup>23</sup> January 30 Filing at 7.

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The Commission orders:

The Midwest ISO's compliance filing is hereby accepted.

By the Commission. Commissioner Moeller not participating.

( S E A L )

Kimberly D. Bose,  
Secretary.