125 FERC ¶ 61,161
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

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

Ameren Services Company
Northern Indiana Public Service Company

Docket No. EL07-86-000

v.

Midwest Independent Transmission System Operator, Inc.

Great Lakes Utilities
Indiana Municipal Power Agency
Missouri Joint Municipal Electric Utility Commission
Missouri River Energy Services
Prairie Power, Inc.
Southern Minnesota Municipal Power Agency
Wisconsin Public Power Inc.

Docket No. EL07-88-000

v.

Midwest Independent Transmission System Operator, Inc.

Wabash Valley Power Association, Inc.

Docket No. EL07-92-000

v.

Midwest Independent Transmission System Operator, Inc.

ORDER ON PAPER HEARING

(Issued November 10, 2008)

1. In August 2007, three groups of utilities filed complaints under section 206(b) of the Federal Power Act (FPA),[1] alleging that the real-time Revenue Sufficiency Guarantee charge contained in the Midwest Independent Transmission System Operator, Inc.'s (Midwest ISO) Transmission and Energy Markets Tariff (tariff) unduly discriminated among classes of market participants. The Commission found that the complainants had shown that the rate in question may be unjust, unreasonable or unduly discriminatory, but that they had not shown that their proposed alternative rate was just and reasonable.[2] In order to develop a more complete record, the Commission set the complaints for paper hearing and investigation.[3] Those proceedings are now complete.

2. In this order, the Commission finds the Complainants have met the burden of proof under section 206(b) of the FPA by demonstrating that the Revenue Sufficiency Guarantee charge cost allocation in effect is unjust and unreasonable, and that the proposed alternative cost allocations are just and reasonable. In this order, the Commission also exercises its discretion to require refunds.

## I. <u>Background</u>

3. On April 25, 2006, in Docket No. ER04-691, the Commission issued an order rejecting the Midwest ISO's proposal to, among other things, remove references to virtual supply from the tariff provisions related to calculating Revenue Sufficiency Guarantee charges.[4] The Commission further found that because the Midwest ISO had not been including virtual supply offers in its Revenue Sufficiency Guarantee calculations, it had violated its tariff and must make appropriate refunds.[5] However, the requests for rehearing of the Revenue Sufficiency Guarantee Order persuaded the Commission to change course and exercise its equitable discretion not to require refunds for the Midwest

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[1] 16 U.S.C. § 824e (2006).

[2] *Ameren Servs. Co. v. Midwest Indep. Transmission Sys. Operator, Inc.*, 121 FERC ¶ 61,205 (2007) (Order on Revenue Sufficiency Guarantee Complaints).

[3] *Id.* P 94. The Commission held the paper hearing in abeyance pending the completion of a stakeholder process. The Commission commenced the paper hearing in August, 2008. *See* P 9 *infra*.

[4] *Midwest Indep. Transmission Sys. Operator, Inc.*, 115 FERC ¶ 61,108, at P 48-49 (Revenue Sufficiency Guarantee Order), *order on reh'g*, 117 FERC ¶ 61,113 (2006) (First Rehearing Order), *order on reh'g*, 118 FERC ¶ 61,212 (Second Rehearing Order), *order on reh'g*, 121 FERC ¶ 61,131 (2007) (Third Rehearing Order).

[5] Revenue Sufficiency Guarantee Order, 115 FERC ¶ 61,108 at P 26.

ISO's failure to include virtual supply offers in its calculation of Revenue Sufficiency Guarantee charges.[6]

4. On March 15, 2007, the Commission issued two orders regarding the Midwest ISO's Revenue Sufficiency Guarantee charges, the Second Rehearing Order and the First Compliance Order.[7] In the Second Rehearing Order, the Commission reiterated that "the Midwest ISO's tariff requires allocation of Revenue Sufficiency Guarantee costs to virtual supply offers, and . . . the Midwest ISO violated its tariff by failing to do so. There no longer seems to be any dispute that this is how the tariff should properly be read."[8] The Commission then revisited the issue of whether to exercise its discretion to require refunds, but based on a balancing of equities, reaffirmed its prior decision not to impose refunds.[9] In the First Compliance Order, the Commission found that the Midwest ISO failed to analyze the relationship between virtual supply offers and Revenue Sufficiency Guarantee cost incurrence as required by the First Rehearing Order. The Commission rejected the Midwest ISO's proposal to allocate costs based on net virtual offers, i.e., virtual offers minus virtual bids, and clarified that the currently-effective tariff, which allocates Revenue Sufficiency Guarantee costs to virtual supply offers, remains in effect.[10] On November 5, 2007, the Commission denied rehearing of the Second Rehearing Order and First Compliance Order and accepted the Midwest ISO's second compliance filing in this proceeding.[11]

5. Ameren Services Company and Northern Indiana Public Service Company (Ameren/Northern Indiana); Great Lakes Utilities, Indiana Municipal Power Agency, Missouri Joint Municipal Electric Utility Commission, Missouri River Energy Services,

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[6] First Rehearing Order, 117 FERC ¶ 61,113 at P 92-96.

[7] *Midwest Indep. Transmission Sys. Operator, Inc.*, 118 FERC ¶ 61,213 (2007) (First Compliance Order), *order on reh'g*, Third Rehearing Order, 121 FERC ¶ 61,131 (2007).

[8] Second Rehearing Order, 118 FERC ¶ 61,212 at P 88 (internal citation omitted).

[9] *Id.* P 88-98.

[10] First Compliance Order, 118 FERC ¶ 61,213 at P 92-93 ("[T]he currently-effective tariff provisions relating to the real-time Revenue Sufficiency Guarantee charge in section 40.3.3 remain in effect.").

[11] Third Rehearing Order, 121 FERC ¶ 61,131 (2007); *Midwest Indep. Transmission Sys. Operator, Inc.*, 121 FERC ¶ 61,132 (2007) (Second Compliance Order).

Prairie Power, Inc., Southern Minnesota Municipal Power Agency, and Wisconsin Public Power Inc.; and Wabash Valley Power Association, Inc. each filed a complaint pursuant to section 206 of the FPA and Rule 206 of the Commission's Rules of Practice and Procedure[12] against the Midwest ISO . These complaints concern the allocation of Revenue Sufficiency Guarantee charges to market participants under the Midwest ISO's tariff.[13] Complainants alleged that the Revenue Sufficiency Guarantee rate, which is based in part on virtual supply offers, is unjustly and unreasonably assessed on only a subset of market participants with virtual supply offers and withdrawals of energy. Complainants argued that there is no justification for differentiating among virtual supply offers with regard to Revenue Sufficiency Guarantee charge allocation and that the Commission's prior orders have found that there is no basis to do so. Complainants asked that the Commission set for hearing the issue of the tariff revisions necessary to remedy this alleged discrimination.

6. In the Order on Revenue Sufficiency Guarantee Complaints, the Commission granted in part and denied in part the relief requested in the complaints. The Commission found that the Midwest ISO's existing Revenue Sufficiency Guarantee cost allocation methodology may not be just and reasonable, but the Revenue Sufficiency Guarantee cost allocation methodologies Complainants proposed also had not been shown to be just and reasonable. The Commission thus established a refund effective date of August 10, 2007 and set the complaints for paper hearing and investigation to review evidence and to establish a just and reasonable Revenue Sufficiency Guarantee cost allocation methodology. The Commission held the paper hearing in abeyance pending the conclusion of a then-ongoing stakeholder proceeding by the Midwest ISO Revenue Sufficiency Guarantee Task Force that was seeking to identify improvements that could be made to the Revenue Sufficiency Guarantee cost allocation methodology or February 1, 2008, whichever is earlier.

7. On February 1, 2008, the Midwest ISO made an informational filing stating that it was not able to meet the February 1, 2008 deadline because the Revenue Sufficiency Guarantee Task Force was still in negotiations. The Midwest ISO proposed to file specific tariff provisions and supporting documentation on or about March 3, 2008.

8. On March 3, 2008, the Midwest ISO filed what it refers to as "indicative" tariff revisions that reflect an alternative mechanism for allocating Revenue Sufficiency Guarantee charges and costs. The Midwest ISO explains that these provisions represent a new real-time Revenue Sufficiency Guarantee cost allocation methodology that was

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[12] 18 C.F.R. § 385.206 (2008).

[13] For additional background to this proceeding, see the Order on Revenue Sufficiency Guarantee Complaints, 121 FERC ¶ 61,205 at P 5-9.

developed based on the principles agreed upon in stakeholder discussions but that has not yet been conformed to incorporate the Midwest ISO's new Ancillary Services Markets market design elements. The Midwest ISO submits that the Commission should determine whether the language in its indicative revisions represents a just and reasonable basis for a subsequent section 205 filing that would replace the Revenue Sufficiency Guarantee cost allocation methodology for the Ancillary Services Markets. The Midwest ISO states that if the Commission determines that the proposed indicative tariff language is a just and reasonable basis for further developing provisions that would adapt the new Revenue Sufficiency Guarantee cost allocation methodology to the Ancillary Services Markets context, it would agree to file, within approximately 60 days from that determination, Ancillary Services Markets-specific tariff provisions embodying this suggested new allocation methodology. Within that period, the Midwest ISO would work with stakeholders to develop Ancillary Services Markets-adapted tariff language, and determine whether additional cost causation analysis is required for such purpose.

9. On August 21, 2008, the Commission issued an order commencing a paper hearing.[14] The Commission noted that parties in the stakeholder proceeding were not able to resolve the issues raised by Complainants. The Commission stated that to fulfill their obligations under section 206(b) of the FPA, Complainants carry the burden of proof in this proceeding and therefore must demonstrate, on the basis of substantial evidence, both that the rate in effect is unjust and unreasonable and that their proposed alternative rate is just and reasonable.[15] The Commission explained that it is not the Midwest ISO's responsibility to propose and justify a new cost allocation because the Midwest ISO is not the complainant but rather the party to which the complaints are directed.[16]

## II. <u>Procedural Matters</u>

10. On September 22, 2008, Ameren Services Company and Northern Indiana Public Service Company (Ameren and Northern Indiana), Wabash Valley Power Association (Wabash Valley), Great Lakes Utilities, Indiana Municipal Power Agency, Missouri Joint Municipal Electric Utility Commission, Missouri River Energy Services, Prairie Power, Inc., Southern Minnesota Municipal Power Agency, and Wisconsin Public Power Inc. and Indianapolis Power & Light (Midwest TDUs and IPL) filed briefs.[17] Wisconsin

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[14] *Ameren Servs. Co. v. Midwest Indep. Transmission Sys. Operator, Inc.*, 124 FERC ¶ 61,173 (2008).

[15] *Id.* P 9.

[16] *Id.*

[17] These entities are referred to collectively as Complainants or complainants.

Electric Power Company (Wisconsin Electric) also filed a brief in Support of Complainants. Reply briefs were filed by Duke Energy Corporation (Duke); Detroit Edison Company (Detroit Edison); the Coalition of Midwest Transmission Customers; DC Energy Midwest, LLC and Integrys Energy Services, Inc. (DC Energy and Integrys); American Municipal Power – Ohio, Inc.; Alliant Energy Corporate Services, Inc. (Alliant); Hoosier Energy Rural Electric Cooperative, Inc. (Hoosier); FirstEnergy Service Company (FirstEnergy); EPIC Merchant Energy, LP, SESCO Enterprises, LLC, and CAM Energy Trading, LLC (Financial Marketers); Otter Tail Power Company (Otter Tail), the Midwest ISO; and the Organization of Midwest ISO States. Edison Mission Group Companies (Edison Mission) filed an answer.

## III. Substantive Matters

### A. Justness and Reasonableness of the Currently Effective Revenue Sufficiency Guarantee Charge Cost Allocation

#### 1. Background

11. The Revenue Sufficiency Guarantee Charge recovers start-up, no-load and incremental costs of generators that are not recovered in the locational marginal price. There are two Revenue Sufficiency Guarantee Charges, one applicable to the day-ahead market and the other one applicable to the real-time market. The Revenue Sufficiency Guarantee Charge at issue in this complaint is the real-time Revenue Sufficiency Guarantee Charge.

12. The current tariff provision specifying the allocation of the real-time Revenue Sufficiency Charge is as follows:

> (ii) On any Day when a Market Participant actually withdraws Energy, the Market Participant shall be charged a Real-Time Revenue Sufficiency Guarantee Charge. The Market Participant's Real-Time Revenue Sufficiency Guarantee Charge shall be based on all Virtual Supply Offers for the Market Participant in the Day-Ahead Energy Market and for deviations based on the sum of the absolute value for the following four elements (a) Load deviations in the Real-Time Energy Market during the Operating Day (based on the difference between real-time Metered Load and Load scheduled in the Day-Ahead Energy Market, measured at each commercial node), (b) Import schedule deviations (based on the difference between real-time Import scheduled quantities and Imports scheduled in the Day-Ahead Energy Market), (c) Export schedule deviations (based on the difference between real-time Export scheduled quantities and

> Exports scheduled in the Day-Ahead Energy Market), and (d) injections of Energy including: (1) any difference between Energy output based on the Metered quantity of Energy (MWh) versus the hourly integrated Dispatch Instruction in the Real-Time Energy Market (excluding MW designated for either Regulation Down or Regulation Up); (2) any negative difference between Energy scheduled in the Day-Ahead Energy Market and real time Economic Minimum Dispatch amounts (excluding Resources committed in any [Reliability Assessment Commitment] processes conducted for the Operating Day); and (3) any negative difference between real time Economic Maximum Dispatch amounts and Energy scheduled in the Day-Ahead Energy Market.

### 2. Briefs

13. Ameren and Northern Indiana consider the Revenue Sufficiency Guarantee cost allocation currently in effect to be unjust, unreasonable and unduly discriminatory. They argue that two different parties can carry out the same transaction, with the same effect on Revenue Sufficiency Guarantee cost incurrence, and one party will be allocated Revenue Sufficiency Guarantee costs while the other will not. They argue that virtual supply offers and generator deviations cause Revenue Sufficiency Guarantee costs to be incurred, regardless of whether the market participant involved in such transactions physically withdraws energy in real time, but the currently-effective tariff provisions assign Revenue Sufficiency Guarantee charges only to market participants physically withdrawing energy.[18] Ameren and Northern Indiana assert the differing treatment of market participants is unfair, unjust and unreasonable and contrary to principles of rate design under the FPA. They note that the unduly discriminatory nature of the cost allocation means that it can be gamed, and that market participants bearing the majority of the costs can do little to change their behavior to avoid incurring Revenue Sufficiency Guarantee charges.

14. Ameren and Northern Indiana note the record in Docket No. ER04-691 supports the conclusion that Revenue Sufficiency Guarantee costs should be allocated to virtual supply offers and generator deviations regardless of the market participant's physical activity,[19] and no party challenged those findings. Based on these findings, Ameren and

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[18] The Midwest ISO tariff, in relevant part, states that on any day when a market participant actually withdraws any energy the market participant shall be charged a real-time revenue sufficiency charge. First Substitute Third Revised Sheet No. 577.

[19] *See* Order on Revenue Sufficiency Guarantee Complaints, 121 FERC ¶ 61,205 at P 81, 85.

Northern Indiana assert that the existing Revenue Sufficiency Guarantee cost allocation provisions do not follow the Commission's requirement that cost allocation follow cost causation. Ameren and Northern Indiana cite to a Midwest ISO Cost Causation Study, which supports the Commission's findings on Revenue Sufficiency Guarantee cost allocation regardless of physical activity, as additional confirmation that the existing Revenue Sufficiency Guarantee cost allocation is unjust, unreasonable and unduly discriminatory.[20] Ameren and Northern Indiana note the Midwest ISO analysis found that the existing cost allocation uplifts over 50 percent of Revenue Sufficiency Guarantee costs to load-serving entities, and does not allocate Revenue Sufficiency Guarantee costs to most virtual supply offers and generator deviations, even though they cause Revenue Sufficiency Guarantee costs.[21] They assert this demonstrated departure from cost causation is unjust and unreasonable.[22] According to Ameren and Northern Indiana, the Midwest ISO's Independent Market Monitor confirms the Midwest ISO conclusions in his *2007 State of the Market Report* by finding that the drivers of cost incurrence include net virtual supply offers, load deviations, generator deviations and transmission congestion.[23]

15. Wabash Valley asserts that the current Revenue Sufficiency Guarantee cost allocation does not consider the impact of all deviations from day-ahead schedules, including virtual offers, virtual bids and generation deviations, and creates different cost allocations to similar transaction deviations that have the same ultimate effect on the Reliability Assessment Commitment process.[24] Wabash Valley notes that Commission orders have recognized that virtual supply offers and generator deviations cause Revenue

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[20] *See* Ameren and Northern Indiana Brief at 15 and *Ameren Servs. Co. v. Midwest Indep. Transmission Sys. Operator, Inc.,* Midwest Independent Transmission System Operator, Inc., Electric Tariff Filing, Docket Nos. EL07-86-000, EL07-88-000, EL07-92-000, EL07-100-000 (filed March 2, 2008).

[21] Ameren and Northern Indiana also submitted data showing a 57 percent allocation of Revenue Sufficiency Guarantee costs to load-serving entities. *See* Second Schukar Affidavit at P 7.

[22] Ameren and Northern Indiana also consider the socialization of costs to be poor market design and economically inefficient, as determined by the Commission in Order No. 2000.

[23] *See* Ameren and Northern Indiana Brief at 18 and *2007 State of the Market Report*, Midwest ISO Independent Market Monitor, May 2008.

[24] The Reliability Assessment Commitment process refers to the commitment of additional resources at the close of the day-ahead market to serve expected load.

Sufficiency Guarantee charges regardless of whether they are withdrawing energy and that these activities are appropriately included in the charge calculation.[25]

16. Wabash Valley considers the current allocation to be unjust, unreasonable and inconsistent with cost causation since it does not allocate Revenue Sufficiency Guarantee costs to virtual supply and generators not withdrawing energy and instead uplifts these charges to load-serving entities. Wabash Valley also argues that it is unduly discriminatory to exempt certain marketers from Revenue Sufficiency Guarantee charges simply because they are not actually withdrawing energy. If virtual supply offers and generators not withdrawing energy can contribute to Revenue Sufficiency Guarantee costs, as the Commission has found, then these same virtual supply offers and generators should be allocated their fair share of the expense, according to Wabash Valley.

17. The Midwest TDUs and Indianapolis Power & Light submit an affidavit from Dr. David B. Sapper, demonstrating that market participants submitting virtual supply offers and having real-time deviations from their day-ahead schedules for imports, exports and generation cause Revenue Sufficiency Guarantee costs to be incurred whether or not they physically withdraw energy in real time. They note that the financial traders who urge the Commission to dismiss the complaints acknowledged in the record in the Revenue Sufficiency Guarantee proceeding in Docket No. ER04-691 that Revenue Sufficiency Guarantee cost causation is not limited to market participants that actually withdraw energy.

18. The Midwest TDUs and Indianapolis Power & Light explain that the causal relationship between a generator deviating from its day-ahead schedule and an accepted virtual supply offer, and the commitment of additional units and the incurrence of Revenue Sufficiency Guarantee costs hold true whether or not the market participant with generator deviations or virtual supply offers withdraws energy on a given day. According to the Midwest TDUs and Indianapolis Power & Light, generators deviating

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[25] *See Michigan S. Cent. Power Agency v. Midwest Indep. Transmission Sys. Operator, Inc.*, 124 FERC ¶ 61,180, at P 18 (2008) ("Like any other virtual supply offer, the virtual offers made by Michigan South Central caused [Revenue Sufficiency Guarantee] costs to be incurred, and it therefore was appropriate for the Midwest ISO to assess [Revenue Sufficiency Guarantee] charges."), *reh'g pending*; First Rehearing Order, 117 FERC ¶ 61,113 at P 46 ("We do not consider it illogical for parties withdrawing energy in the real-time market to pay [a Revenue Sufficiency Guarantee] charge based on their load, virtual supply and uninstructed deviations. All three components are activities that can affect [Revenue Sufficiency Guarantee] costs and therefore are appropriately included in the charge calculation."), *order on reh'g*, Second Rehearing Order, 118 FERC ¶ 61,212, *order on reh'g*, Third Rehearing Order, 121 FERC ¶ 61,131.

downward from dispatch instructions require the Midwest ISO to make up the deficiency, perhaps via the commitment of another generator. They note that generators producing more than scheduled can also cause Revenue Sufficiency Guarantee costs. Likewise, additional physical units are committed, leading to Revenue Sufficiency Guarantee costs, when market participants make an accepted virtual supply offer.

19. The Midwest TDUs and Indianapolis Power & Light note the Commission has already found that virtual supply offers, generator deviations and other market activities can and will cause Revenue Sufficiency Guarantee cost incurrence[26] and it has recognized that such activities cause Revenue Sufficiency Guarantee costs irrespective of the market participants' day-to-day physical energy withdrawals.[27] According to Dr. Sapper's affidavit, the analyses Midwest ISO included in its indicative tariff proposal support the conclusion that Revenue Sufficiency Guarantee costs are influenced more by virtual supply offers than by physical deviations.

20. The Midwest TDUs and Indianapolis Power & Light contend that the "actually withdraw energy" exemption violates the principle of cost causation and produces unjust, unreasonable and unduly discriminatory rates since all virtual supply offers engaged in by purely financial traders escape any allocation of Revenue Sufficiency Guarantee costs they cause.

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[26] *See* First Rehearing Order, 117 FERC ¶ 61,113 at P 46 ("[L]oad, virtual supply and [generators'] uninstructed deviations . . . [a]ll . . . are activities that can affect [Revenue Sufficiency Guarantee] costs and therefore are appropriately included in the charge calculation."); Third Rehearing Order, 121 FERC ¶ 61,131 at P 60 ("As the record in this proceeding shows, [Revenue Sufficiency Guarantee] charges are caused by the commitment of additional units in the [Reliability Assessment Commitment] and real-time markets, and, in turn, this physical unit commitment is caused

by a limited set of market activities such as virtual offers, load and resource deviations and exports and imports."); First Compliance Order, 118 FERC ¶ 61,213 at P 91 ("[V]irtual offers may cause unit commitment to the extent the virtual offer clears the market and must be replaced in the [Reliability Assessment Commitment] process with a physical unit.").

[27] Revenue Sufficiency Guarantee Order, 115 FERC ¶ 61,108, at P 83-84; First Rehearing Order, 117 FERC ¶ 61,113 at P 111 ("[V]irtual supply offers can cause [Reliability Assessment Commitment] and [Revenue Sufficiency Guarantee] costs whether they are made by financial trader market participants or other market participants with physical load and generation. We find no basis to differentiate among virtual supply offers since any accepted virtual supply offer could result in physical unit commitment to meet the physical needs of the real-time energy market.").

21. The Midwest TDUs and Indianapolis Power & Light also contend that it is necessary to ensure that all market participants who cause Revenue Sufficiency Guarantee costs bear a fair share of those costs so that they have proper market signals and incentives to minimize the Midwest ISO's overall Revenue Sufficiency Guarantee costs. Allowing non-load-serving entity virtual supply offers to remain exempt from payment of Revenue Sufficiency Guarantee costs would skew virtual traders' arbitrage decisions and sets up a perverse incentive for non-load-serving entity generators, according to the Midwest TDUs and Indianapolis Power & Light. Market participants that are not load-serving entities and therefore are shielded by the "actually withdraw energy" exemption are free to transact so as to increase the Midwest ISO's costs, knowing they will bear no responsibility for those costs so long as they avoid withdrawing energy in the real-time market.[28] The Midwest TDUs and IPL argue that this reasoning also applies to generator-only market participants and it is unjust, unreasonable and unduly discriminatory to provide certain generators with a competitive advantage over others based solely on whether they happen to also serve load.

### 3. **<u>Reply Briefs</u>**

22. Duke agrees with Ameren and Northern Indiana, the Midwest TDUs and Wabash Valley that it is unduly discriminatory for customers that withdraw energy to pay the entire amount of Revenue Sufficiency Guarantee costs, including the amount caused by other market participants that do not withdraw energy. Hoosier agrees that evidence has been presented that supports elimination of this provision.

23. FirstEnergy states that complainants have shown that virtual supply offers and generator deviations contribute to Revenue Sufficiency Guarantee costs without regard to whether or not the market participant "actually withdraws energy." It adds that complainants have shown that the current allocation is unfair and unduly discriminatory in that it assesses Revenue Sufficiency Guarantee costs to some, but not all, entities responsible for creation of these costs and also assesses Revenue Sufficiency Guarantee costs to some load-serving entities that were not responsible for creation of these costs. Also, FirstEnergy argues complainants have shown that the existing cost allocation is unjust and unreasonable because it distorts the basis on which market participants make decisions and provides perverse incentives to market participants.

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[28] The Midwest TDUs and Indianapolis Power & Light note that the Commission has recognized the potential adverse effects of not holding virtual supply offers responsible for Revenue Sufficiency Guarantee costs. Brief at 22 (citing First Rehearing Order, 117 FERC ¶ 61,113 at P 116 ("[N]ot assigning any [Revenue Sufficiency Guarantee] costs to virtual suppliers could provide incentives for them to engage in offer behavior that decreases the net benefits of their market activity at no cost to themselves, namely by shifting Revenue Sufficiency Guarantee costs to others.")).

24. Alliant asserts that the Midwest TDUs and Indianapolis Power & Light have clearly demonstrated the current tariff is unjust, unreasonable, unduly discriminatory and contrary to principles of cost causation. AMP-Ohio supports the conclusion of Midwest TDUs and Indianapolis Power & Light that the current Revenue Sufficiency Guarantee provisions are unjust, unreasonable, arbitrary and contrary to cost-causation evidence.

25. Detroit Edison objects to the currently-effective Revenue Sufficiency Guarantee allocation since it allows a large number of market participants responsible for real-time Revenue Sufficiency Guarantee cost incurrence to avoid all attendant cost responsibility.

26. The Midwest ISO does not view deletion of the phrase "actually withdraws energy" to be the elimination of an unjust and unreasonable provision, but rather an improvement of the Revenue Sufficiency Guarantee cost allocation mechanism.

27. Mr. Klein, representing Edison Mission, claims that removal of this provision would undermine the purpose of the existing allocation mechanism to provide an incentive for load-serving entities to bid their load in the day-ahead market, contributing to good market performance.

28. Edison Mission considers it reasonable that physical load should be responsible for all Revenue Sufficiency Guarantee charges since it reflects the requirement that costs should be allocated to those who benefit from their incurrence. Similarly, Financial Marketers assert that virtual market participants not withdrawing energy are not load and do not benefit from measures taken to ensure that load receives reliable service. Edison Mission asserts that Revenue Sufficiency Guarantee costs are incurred to ensure that the right mix of generating units are committed to serve physical load in real time. Edison Mission notes that these decisions have no cost-causation relationship with virtual offers. Edison also argues the Commission routinely allocates reliability costs to load when there is no specific cost-causation analysis demonstrating the need for a different allocation.[29]

29. DC Energy and Integrys claim the complainants are in error when they state that unit commitment is the root cause of Revenue Sufficiency Guarantee costs and there is no basis for distinguishing between virtual supplies and physical causes of commitment. DC Energy and Integrys explain that there are many other causes of Revenue Sufficiency Guarantee costs, such as high loads, conservative operations to manage reliability, unexpected changes in transmission availability, and loop flow. They also point to the lack of evidence showing that virtual supplies cause Revenue Sufficiency Guarantee costs on a similar basis as the other causes or at all. Financial Marketers assert that it is

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[29] Edison Mission Brief cites to Commission precedent accepting allocations to load since it was difficult to determine cause and effect and load was determined to be the beneficiary. Brief at 29-30 (citing cases).

the supply needs and decisions of load-serving entities that cause Revenue Sufficiency Guarantee costs to be incurred; therefore, allocation of Revenue Sufficiency Guarantee costs to load is consistent with cost-causation principles.

30. DC Energy and Integrys assert that financial market participants are different than market participants serving load and therefore it is rational to allocate Revenue Sufficiency Guarantee costs to physical participants and not to financial participants. They explain that financial participants have the incentive to cause convergence between day-ahead and real-time prices, whereas physical load-serving entities have obligations to serve load and would not take arbitrage positions deemed to be speculative. DC Energy and Integrys provide examples and testimony that physical participants have incentives to cause divergence, while financial participants have incentives only to cause convergence.

31. DC Energy and Integrys argue that virtual activity from financial participants is not expected to contribute significantly to real-time Revenue Sufficiency Guarantee cost causation since financial participants' bids do not reflect a hedge on a physical position that otherwise would have been in the day-ahead market. In contrast, virtual activity of physical participants is a hedge for physical activity that is expected to contribute significantly to real-time Revenue Sufficiency Guarantee cost causation. DC Energy and Integrys also contend that virtual activity used as a proxy for physical load by load-serving entities is more detrimental to the market and could cause operators to think that virtual supply offers must be replaced by actual generation.

32. DC Energy and Integrys conclude that since virtual activity from financial participants causes more generating plants to be dispatched in the day-ahead market when the market anticipation is for greater real-time market needs, and fewer plants to be dispatched when the market anticipation is for lower real-time market needs, these virtual transactions are not expected to contribute significantly to real-time Revenue Sufficiency Guarantee cost causation.

33. DC Energy and Integrys do not consider the possibility that a physical participant would set up an affiliate to engage in virtual trading and thereby avoid Revenue Sufficiency Guarantee charges to be discriminatory or manipulative since any market participant can do this. Dr. Hogan describes the benefits of competition from virtual bidders in improving efficiency, reducing hedging costs and promoting liquidity.[30] In consideration of the foregoing arguments and the Commission determination finding the Revenue Sufficiency Guarantee charge is not arbitrary or unduly discriminatory since the end-result of the charge does not result in any harm,[31] DC Energy and Integrys conclude

[30] *See* DC Energy and Integrys Brief at Exhibit 3.

[31] *See* First Rehearing Order, 117 FERC ¶ 61,113 at P 58.

the Complainants have failed to demonstrate that the current tariff is unduly discriminatory.

34. DC Energy and Integrys note the Commission rejected the Midwest ISO's attempt to remove the "actually withdrawing energy" phrase, since the Midwest ISO failed to provide evidence supporting this removal.[32] They further note that neither the Midwest ISO nor Complainants have set forth evidence or analysis to show that removing this phrase from the tariff is based on cost causation.

35. Edison Mission contends Complainants have not provided evidence demonstrating that virtual supplies increase costs and therefore there is no basis to find the existing rate is unjust and unreasonable.

36. Edison Mission contends the "actually withdrawing energy" provision was written into the tariff to provide an incentive for load-serving entities to bid their entire load in the day-ahead market, and thereby ensure that under-scheduling of load in the day-ahead market suppresses day-ahead prices below real-time prices. Edison Mission asserts these facts demonstrate why the current allocation methodology is not unduly discriminatory.

37. Financial Marketers consider the Complainant proposals to be collateral attacks on Commission orders approving the Revenue Sufficiency Guarantee provisions of the TEMT.

### 4. <u>Commission Determination</u>

38. The current tariff provision at issue specifies that the Revenue Sufficiency Guarantee charge is applied to market participants that withdraw energy during a day. For those market participants withdrawing energy, Revenue Sufficiency Guarantee charges are allocated based on virtual supply offers, deviations and other factors.[33] Complainants state that this provision is unduly discriminatory because two market participants undertaking the same activities that can cause the incurrence of Revenue Sufficiency Guarantee costs would be treated differently, resulting in some market

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[32] *See* First Compliance Order, 118 FERC ¶ 61,213 at P 84.

[33] The tariff states, in relevant part: "On any Day when a Market Participant actually withdraws Energy, the Market Participant shall be charged a Real-Time Revenue Sufficiency Guarantee Charge. The Market Participant's Real-Time Revenue Sufficiency Guarantee Charge shall be based on all Virtual Supply Offers for the Market Participant in the Day-Ahead Market and for deviations based on the sum …" First Substitute Third Revised Sheet No. 577.

participants whose activities can cause Revenue Sufficiency Guarantee costs being exempted from Revenue Sufficiency Guarantee cost responsibility.

39. The evidence in this proceeding indicates there is no cost-causation basis for charging certain market participants Revenue Sufficiency Guarantee charges because they withdraw energy on a day, while exempting other market participants, engaged in the same activities as the first group of market participants, from the same charge because they are not withdrawing energy that day. We therefore find the current tariff provision to be unduly discriminatory and therefore unjust and unreasonable.

40. The most significant evidence upon which we base our finding is the results of the multi-year effort by the Revenue Sufficiency Guarantee Task Force, which determined the major drivers of Revenue Sufficiency Guarantee cost incurrence. Of all the many factors determined to contribute to Revenue Sufficiency Guarantee cost incurrence (to be discussed in the next section), the task force did not find that the withdrawal of energy was a factor in determining whether or not a market participant contributed to the incurrence of Revenue Sufficiency Guarantee costs. The task force did find that generator deviations and virtual offers were contributors to Revenue Sufficiency Guarantee cost incurrence, and their impact on Revenue Sufficiency Guarantee cost incurrence was not a function of whether the market participant was withdrawing energy.[34]

41. The Independent Market Monitor came to a similar conclusion in the *2007 State of the Market Report,* in which it concluded that major drivers of Revenue Sufficiency Guarantee cost incurrence were transmission congestion, generator and load deviations and net virtual supply offers. The Independent Market Monitor's findings on the impact of these factors on Revenue Sufficiency Guarantee cost incurrence were not conditioned on whether the market participant withdrew energy.[35] We also agree with Complainants that the record of Docket No. ER04-691 supports the conclusion that Revenue Sufficiency Guarantee costs should be allocated to virtual offers, irrespective of whether the market participant withdraws energy.[36]

42. Dr. Sapper, representing the Midwest TDUs and Indianapolis Power & Light, explains that virtual supply offers create real-time Revenue Sufficiency Guarantee costs when they clear the day-ahead market, thereby displacing physical supply offered into the

[34] *See* Ameren and Northern Indiana Brief at Attachment C.

[35] *See id.* at 15 n.31 (citing Independent Market Monitor comments in Midwest ISO March 3, 2008 compliance filing in Docket No. ER04-691).

[36] *See* First Rehearing Order, 117 FERC ¶ 61,113 at P 111.

day-ahead market, and must be replaced in the Reliability Assessment Commitment process with physical units with production costs that are not covered by real-time energy market revenues. Dr. Sapper asserts this causal relationship between virtual supply offers and real-time Revenue Sufficiency Guarantee costs does not require that the market participant submitting the virtual supply offer actually withdraw energy.[37]

43. Dr. Sapper also explains that the energy from generation and imports that deviate negatively or exports that deviate positively from day-ahead schedules may need to be replaced by the commitment of additional units and thereby cause real-time Revenue Sufficiency Guarantee costs. He further asserts the causal relationships between these deviations and Revenue Sufficiency Guarantee costs do not depend on the actual withdrawal of energy by the market participant.[38]

44. While the tariff provision serves other purposes, such as providing an incentive for market participants to bid in the day-ahead market, we cannot accept a tariff provision that has no relationship to cost causation.[39] Nor can we accept this provision on the basis that it assesses a charge to load in recognition of the general benefit to load that additional unit commitment provides, as Edison Mission argues. The result of such a cost allocation is that certain market participants are paying for Revenue Sufficiency Guarantee costs caused by other market participants – even though both sets of market participants engage in activities that may have the same effect of requiring the commitment of additional resources in real time. Such an allocation is unduly discriminatory, ignores the connection between cost responsibility and cost incurrence, and therefore is not a basis for a just and reasonable rate.

45. We also find persuasive arguments by the Midwest TDUs and Indianapolis Power & Light that the current provision is detrimental to market efficiency. By exempting certain market participants engaging in virtual transactions and generator deviations from Revenue Sufficiency Guarantee charge responsibility, the current allocation provides an incentive for these participants to engage in offer behavior that drives up Revenue Sufficiency Guarantee costs and shifts costs to others, thereby reducing the net benefits of

[37] Affidavit of Dr. Sapper at P 14-15.

[38] *Id.* P 19.

[39] "The basic principle of cost causation mandates that customers pay only those costs that are attributable to them." *Enron Power Marketing, Inc.*, 119 FERC ¶ 63,013, at P 157 (2007) (citing *KN Energy, Inc., v. FERC,* 968 F.2d 1295, 1300 (D.C. Cir. 1992) ("Simply put, it has been traditionally required that all approved rates reflect to some degree the costs actually caused by the customer who must pay them.")).

their market activity. Given the high level of Revenue Sufficiency Guarantee costs, this detrimental impact on market efficiency is an important consideration.

46. We restrict our review in this section to the Complainants' position that the phrase "actually withdraws energy" is unduly discriminatory. This is the position upon which their complaint is based, and it is the position we must evaluate as required under FPA section 206.[40] We consider the position of DC Energy and Integrys that virtual offers from financial participants contribute less to Revenue Sufficiency Guarantee cost causation than physical participants to go to the selection of a replacement rate, if the Commission finds that the Complainants have shown that the existing allocation is unduly discriminatory. We also consider claims by parties other than the Complainants that the current tariff is unjust and unreasonable to be beyond the scope of our determination in this section regarding the tariff provision at issue in the complaints. Therefore, we address the cost causation arguments raised by DC Energy and Integrys, Edison Mission and Financial Marketers in the next section.

47. The Commission determinations discussed by DC Energy and Integrys have been taken out of context. The Commission determination that the Revenue Sufficiency Guarantee charge was not unduly discriminatory was not addressing the "actually withdraws energy" section, but instead was addressing a second-pass allocation to load. As discussed above, the Commission in Docket No. ER04-691 found no basis to differentiate between market participants withdrawing or not withdrawing energy in determining the appropriate cost allocation, but could not pursue tariff revisions in the section 205 proceeding.[41]

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[40] We consider the claim of Wabash Valley that the current allocation is unreasonable because it does not include virtual offers and bids and the net amount of physical deviations to go to the selection of a replacement rate, if the Commission finds that the Complainants have shown that the existing allocation is unduly discriminatory. This issue is discussed in the next section.

[41] In this context, we do not consider the complaints to be collateral attacks on the Commission's decisions in Docket No. ER04-691, as Financial Marketers claim. The Commission expressly contemplated in that proceeding the possibility of a future proceeding to re-evaluate the filed rate, noting that "[w]hile the allocation of guarantee costs, which currently is based on the factors that cause [Revenue Sufficiency Guarantee] costs to be incurred, arguably could be refined or improved, changes . . . cannot be made to a Commission-approved and effective tariff in the instant section 205 proceeding . . . . Rather, such changes can only be made pursuant to section 206." Second Rehearing Order, 118 FERC ¶ 61,212 at P 22.

48. Responding to Edison Mission, our finding that the current rate is unduly discriminatory is sufficient for a determination that the current rate is unjust and unreasonable. Our finding does not require a determination that virtual supplies increase costs. We discuss the Edison Mission cost tests more fully in the next section.

49. For the foregoing reasons we find that the current tariff, which only allocates Revenue Sufficiency Guarantee costs to market participants that withdraw energy, is not based on cost causation. Inasmuch as it exempts some certain market participants from any cost responsibility for activities that cause Revenue Sufficiency Guarantee costs, but assesses charges to other market participants, we also find the current tariff to be unduly discriminatory. For these reasons, we consider the current tariff provision on Revenue Sufficiency Guarantee cost allocation to be unjust and unreasonable.

### B. Proposed Revenue Sufficiency Guarantee Cost Allocation

#### 1. Briefs

50. Ameren and Northern Indiana propose to allocate Revenue Sufficiency Guarantee costs to the transactions, market participants and factors that cause Revenue Sufficiency Guarantee costs to be incurred, including transmission congestion, headroom[42] and all deviations. In addition to aligning cost allocation more closely with cost causation, Ameren and Northern Indiana claim the proposed cost allocation would give market participants a tool they could use to minimize their deviations, thereby lowering Revenue Sufficiency Guarantee cost incurrence. Ameren and Northern Indiana also argue that their proposed cost allocation would avoid the infirmities of the current cost allocation such as a large cost allocation to load-serving entities disproportionate to the costs they cause and the avoidance of Revenue Sufficiency Guarantee costs by many market participants.

51. The proposed cost allocation is based on an indicative proposal by the Midwest ISO that is supported by a majority of stakeholders. According to the Midwest ISO, this cost allocation enhances the tracking of cost causation[43] by basing the allocation of

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[42] Headroom refers to the additional capacity the Midwest ISO must commit during periods when demand is changing at higher than average rates.

[43] The Midwest ISO tested its cost allocation against relevant data in 2007 and undertook a study to determine whether reasonable results would be produced from an allocation of 2007 Revenue Sufficiency Guarantee costs in accordance with the proposed allocation. The Midwest ISO states the data analysis and study results support the proposed cost allocation. For example, the study found that over a third of the Revenue Sufficiency Guarantee costs result from unit commitments made to respond to transmission congestion and most of the remaining costs were due to unit commitments (continued…)

Revenue Sufficiency Guarantee costs on three major reasons for the commitment of units after the day-ahead market closes: (1) managing a transmission constraint or addressing a local reliability concern; (2) addressing intra-hour demand changes; and (3) adjusting to deviations from day-ahead schedules.[44] The proposal provides an opportunity for market participants to net certain deviations when market participants provide the Midwest ISO sufficient advance notice of anticipated schedule changes, thereby avoiding the need for additional commitments in the Reliability Assessment Commitment process.

52. In consideration of the fact that the Midwest ISO cannot implement the proposed cost allocation for at least another seven months and can not implement it retroactively to August 10, 2007, Ameren and Northern Indiana propose an alternative just and reasonable cost allocation[45] for this time period or prospectively if the Commission determines it would be preferable to the new proposal.

53. Wabash Valley recommends the Commission direct removal of the sentence, "[o]n any Day when a Market Participant actually withdraws any Energy, the Market Participant shall be charged a Real-Time revenue sufficiency guarantee charge" from the tariff on a going-forward basis. This revision will result in an assessment of Revenue Sufficiency Guarantee charges on all virtual supply offers and real-time load, injection, export and import deviations, states Wabash Valley. Wabash Valley asserts this revision will remove the illogical result of allowing some market participants creating Revenue Sufficiency Guarantee charges to escape being charged those costs and inappropriately shifting Revenue Sufficiency Guarantee costs to load-serving entities that should not be paying them and do not have any way to plan for or hedge against those costs. Wabash Valley claims this modification will be cost-causation justified.

54. As an alternative, Wabash Valley supports the Midwest ISO indicative proposal. Wabash Valley considers this allocation to be consistent with cost causation. Because this proposed allocation cannot be implemented in a timely manner, Wabash Valley recommends it should be applied prospectively only from the time it can be implemented.

55. The Midwest TDUs and Indianapolis Power & Light consider the most appropriate remedy to be the elimination of the "actually withdraws energy" language

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to address deviations from schedules such as virtual supply offers and generator deviations, according to the Midwest ISO.

[44] These allocation categories are called allocation "buckets."

[45] This proposed rate, called the replacement cost allocation by some commenters, would delete "actually withdraws energy" from the current tariff.

from the current tariff since this phrase bears no rational relationship to cost causation.[46] Wisconsin Electric supports this position. The Midwest TDUs and Indianapolis Power & Light also note such a change is supported by the Commission's finding that there is no basis to distinguish between virtual supply offers by those who are [load-serving entities] versus those who are purely virtual traders,[47] and the Midwest ISO analysis shows the strength of the correlation between virtual supply offers and Revenue Sufficiency Guarantee costs. The Midwest TDUs and Indianapolis Power & Light assert that while elimination of the "actually withdraws energy" language does not result in the ideal allocation of Revenue Sufficiency Guarantee costs, cost causation principles do not require "exacting precision"[48] and therefore it is sufficient that the complainants have shown that eradication of the "actually withdraws energy" exemption will better track cost causation.

56. The Midwest TDUs and Indianapolis Power & Light argue that the Commission does not need to accept prospective-only mechanisms to replace this cost allocation and assert that the FPA requires the continued use of the newly adopted just and reasonable rate unless it is found that the Revenue Sufficiency Guarantee cost allocation applicable to the refund period is unjust and unreasonable if applied prospectively. The Midwest TDUs and Indianapolis Power & Light state that any modifications or new provisions should be made only upon a filing by the Midwest ISO in a section 205 proceeding and it is shown that the replacement provisions are just and reasonable.

57. The Midwest TDUs and Indianapolis Power & Light do not object to the prospective application of the Midwest ISO redesign proposal provided that it does not delay resolution of this proceeding, particularly in light of the 15 month limit on the statutory refund period. They aver that the Midwest ISO's proposal should be implemented only as a successor to, and not in lieu of, the remedies described above for the refund period. The Midwest TDUs and Indianapolis Power & Light also recommend that the proposal be modified to reverse the order of the second and third cost allocation

[46] The Midwest TDUs and Indianapolis Power & Light also recommend the addition of the term "cleared" before "virtual supply offers" to clarify that the Revenue Sufficiency Guarantee charges related to virtual transactions are based only on those virtual supply offers actually accepted in the day-ahead market.

[47] Brief at 25 (citing Second Rehearing Order, 118 FERC ¶ 61,212 at P 111).

[48] *Id.* at 26 (citing *Midwest ISO Transmission Owners v. FERC*, 373 F.3d 1361, 1368 (D.C. Cir 2004)).

buckets and to expand the market participants responsible for second-pass Revenue Sufficiency Guarantee charges.[49]

58. Responding to their opponents, Ameren and Northern Indiana contend the Midwest ISO analysis of reasons for committing units in its Reliability Assessment Commitment process provides as much evidence of cost causation as is possible. Ameren and Northern Indiana also note that as there are multiple reasons for unit commitment, it is not possible to prove causation. Ameren and Northern Indiana do not consider lack of perfect cost causation to be an impediment to a finding that the Complainant proposal is just and reasonable in light of Commission and court precedent that does not require this standard.[50] Ameren and Northern Indiana assert that if the Commission waits for the perfect cost causation study it will never reach a fair and equitable cost allocation.

### 2. Reply Briefs

#### a. Reply Briefs Supporting Complainant Positions

59. While Duke supports both alternative cost allocations proposed by Ameren and Northern Indiana, Wabash Valley, the Midwest TDUs and Indianapolis Power & Light and contends they both meet the statutory standard.[51] It expresses its preference for the latter alternative that eliminates the "actually withdraws energy" language from the tariff, thereby harmonizing the backward and forward looking treatment and avoiding the potential for further confusion. Duke notes that if the Midwest TDU proposal were adopted, the Midwest ISO would be free to subsequently seek to amend the tariff in a section 205 filing.

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[49] The second-pass Revenue Sufficiency Guarantee charge recovers those Revenue Sufficiency Charge costs not recovered in the initial allocation to virtual offers and deviations, and allocates these remaining costs on a load-ratio share basis.

[50] *See* First Compliance Order, 118 FERC ¶ 61,213 at P 85 n.24 (citing *Colorado Interstate Gas Co. v. FPC*, 324 U.S. 581, 589 (1945) ("Allocation of costs is not a matter for the slide rule. It involves judgment on a myriad of facts. It has no claim to an exact science."); *Preventing Undue Discrimination and Preference in Transmission Service,* Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 559 (2007)).

[51] Duke cites to precedent that establishes the Commission has broad authority to select methods for determining just and reasonable rates or choose a rate from a range of just and reasonable rates. Brief at 3 (citing *Am. Elec. Power Serv. Corp. v. Midwest Indep. Transmission Sys. Operator, Inc.* 122 FERC ¶ 61,083, at P 113, n.129 (2008) (*citing FPC v. Conway Corp.,* 426 U.S. 271, 278 (1976)).

60. Detroit Edison supports adoption of the indicative cost allocation developed by the Midwest ISO which it says is more granular than the cost allocation currently in effect and more closely links the imposition of real-time Revenue Sufficiency Guarantee costs to the actions and entities causing their incurrence. Detroit Edison asserts this new cost allocation will enable the Midwest ISO to assess real-time Revenue Sufficiency Guarantee charges to those responsible for the underlying costs and therefore comports with the Commission's longstanding cost causation ratemaking principles. Detroit Edison submits that the Commission must modify the Revenue Sufficiency Guarantee cost allocation to ensure that market players take financial responsibility for the costs they cause. Detroit Edison supports the Ameren and Northern Indiana position that during the refund period real-time Revenue Sufficiency Guarantee charges should be assessed on all virtual supply offers that clear the day-ahead market and on all independent generators that deviate from their day-ahead schedules.

61. FirstEnergy supports the indicative allocation and opposes the replacement rate proposed by the Midwest TDUs and Wabash Valley. FirstEnergy explains that the indicative allocation will include and account for virtual offers and bids and that the Midwest ISO has previously demonstrated that virtual offers and bids contribute to unit commitments and constraints in both the day-ahead and real-time market. As such, FirstEnergy argues that these market participants should be assessed Revenue Sufficiency Guarantee charges where applicable. FirstEnergy also notes that the indicative allocation is an improvement since it will include procedures to allow market participants to net schedule deviations with schedule changes, and thereby allow them to lower the total amount of Revenue Sufficiency Guarantee costs.

62. FirstEnergy opposes the replacement rate proposal on the basis that the Midwest TDUs and Wabash Valley have not satisfied their section 206 burden. FirstEnergy asserts that the replacement proposal, in contrast to the indicative allocation, does not account for factors that have been shown to result in the creation of additional Revenue Sufficiency Guarantee costs such as differences in reasons for commitment of resources, locational aspects of deviations, schedule changes where the Midwest ISO has given sufficient advance notice, and all deviations from day-ahead schedules. FirstEnergy also notes that the replacement proposal does not assign these costs to market participants that create them and the Midwest TDUs and Wabash Valley have not explained why it is just and reasonable to ignore these factors. FirstEnergy also opposes the Midwest TDU proposal to expand the existing Revenue Sufficiency Guarantee second-pass to all market participants since it does not match Revenue Sufficiency Guarantee costs to the market participants that cause them. FirstEnergy asserts Ameren has not shown the rate it proposes for calculating refunds is just and reasonable.

63. If the Commission finds the current allocation to be unjust and unreasonable, Otter Tail supports removal of the "actually withdraws energy" provision until the Midwest ISO makes a section 205 filing that more closely aligns cost causation and allocation.

Otter Tail states that virtual offers may contribute to Revenue Sufficiency Guarantee costs based on the new studies provided by the Midwest ISO to stakeholders.

64. The Organization of Midwest ISO States also recommends removal of the "actually withdraws energy" provision since such a revision would serve as a just and reasonable methodology for Revenue Sufficiency Guarantee costs allocation and for providing refunds. Alliant asserts that the Midwest TDUs and Indianapolis Power & Light have met their burden under section 206 in their proposal to eliminate this provision and/or expand the second-pass distribution to include all market participants. AMP-Ohio also supports the Midwest TDU and Indianapolis Power & Light position, and notes that it is easier to implement going forward. AMP-Ohio also considers the Ameren proposal to be just and reasonable. AMP-Ohio agrees with Duke that the Commission should not pay heed to parties currently benefiting from the current tariff provisions who argue the existence of two just and reasonable proposals prevents the Commission from choosing one over the other.

65. Coalition of Midwest Transmission Customers note that given the widespread agreement that the causation of Revenue Sufficiency Guarantee costs is not necessarily related to whether a party physically withdraws energy, the provision that ties Revenue Sufficiency Guarantee costs to physical withdrawals is unfair and should not continue to exist in the tariff. Coalition of Midwest Transmission Customers assert that perpetuating the tie is unduly discriminatory and violates the Commission's cost-causation principles

66. The Midwest ISO agrees with complainants that the replacement allocation need not be precise, as long as it falls within the zone of reasonableness and is superior to the existing methodology. The Midwest ISO states that the indicative proposal can only be applied prospectively after Ancillary Services Markets start and it would take at least seven months to prepare its systems and software for full implementation. The Midwest ISO also indicates it is amenable to adopting the alternative proposal, i.e., removal of the "actually withdraws energy" phrase as an interim cost allocation.

67. The Midwest ISO does not believe the Midwest TDU/Indianapolis Power & Light proposal to expand the second-pass allocation to all market participants has been substantiated by its benefits-based arguments. Carried to its conclusion, the benefit argument would impose all market charges on all market participants because they benefit, regardless of whether they cause particular types of charges, and this result is inconsistent with cost causation principles. The Midwest ISO also notes that the second-pass is still under consideration in stakeholder discussions and therefore it is premature to resolve this issue pending completion of stakeholder consultations.

68. The Midwest ISO does not consider the Midwest TDU/Indianapolis Power & Light proposal to put the deviation bucket ahead of the intra-hour demand bucket to be appropriate since the sequence of allocation categories is based on the priority of the principal reasons for Reliability Assessment Commitment commitments. The Midwest

ISO considers it appropriate to place intra-hour demand charges in the second bucket because they are next in degree of specificity of reasons for making Reliability Assessment Commitment commitments and such a designation facilitates the allocation to load of any remaining unloaded capacity of resources that are Reliability Assessment Commitment committed in real-time. The Midwest ISO notes the Market Subcommittee voted to reverse the order of the second and third buckets.

69. The Midwest ISO states that the indicative proposal can be adopted without having to prove the existing, refund or interim Revenue Sufficiency Guarantee allocation is unjust and unreasonable.

#### b. Reply Briefs Opposing Complainant Positions: Comments On Proposal To Remove "Actually Withdraws Energy" From Current Tariff

70. DC Energy and Integrys fault the Complainants' proposal to remove the "actually withdraws energy" phrase, arguing that it is not supported by evidence and the Commission rejected this approach in Docket No. ER04-691. E.ON notes that the alternative proposal could result in Revenue Sufficiency Guarantee charges for some importing activity even where it has not been determined that such importing activity results in Revenue Sufficiency Guarantee cost incurrence, and therefore removal of the "actually withdraws energy" phrase would not adequately take into account principles of cost causation for these transactions.

71. DC Energy and Integrys estimate that removal of the "actually withdraws energy" phrase would result in a Revenue Sufficiency Guarantee charge to virtual supply of $2.57 per virtual supply megawatt-hour, or 50 percent of real-time market Revenue Sufficiency Guarantee costs. In contrast, they claim the New York Independent System Operator, Inc. has a cost-causation driven process that results in a charge of $0.08. DC Energy and Integrys assert that since the current tariff charge of zero is closer to the New York Independent System Operator, Inc.'s charge of $0.08 than the $2.57 that results from the Midwest ISO analysis, the current tariff more closely resembles cost causation than the complainant proposal.

72. Mr. Andrew Hartshorn, representing Edison Mission argues that removal of the "actually withdraws energy" provision would expose virtual supply to real-time Revenue Sufficiency Guarantee charges associated with other factors such as loop flow and transmission outages that are not impacted by the presence of virtual participants.

**c. Reply Briefs Opposing Complainants Positions: Comments On Statistical and Data Analysis By the Revenue Sufficiency Guarantee Task Force**

73. DC Energy and Integrys assert the Midwest ISO analysis that forms the basis of the Complainant cost allocation proposal is not probative and cannot be relied on for cost allocation since it does not provide evidence of cost causation. Financial Marketers also do not consider correlation among variables to mean that one variable is causing the other. DC Energy and Integrys further note the Complainants have not shown the correlation analysis to be statistically significant, and, in any case, individual correlation factors are meaningless to establish cost causation because there are too many concurrent drivers at the same time to conclude that any one of them is the cause of Revenue Sufficiency Guarantee costs.[52] Financial Marketers also assert that it is impossible to verify whether the results are statistically significant and that the regression analysis of Ameren and Northern Indiana has specification errors that bias the results.

74. DC Energy and Integrys fault the Midwest ISO analysis for its conclusion that Revenue Sufficiency Guarantee costs are 70 percent higher than average costs in hours in which net virtual supply transactions occur since this conclusion is only based on 12 days of analysis and is not supported by a majority of the Revenue Sufficiency Guarantee Task Force. They also fault the Complainants for not addressing the possibility that any correlation between Revenue Sufficiency Guarantee costs and virtual supplies can be explained by other drivers coincident with virtual supplies. DC Energy and Integrys note there is a correlation between abnormally low real-time locational marginal prices and high real-time Revenue Sufficiency Guarantee charges, and the incidence of low real-time locational marginal prices has nothing to do with virtual transactions.

75. Financial Marketers consider the 70.3 percent correlation to be statistically insignificant because of flaws in the study. They note it is impossible to determine whether the average used is higher or lower than the average hourly Revenue Sufficiency Guarantee cost would be without virtual transactions. Financial Marketers assert an analysis of virtual transactions in all hours -- both in hours in which there is net virtual supply and hours in which there is net virtual demand -- shows no net impact on Revenue

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[52] Dr. Lorna Greening, representing DC Energy and Integrys concluded that the categories of factors causing Revenue Sufficiency Guarantee costs are not independent of each other and therefore the correlation between any one category and Revenue Sufficiency Guarantee costs cannot be relied upon to show that a particular category caused Revenue Sufficiency Guarantee costs. Her analysis showed that over half of the hours where net virtual supply is thought to cause Revenue Sufficiency Guarantee charges can equally be explained by other factors such as constraint management, ramp capability, and forecast error. DC Energy and Integrys Reply Brief at 31-33.

Sufficiency Guarantee costs and therefore no inferences can be drawn by using the average with virtual transactions.

76. Edison Mission contends the correlation analysis did not attribute any Revenue Sufficiency Guarantee costs to any particular factor, did not perform any but-for analysis with and without virtual bids or try to isolate cost causation, and did not consider any changes in total costs or consider the effect of real-time energy prices on real-time Revenue Sufficiency Guarantee costs. Edison Mission considers illogical Dr. Sapper's argument that because high net cleared virtual supply offers correlate with high Revenue Sufficiency Guarantee costs, the former causes the latter. Edison Mission notes that Commission precedent rejects claims that statistical correlation shows causation.

77. Edison Mission asserts the Midwest ISO analysis does not analyze how Revenue Sufficiency Guarantee costs would change if there were fewer, greater, or no virtual offers, and therefore assumes that virtual offers are equally cost causative with other factors. Edison Mission does not consider this analysis to be informative for determining cost causation. Financial Marketers contend that a tariff proposal allocating Revenue Sufficiency Guarantee costs to virtual transactions can be held to be just and reasonable only if the evidence demonstrates that virtual transactions cause more costs to be incurred than would be the case if there were no virtual transactions. If the amount of Revenue Sufficiency Guarantee costs is shown to be higher with virtual transactions in the market than without, then an allocation of the excess to virtual transactions would be just and reasonable, and an allocation above the excess would be unjust and unreasonable.

78. Likewise, Financial Marketers assert the Midwest ISO analysis shows that the cause of Revenue Sufficiency Guarantee costs is over-forecasting of load, not virtual supply, in the almost one-third of hours in which virtual supply has been greater than virtual demand since January 1, 2007. Financial Marketers claim this statistic shows that Complainants have made no effort to separate out other elements that cause Revenue Sufficiency Guarantee costs and high forecast errors have been ignored despite their link to Revenue Sufficiency Guarantee cost incurrence. Also, Financial Marketers consider the contribution of virtual offers to Revenue Sufficiency Guarantee costs to be insignificant in hours in which the Midwest ISO under-forecasts loads in the forward Reliability Assessment Commitment. Financial Marketers conclude that the Complainants proposals are unjust and unreasonable and not based on a cost-causation analysis since they would allocate Revenue Sufficiency Guarantee costs to virtual offers in all hours while virtual supply offers are a material contributor in only 15 percent of hours in 2007 and less than nine percent in 2008 to date.

79. Financial Marketers conclude that the empirical evidence presented by complainants is so flawed that it is not reasonable to assign Revenue Sufficiency Guarantee costs to virtual supply. Financial Marketers contend the Midwest ISO data analysis cannot be relied on since it treats every hour for which there is net virtual demand as an hour having zero net virtual supply and zero net virtual demand, rather than

a negative amount of net virtual supply. Financial Marketers claim that counting the negative value of hours with net virtual demand would confirm that on a net basis virtual trading does not cause Revenue Sufficiency Guarantee costs to be incurred. They also claim that the sample, based on 36 days of data, is too small to support a conclusion that the previously approved Revenue Sufficiency Guarantee allocation in unjust and unreasonable or that the Complainants' proposals are just and reasonable. Financial Marketers also cite flaws in the Midwest ISO study such as the fact that it is not clear if the study relied on cleared virtual supply data and whether the net virtual supply offer correlation coefficient was based on net virtual offers, all cleared virtual offers, or a hybrid that zeroes out hours with net virtual demand. The attached analysis by Dr. Lesser also disputes the data presented in the Midwest ISO study, and performs a statistical analysis that he claims shows the Revenue Sufficiency Guarantee cost differences presented (between "High," "Nominal," and "Low" Revenue Sufficiency Guarantee days) are insignificant.

80. Financial Marketers state that virtual transactions prevent or reduce Revenue Sufficiency Guarantee costs in hours in which there is net virtual demand since there is a surplus of committed capacity that can be used to fulfill requirements caused by constraints and other factors and the amount of generation that must be committed in the Reliability Assessment Commitment process is reduced. They note that Revenue Sufficiency Guarantee costs were 38.8 percent lower than average in hours with net virtual demand and that these hours account for nearly two-thirds of all hours in 2007 and for nearly 75 percent of the hours to date in 2008. The Financial Marketers also point out that in 96.4 percent of the hours where there were zero Revenue Sufficiency Guarantee costs, there was net virtual demand. Financial Marketers conclude that these figures demonstrate that the presence of virtual transactions and net virtual demand caused a reduction in Revenue Sufficiency Guarantee costs in two-thirds of all hours.[53] They conclude that the complainants' rate proposal is unjust and unreasonable since it allocates Revenue Sufficiency Guarantee costs to virtual transactions over these hours.

81. DC Energy and Integrys state it is reasonable to consider load the primary cause of Revenue Sufficiency Guarantee cost incurrence since their analysis shows a correlation of 0.5262 for Revenue Sufficiency Guarantee costs and load and a stronger regression statistic than is obtained for Revenue Sufficiency Guarantee costs and virtual supplies. They also explain that the adjusted regression statistic for Revenue Sufficiency Guarantee costs and virtual supplies is only 15.8 percent, and the randomness of the data points

[53] They also note the correlation coefficient for virtual demand bids in the Midwest ISO study was -0.1585, providing further evidence that virtual transactions cause Revenue Sufficiency Guarantee costs to decrease in hours in which there is net virtual demand.

between real-time Revenue Sufficiency Guarantee and virtual supplies dissuades any notion that the correlation indicates cost causation.

82. Financial Marketers assert that a critical flaw of the Midwest ISO study is that the cost allocation decisions were made prior to any empirical analysis. Financial Marketers claim that without an empirical analysis of the effect of virtual transactions on Revenue Sufficiency Guarantee costs, it is not possible for Complainants to carry the burden of demonstrating that the proposed assignment of Revenue Sufficiency Guarantee costs is equitable. Financial Marketers fault the Midwest ISO for not providing data requested by an ad hoc committee in the stakeholder process and claim it is impossible to rely on the Midwest ISO data analysis when the Midwest ISO refuses to make the information public.

#### d. Reply Briefs Opposing Complainants Positions: Comments On Other Aspects of the Revenue Sufficiency Guarantee Task Force Proposal

83. Financial Marketers contend Complainants have provided no reliable evidence to support a change in the existing Revenue Sufficiency Guarantee cost allocation or that would allow the Commission to conclude that any of the alternatives are superior and just and reasonable. Financial Marketers state that the Complainants have not provided the required cost-based analysis or any meaningful cost causation analysis, and therefore the proposals should be rejected. They also state the Complainants err when they claim the Commission has already determined that virtual supply offers cause Revenue Sufficiency Guarantee costs to be incurred.

84. Edison Mission claims there is no evidence demonstrating that virtual supplies actually increase costs.[54] Therefore, Edison Mission reasons, there is no basis for the Commission to find that any of the Complainants' proposals are just and reasonable. Edison Mission also argues that there is no evidence that would indicate the extent to which virtual supplies might contribute to Revenue Sufficiency Guarantee costs such that the Commission could establish a cost allocation that properly reflects the large number

[54] Responding to statements by Ameren and Northern Indiana and the Midwest TDUs that the Commission has already found in Docket No. ER04-691 that virtual supplies contribute to Revenue Sufficiency Guarantee costs, Edison Mission states these parties have no valid response to the expert criticisms of the illustrative example that Ameren provided in that proceeding.

of other undisputed causes of Revenue Sufficiency Guarantee costs that have been identified.[55]

85. Edison Mission asserts that while it may be difficult to precisely determine the impacts of virtual supply offers on Revenue Sufficiency Guarantee costs, that difficulty cannot justify endorsing cost reallocation methods not based on valid evidence of cost causation. Dr. Hogan, on behalf of Edison Mission, also states that most cleared virtual offers have no marginal impact on total costs or Revenue Sufficiency Guarantee payments.

86. Financial Marketers note that they have consistently argued that virtual transactions, on a net basis, reduce Revenue Sufficiency Guarantee costs. Edison Mission agrees that virtual offers may cause reduced Revenue Sufficiency Guarantee costs in certain circumstances and avers that the Complainants have not submitted evidence rebutting these findings. Edison Mission also contends Complainants have not addressed known causes of Revenue Sufficiency Guarantee costs nor have they proposed a cost allocation that reflects them. Edison Mission argues that if Complainants had performed a valid cost causation analysis, the appropriate allocation factors are impossible to know *a priori* and could go up or down.

87. DC Energy and Integrys also fault the Complainant proposal since it allocates to virtual supplies the full Revenue Sufficiency Guarantee cost, rather than recognizing that virtual supplies reduce day-ahead market costs and allocating to them the real-time Revenue Sufficiency Guarantee cost less the avoided Revenue Sufficiency Guarantee cost in the day-ahead market resulting from virtual supply. Load that in the absence of virtual supplies would be assessed Revenue Sufficiency Guarantee costs in the day-ahead market would reap a windfall at the expense of virtual suppliers, according to DC Energy and Integrys.

88. DC Energy and Integrys also attached an Oct. 9, 2008 paper from Dr. Hogan, in which several examples demonstrate that every virtual offer does not have the same impact on Revenue Sufficiency Guarantee costs. Dr. Hogan shows that the marginal effects of virtual offers at discrete levels are not the same as the average effects of virtual offers, relative to Revenue Sufficiency Guarantee costs. Dr. Hogan states that Revenue Sufficiency Guarantee costs are not simply a function of deviations or cleared offers. In the specific examples given, he shows that the interaction of virtual offers, Reliability Assessment Commitment logic, and inclusion of individual units determine Revenue Sufficiency Guarantee costs.

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[55] Edison Mission notes that since the Midwest ISO did not perform a cost causation analysis, as directed, the Commission rejected its compliance filing in Docket No. ER04-691. *See* First Compliance Order, 118 FERC ¶ 61,213 at P 88.

89. Edison Mission also believes cost causation analysis needs to address total costs and benefits to determine a just and reasonable cost allocation. Dr. Hogan and Mr. Hartshorn, representing Edison Mission, state that a full empirical analysis of total costs, with and without virtuals, is needed in order to have an economically valid and fair cost allocation that recognizes that the market design seeks a total least cost solution. Mr. Hartshorn provides an illustration showing that the likely level of total cost impact with and without virtual supply is likely to be small because total cost does not change a great deal based on the final few unit commitment decisions that might be influenced by virtual supply offers.

90. DC Energy and Integrys consider analysis of Revenue Sufficiency Guarantee costs in excess of those that would have been incurred in the absence of virtual supplies should be the basis of a cost causation analysis. They also argue that runs of the day-ahead unit commitment and Reliability Assessment Commitment programs without virtual supplies would provide useful information on Revenue Sufficiency Guarantee costs that would have been incurred in the day-ahead market but were avoided as a result of virtual supplies. Dr. Hogan asserts that the focus should be on the marginal or incremental effect of virtual supply offers to total Revenue Sufficiency Guarantee costs, and to do otherwise would violate the connection of this principle to economic efficiency.

91. Dr. Hogan notes that high Revenue Sufficiency Guarantee costs occur at times of high load due to conservative operations to manage reliability and therefore it is reasonable to charge these Revenue Sufficiency Guarantee costs to load. Mr. Hartshorn makes the similar point that conservatism of operators grows as the absolute load increases, and that this fact combined with a real-time pricing construct in the Midwest ISO that does not allow inflexible peaking units to set energy prices in real-time, causes high levels of real-time Revenue Sufficiency Guarantee costs as well as high levels of cleared net virtual supply. He concludes that these factors explain the correlation between high Revenue Sufficiency Guarantee costs and virtual offers and this has nothing to do with cost causation.

92. DC Energy and Integrys dismiss Complainants' arguments that more Revenue Sufficiency Guarantee costs should be allocated to virtual supply since (a) there would be no virtual supply without the market and (b) virtual transactions do not create physical flow and losses and therefore they should not be part of the locational marginal price. They note that these arguments do not rely on cost causation and that they ignore the benefits that virtual supplies provide to load-serving entities by reducing day-ahead market prices. DC Energy and Integrys assert that the PJM Interconnection, L.L.C. argument is unavailing because virtual transactions are charged losses, but not Revenue Sufficiency Guarantee charges, as part of the locational marginal price.

93. DC Energy and Integrys consider the just and reasonable rate to be the removal of the Revenue Sufficiency Guarantee charge with respect to all virtual supply transactions.

94. DC Energy and Integrys fault the Complainants for not doing any analysis of cost causation over the three-year history of this issue, even when the Commission indicated a study was needed and Complainants concede cost allocation should follow cost causation. DC Energy and Integrys note they have supported cost causation in the stakeholder process and asked for analysis, and that Dr. Greening believes such an analysis is feasible. For these reasons, DC Energy and Integrys recommend that the Commission dismiss the complaints and institute further hearing procedures.

95. Financial Marketers assert that the Complainants' proposal to allocate Revenue Sufficiency Guarantee costs associated with intra-hour deviations to virtual transactions should be rejected since they have provided no evidence to support this treatment and the Midwest ISO indicative proposal does not propose such an allocation.

96. Since virtual supplies are fixed at the close of the day-ahead market, they should not be assessed Revenue Sufficiency Guarantee charges incurred during the real-time market unit commitment process, according to DC Energy and Integrys. Noting the Complainants have not put forth evidence that virtual supplies cause Revenue Sufficiency Guarantee costs in real-time, DC Energy and Integrys explain that capacity committed in the real-time market unit commitment process substantially exceeds the capacity committed in the Reliability Assessment Commitment process that occurs at the end of the day-ahead market and therefore Revenue Sufficiency Guarantee costs would be greater for the real-time market unit commitment process compared to the Reliability Assessment Commitment process.[56]

97. DC Energy and Integrys argue that Revenue Sufficiency Guarantee costs caused by day-ahead market software limitations or load forecast errors should not be allocated to virtual supplies since virtual supply offers did not cause those costs.[57] They note that New York Independent System Operator, Inc. and ISO-New England do not assign these costs to virtual supplies. They also object to the allocation of Revenue Sufficiency Guarantee costs to virtual offers during hours in which virtual bids are greater than virtual offers (i.e., when Revenue Sufficiency Guarantee costs are lower).

[56] DC Energy and Integrys note that New York Independent System Operator, Inc. does not allocate any uplift incurred after the equivalent of the Reliability Assessment Commitment process to virtual supplies and is able to determine the maximum amount of commitment costs to allocate to virtual supplies. DC Energy and Integrys Reply Brief at 22-23.

[57] DC Energy and Integrys also point to other factors that can cause Revenue Sufficiency Guarantee costs, such as unexpected changes in transmission availability, outages and loop flows, and argue that these costs should not be allocated to virtual supplies. *Id.* at 27.

98. Similarly, Edison Mission asserts that it is not possible to implement a new Revenue Sufficiency Guarantee cost allocation based on cost causation when a substantial portion of the costs being allocated are costs of energy, not Revenue Sufficiency Guarantee costs. Edison Mission explains that Revenue Sufficiency Guarantee charges are inflated because the energy pricing software is not picking up the cost of peaking generating units with limited dispatch ranges, with the result that substantial real-time energy costs are being assigned improperly to Revenue Sufficiency Guarantee charges.

99. Financial Marketers assert Complainants fail to recognize that virtual offers are less likely to cause changes in unit commitment during the Reliability Assessment Commitment process than real-time deviations since the virtual transaction is known as soon as the bid or offer is accepted in the day-ahead market. They add that dispatch decisions made early in the Reliability Assessment Commitment process are typically less expensive than generator dispatch decisions made closer to real-time. They also claim the Revenue Sufficiency Guarantee impact of other factors, such as physical deviations, is likely to seem lower because these other factors get the benefit of hours with net virtual demand.

100. Financial Marketers object to the complainants' proposal to make all virtual supply offers subject to Revenue Sufficiency Guarantee charges without regard to the reasons for unit commitment in the Reliability Assessment Commitment process, the location of constraints, advance notice of planned schedule changes that avoids the need for additional commitments in the Reliability Assessment Commitment process, the net impact of virtual offers and bids, and the fact that Revenue Sufficiency Guarantee costs caused by intra-hour deviations would be no different without virtual offers. They also object to making virtual offers and bids subject to the Revenue Sufficiency Guarantee second-pass charge and to allocating constraint-related Revenue Sufficiency Guarantee costs to virtual offers and bids.

101. If the Commission adopts the Midwest ISO indicative proposal, Edison Mission recommends netting positive and negative deviations before performing the allocations to ensure the total amount of Revenue Sufficiency Guarantee costs collected does not exceed the aggregate cost impact of the deviations covered in buckets one and three. Edison Mission notes the Independent Market Monitor agrees with Edison Mission on this change.[58] Edison Mission also objects to the allocation of Revenue Sufficiency Guarantee costs associated with generating units committed solely for constraint relief purposes to deviations throughout the pool that had no impact on the relevant constraint. It contends that this contradicts the objective of including the Revenue Sufficiency

[58] Edison Mission Answer at 27 (citing Independent Market Monitor Comments at 4-6).

Guarantee constraint management charge in the allocation and double-charging for a single deviation.

102. In the event the Commission accepts the indicative allocation, E.ON recommends the Commission order the Midwest ISO to file those revisions pursuant to section FPA 205 and give parties an opportunity to comment on the proposal before placing it in effect.

### 3. Commission Determination

103. Complainants argue for two alternative cost allocations. Ameren and Northern Indiana and Wabash Valley support both the cost allocation developed by the Revenue Sufficiency Guarantee Task Force (the "indicative" cost allocation) and the cost allocation that would revise the current tariff to remove "actually withdraws energy" language (the replacement costs allocation). Ameren and Northern Indiana and Wabash Valley recommend that the current tariff, revised to delete the "actually withdraws energy" language, be put into effect on August 10, 2007 and remain in effect until the allocation developed by the Revenue Sufficiency Guarantee Task Force is ready for implementation.[59] The Midwest TDUs and Indianapolis Power & Light support the latter alternative, to be effective on August 10, 2007.

104. As discussed further below, we find that the evidence in this proceeding supports both cost allocations. We agree with Duke that the Commission has broad authority to select methods for determining just and reasonable rates and therefore there is no bar to the Commission accepting more than one cost allocation, provided the allocations are just and reasonable.

105. The Commission found that the currently-effective cost allocation does not reflect cost causation because virtual supply offers can cause unit commitment and Revenue Sufficiency Guarantee costs, whether the virtual supply offers are made by financial trader market participants (that do not withdraw energy) or other participants with physical load and generation (that do withdraw energy).[60] Such a differentiation in cost responsibility that is not based on cost causation represents a finding that the current cost allocation is unjust and unreasonable and unduly discriminatory. The Revenue Sufficiency Guarantee Task Force effort to identify the factors contributing to Revenue Sufficiency Guarantee cost incurrence included analysis of the components that comprise

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[59] The Midwest ISO explains that the RSG Task Force alternative proposal will not be ready for implementation until after the launch of the ancillary services market and after various software modifications are accomplished.

[60] *See* First Rehearing Order, 117 FERC ¶ 61,113 at P 111.

the current Revenue Sufficiency Guarantee charge, including virtual offers and generator deviations. We find that the record of this proceeding establishes that these components of the existing cost allocation in the current tariff can cause Revenue Sufficiency Guarantee costs, and it is therefore appropriate that these components remain in the cost allocation. We also note that the record in the Docket No. ER04-691 proceeding supports a finding that these factors can cause Revenue Sufficiency Guarantee costs. We therefore agree with Complainants that a revised cost allocation that eliminates the "actually withdraws energy" language would provide the basis for a just and reasonable rate.

106. We disagree with Edison Mission and FirstEnergy that each and every element in the "indicative" cost allocation must be included in the tariff in order for the filed allocation to be just and reasonable. The current allocation, that forms the basis of the replacement cost allocation, includes many of the components included in the Revenue Sufficiency Guarantee Task Force allocation, and therefore we find that it appropriately reflects cost causation. The fact that market participants are exposed to costs they do not cause, and for which it is not possible to determine cost causation, such as loop flow, does not make the allocation unjust and unreasonable. All customers share equitably in the cost responsibility for these factors and therefore the allocation is equitable and not unduly discriminatory.

107. Responding to DC Energy and Integrys, the Commission did not reject the replacement cost allocation in Docket No. ER04-691. Rather, as discussed above,[61] the Commission decided that an FPA section 205 proceeding was not the venue to change the allocation and ultimately the Revenue Sufficiency Guarantee rate.[62] Responding to E.ON, the Revenue Sufficiency Guarantee Task Force determined that import deviations are one of the factors contributing to Revenue Sufficiency Guarantee cost incurrence, and therefore it is appropriate that they are included in the alternative allocation.

108. We agree with the Midwest TDUs and Indianapolis Power & Light that the term "cleared" should be inserted before "virtual offers" to more accurately define the virtual offers impact on cost incurrence, and therefore we direct this revision be included in the compliance filing required by this order.

109. Turning to the allocation developed by the RSG Task Force and submitted by the Midwest ISO as an "indicative" proposal, we consider this alternative allocation to be just and reasonable since it allocates costs to the factors that have been determined to contribute to unit commitment and the incurrence of Revenue Sufficiency Guarantee costs. Generally, the indicative proposal allocates Revenue Sufficiency Guarantee costs

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[61] *Supra* P 47.

[62] Second Rehearing Order, 118 FERC ¶ 61,212 at P 22.

based on market participants' activities that cause unit commitment and can cause the incurrence of Revenue Sufficiency Guarantee costs. These activities include generation injections at constrained flowgates, deviations in imports, exports, load, generation and virtual supply offers.[63] In consideration of the fact that this proposed cost allocation ensures that cost incurrence follows cost causation, and because we find no basis to conclude the cost allocation results in inequities or unduly discriminatory outcomes, we find that the Revenue Sufficiency Guarantee Task Force's proposed cost allocation is a just and reasonable alternative to the current allocation.

110. Our findings in this proceeding rely on the allocations developed by the Revenue Sufficiency Guarantee Task Force. We consider the efforts of this group, comprised of Midwest ISO personnel and market participants, to represent the experience and knowledge of the system operators and analysts with the best understanding of this issue. Therefore, we put great weight on their determinations of the factors that contribute to Revenue Sufficiency Guarantee cost incurrence.

111. We do not find that any elements of the statistical analysis refute the findings of the task force, and certain statistics provide support for its effort. For example, the finding in the statistical analysis that Revenue Sufficiency Guarantee costs were 70.3 percent higher than average in hours with net virtual supply (considering all hours in 2007) suggests a relationship between net virtual supply offers and Revenue Sufficiency Guarantee costs (although no standard deviations were provided). The Revenue Sufficiency Guarantee Task Force undertook analysis to isolate factors contributing to Revenue Sufficiency Guarantee cost incurrence, in a separate analysis of data from June 2006 through March 2008, and found a correlation coefficient of 0.4372 between virtual supply offers and real-time Revenue Sufficiency Guarantee make-whole payments to committed generators per committed megawatt. This was the strongest pair-wise correlation in a study that also evaluated other factors such as import and export deviations and differences between load forecasts.[64] This correlation does not prove causation, but when it is considered together with the rest of the Midwest ISO analysis, the fact that it is the highest positive correlation found could indicate a contribution from

[63] As explained in the Ameren and Northern Indiana Brief, the allocation of Revenue Sufficiency Guarantee costs is based on three major reasons for the commitment of units after the day-ahead market closes: (1) managing a transmission constraint or addressing a local reliability concern; (2) addressing intra-hour demand changes; and (3) adjusting to deviations from day-ahead schedules. Each allocation category is called an allocation "bucket." A detailed description of the proposed Revenue Sufficiency Guarantee Task Force cost allocation is provided in Appendix A.

[64] Brief of the Midwest TDUs and Indianapolis Power & Light (cited in the affidavit of Dr. Sapper at P 18 and attached as Exhibit 4 at 15).

virtual supply offers, when considered together with the rest of the Midwest ISO analysis.[65]

112. With regard to the cost causation arguments made by DC Energy and Integrys, Financial Marketers and Edison Mission, we have two responses. First, cost causation analyses of the type endorsed by these parties are very difficult to undertake. As parties noted, the Commission in Docket No. ER04-691 asked the Midwest ISO to undertake an analysis similar to what these parties support, in order to determine the impact of virtual offers on Revenue Sufficiency Guarantee costs, and the Midwest ISO was unable to accomplish this requirement.[66] We do not expect that it is possible to isolate the impact of virtual offers from all other factors and then demonstrate that virtual offers increase costs, as recommended by Edison Mission, based on data that is the result of many factors impacting unit commitment and Revenue Sufficiency Guarantee cost incurrence simultaneously.[67] However, this analytical limitation does not mean, therefore, that virtual offers cannot cause Revenue Sufficiency Guarantee costs. As discussed, the operators of the Midwest ISO system and the Independent Market Monitor have concluded that virtual offers can cause Revenue Sufficiency Guarantee costs, and the statistical analysis does not refute those conclusions.

113. Second, we interpret the primary concern of these parties to be that the proposed alternative cost allocations would allocate too many costs to virtual transactions, and not that the proposed cost allocation should not allocate any costs to virtuals. Neither the reply briefs nor the supporting affidavits state that virtual offers do not cause or contribute to the incurrence of Revenue Sufficiency Guarantee costs under any

[65] We note that Dr. Lesser's claim that the differences in Revenue Sufficiency Guarantee costs between "High," "Nominal," and "Low" Revenue Sufficiency Guarantee cost days were insignificant cannot be evaluated. Dr. Lesser disputes the sample size that was reported in the Revenue Sufficiency Guarantee analysis (36), as the Midwest ISO website showed that data from only six days were used. Dr. Lesser goes on to perform a statistical test assuming a lower sample size, but this sample size has not been verified with the Midwest ISO. The value of the test statistic, and the critical value, are both sensitive to the sample size. Therefore, Dr. Lesser's statistical conclusion is affected by the decision to assume a different sample size.

[66] *See* First Compliance Order, 118 FERC ¶ 61,213 at P 77.

[67] Edison Mission has acknowledged this in Docket No. ER04-691. *See id.* P 78-80 ("Edison Mission believes that the Midwest ISO is unwilling to do the analysis that the Commission directed because it believes that cost causation cannot be established with exactitude.").

circumstance. In addition, the thrust of these parties' arguments supports lower – as opposed to no – cost allocations to virtual offers.

114. For example, we understand Dr. Hogan's analysis to support a conclusion that virtual offers can contribute to the incurrence of Revenue Sufficiency Guarantee costs (while recognizing that an allocation that reflects marginal costs ensures market efficiency), and therefore it is appropriate that virtual offers are one of the factors upon which costs are allocated. However, Dr. Hogan differed with the Revenue Sufficiency Guarantee cost allocation method presented because the ideal methodology would consider the marginal impacts of virtual offers on Revenue Sufficiency Guarantee costs, and not assign Revenue Sufficiency Guarantee costs as a function of net deviations, cleared offers, or averages.

115. In light of these considerations and the context of this proceeding – determining a just and reasonable cost allocation – we do not find it necessary to undertake complex statistical analyses to determine the precise cost impact before any Revenue Sufficiency Guarantee costs can be allocated based on virtual offers.[68] Complainants have relied on an analysis by the Revenue Sufficiency Guarantee Task Force for determining drivers that contribute to Revenue Sufficiency Guarantee cost incurrence, and we accept the allocations developed by this group to be just and reasonable.

116. While we do not deny that virtual transactions can provide benefits to Midwest ISO energy markets by reducing day-ahead market prices under certain circumstances, a just and reasonable cost allocation of the real-time Revenue Sufficiency Guarantee charge must reflect cost incurrence. We find, therefore, that Complainants' "indicative" alternative cost allocation, which includes an allocation based on net virtual offers is just and reasonable. In the same vein, while we recognize that virtual bids can reduce Revenue Sufficiency Guarantee costs and an allocation that nets virtual offers and bids may be more precise, we do not consider it unreasonable to allocate costs based on virtual offers -- as is the case in the replacement allocation proposal that removes the "actually withdraws energy" language from the current tariff -- since they can contribute to Revenue Sufficiency Guarantee cost incurrence.[69]

[68] *FPC v. Conway Corp.*, 426 U.S. 271, 278 (1976); *Maine Pub. Utils. Comm'n v. FERC*, 454 F.3d 278, 288 (D.C. Cir. 2006).

[69] We do not consider the statistical analysis of Financial Marketers regarding virtual bids to be a basis for assuming each and every MW of virtual bids results in a corresponding decline in Revenue Sufficiency Guarantee costs. As they argue themselves, the statistical analysis reflects multiple variables impacting costs simultaneously and therefore is not evidence of cause and effect relationships.

117. We next address issues with the specifics of the "indicative" cost allocation alternative proposal based on the Revenue Sufficiency Guarantee Task Force effort. We find it appropriate that the allocation is based on both the unit commitment that occurs in the Reliability Assessment Commitment process and the unit commitment made to manage constraints. With respect to virtual supplies, the Midwest ISO must commit additional units to provide physical energy sufficient to meet the load forecast in the Reliability Assessment Commitment process, and it must commit additional units to provide physical energy sufficient to manage constraints. As discussed above, we find that this proposed allocation aligns cost responsibility with cost incurrence to the extent possible.[70]

118. While we have found the proposed indicative allocation to be a just and reasonable basis for future cost allocations, we recognize that it is not ready to be implemented now. The Midwest ISO cannot implement it before the start of the Ancillary Services Markets, and needs at least sixty days to conform the proposal to the Ancillary Services Markets tariff.[71] Accordingly, we will allow the Midwest ISO to file its indicative allocation when it has a complete and final proposal.[72] We acknowledge that the Midwest ISO recognizes that it will need to make further adjustments to the indicative cost allocation proposal related to conformance with the Ancillary Services Markets and we accept its proposal to make these adjustments in its compliance filing. We will rule on those adjustments after they are filed. We also encourage the Midwest ISO and stakeholders to continue to address software and market design issues to ensure Revenue Sufficiency Guarantee charges are minimized to the extent possible.

119. We do not find the Edison Mission proposed revision to the Revenue Sufficiency Guarantee Task Force allocation to better align cost allocation with cost incurrence. Their proposal to net virtual offers and bids market-wide socializes cost responsibility, rather than assess Revenue Sufficiency Guarantee costs to market participants with net virtual offers that can cause Revenue Sufficiency Guarantee cost incurrence.

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[70] We find that the "indicative" cost allocation is responsive to a number of the concerns of Financial Marketers, DC Energy and Integrys: It nets the virtual offers and bids, does not assign costs to virtual supply offers for intra-hour deviations, and does not subject virtual offers and bids to the second-pass charge that recovers costs that can not be allocated based on cost causation.

[71] *See* Midwest ISO Reply Brief at 20.

[72] The Midwest ISO should propose a prospective effective date for this cost allocation, based on the amount of time it needs to develop the systems and processes necessary to implement the proposal.

120. Recognizing that the proposed indicative cost allocation can not be implemented for a number of months and can not be implemented retroactively, we require the revised cost allocation applicable from the refund effective date of August 10, 2007 to be the current tariff with the "actually withdrawing energy" language in section 40.3.3 deleted.[73] This allocation will be effective until the effective date of the proposed indicative cost allocation.

121. We require the Midwest ISO to submit a compliance filing with revised tariff provisions that delete the "actually withdraws energy" language from the current tariff and inserts "cleared" before virtual offers, to be made effective August 10, 2007. We require the Midwest ISO to submit the compliance filing within 30 days of the date of this order.

## C. Refunds

### 1. Briefs

122. Ameren and Northern Indiana assert that the Commission should exercise its remedial discretion to provide them and other load-serving entities with refunds and thereby put them back in the position they would have been in had the existing rate been just and reasonable. Ameren and Northern Indiana state that a balancing of the equities requires that market participants that have been subject for years to an unjust, unreasonable and unduly discriminatory rate, through no fault or inaction of their own, must receive refunds. They contend that allowing the existing rate to remain in effect over the past year would constitute unjust enrichment for market participants that cause Revenue Sufficiency Guarantee costs but have not been subject to Revenue Sufficiency Guarantee charges. Ameren and Northern Indiana assert that there is no reason to deny refunds based on notice arguments because the Commission has established a refund effective date in this proceeding.

123. Ameren and Northern Indiana propose that the refund be based on a Revenue Sufficiency Guarantee rate that removes the "actually withdraws energy" condition from the current rate in section 40.3.3.a.ii of the Midwest ISO tariff, since this language is the source of the unduly discriminatory outcomes that are presently occurring. Ameren and Northern Indiana request the Commission to direct the Midwest ISO to calculate and provide refunds as though this revision had gone into effect on August 10, 2007. They explain that this basis for refunds is more appropriate than the proposed "indicative" cost allocation (discussed *supra* in section B) since the Midwest ISO lacks the data on unit commitment back to August 2007 upon which this proposed cost allocation is developed.

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[73] We clarify that the tariff to be revised is the tariff reflecting all the revisions ordered by the Commission in Docket No. ER04-691.

124. Wabash Valley also recommends refunds back to August 10, 2007 based on its proposed alternative rate that eliminates the "withdrawing energy" phrase from the tariff.

125. The Midwest TDUs and Indianapolis Power & Light assert that the Commission should order the Midwest ISO to resettle market participants' Revenue Sufficiency Guarantee charges, based on the replacement cost allocation that revises the Revenue Sufficiency Guarantee provisions in the current tariff, for the period between August 10, 2007 and the date of implementation of such revisions. They argue that this will result in surcharges to market participants who paid less than their fair share of Revenue Sufficiency Guarantee costs during that period and refunds to those market participants who paid more than their fair share. They add that the Commission should reject arguments that it should refrain from ordering refunds since the Commission has a general policy of granting full refunds for overcharges.[74]

126. The Midwest TDUs and Indianapolis Power & Light consider it appropriate to require refunds since, unlike the circumstance in the Revenue Sufficiency Guarantee Proceedings in Docket No. ER04-691, market participants have been put on notice that this proceeding could result in resettlement of Revenue Sufficiency Guarantee charges and refunds to those who overpaid since the date of the first complaint. The Commission should reject arguments that market participants engaging in virtual supply offers had settled expectations, according to the Midwest TDUs and Indianapolis Power & Light, since many rate and billing issues have been in flux. The Midwest TDUs and Indianapolis Power & Light contend that only by ordering refunds can the Commission provide the complete, permanent and effective protection from excessive rates and charges that the FPA intends.

127. Responding to arguments that refunds can only be made from a utility to its customers and cannot be made by one set of market participants to another set of market participants, Ameren and Northern Indiana consider refunds and resettlement in the Midwest ISO markets appropriate since the Commission has directed the resettlement of markets to provide refunds among market participants in California, the New York Independent System Operator, Inc. and ISO New England Inc.

### 2. **Reply Briefs**

128. The Midwest ISO agrees that it would be appropriate to calculate Revenue Sufficiency Guarantee refunds with the existing allocation methodology minus the energy withdrawal criterion.

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[74] *See Consolidated Edison Co. v. FERC*, 347 F.3d 964, 972 (D.C. Cir. 1992) (quoting *Towns of Concord, Norwood, & Wellesley v. FERC,* 955 F.2d 67, 76 (D.C. Cir. 1992).

129. The Organization of Midwest ISO States supports requiring refunds back to August 10, 2007 based on the removal of the "actually withdraws energy" provision. Hoosier also supports eliminating this provision effective August 10, 2007. Alliant and AMP-Ohio assert that the Midwest TDUs and Indianapolis Power & Light have demonstrated that this alternative allocation must be put in effect, and refunds granted, as of the refund-effective date of August 10, 2007.

130. Coalition of Midwest Transmission Customers argues that the Commission should order refunds and apply them to the period beginning on August 10, 2007 since it has been clearly demonstrated that customers have paid for costs caused by other market participants, and also given the disproportionate share of costs borne by some participants and the lack of burden borne by others that caused Revenue Sufficiency Guarantee costs.

131. FirstEnergy supports making the indicative allocation the basis for the refund rate. Since it is not possible to calculate refunds based on the just and reasonable rate, the Commission should not order refunds back to August 10, 2007. FirstEnergy notes that the Commission has not ordered refunds in situations that would require the re-running of markets, since such an action would do more harm to electric markets than can be justified. FirstEnergy contends that market participants were not able to revise their market practices to maximize efficiencies or to reduce their exposure to refund liabilities; therefore it would be unfair to impose refund obligations on market participants.

132. Edison Mission argues refunds are not feasible since the new just and reasonable rate, based on the Midwest ISO indicative proposal, cannot be applied until a later date.

133. Since the complainants have not provided market participants with any notice of what their Revenue Sufficiency Guarantee charges would be under the proposed alternatives, any retroactive refund is unlawful, according to Financial Marketers. Financial Marketers also argue that refunds are not appropriate since Complainants have called for changes in the tariff and cost allocation that were not stated in their complaints. A complaining party cannot rely on the outcome of a future stakeholder process or future filing to meet the requirements of section 206. Financial Marketers also claim that the Complainants are abusing the section 206 process by proposing changes in the Midwest ISO indicative proposal and a new alternative applicable to the refund period.

134. DC Energy and Integrys argue that any new Revenue Sufficiency Guarantee charge applicable to virtual offers should only be prospective after the Commission issues an order, consistent with the "revisited decisions" precedent.[75] They also contend there is

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[75] DC Energy and Integrys Brief at 66 (citing *Connecticut Light & Power Co.*, 15 FERC ¶ 61,056 (1981)); *Union Electric Co.*, 58 FERC ¶ 61,247 (1992); *California Indep. System Operator Corp.*, 84 FERC ¶ 61,121 (1998); *New York Indep. Sys. Operator, Inc.*, 92 FERC ¶ 61,073 (2000).

no basis to conclude that a rate should apply to market participants that cannot adjust their past market behavior.

135. While DC Energy and Integrys may have been aware the Commission might charge refunds, they state that they could not have a sense of the magnitude and variability of such refunds. According to DC Energy and Integrys, complainants have failed to demonstrate that the current tariff is unjust and unreasonable and that an alternative rate is just and reasonable by completing the required cost causation analysis that is a prerequisite to determining an appropriate Revenue Sufficiency Guarantee rate. Also, DC Energy and Integrys could not speculate as to the rate to be adopted in this proceeding and therefore could not alter their market activities since the Midwest ISO indicative rate cannot be implemented until seven months after the Commission rules on the rate proposal.

136. DC Energy and Integrys claim that refunds are not appropriate since the threat of refund liability reduces participation in markets and causes market uncertainty, and nothing in section 206(b) or its legislative history precludes the Commission from stating refunds are inappropriate. They further state that the Commission has ample basis in the record of this proceeding that retroactive rebilling is not appropriate.

137. DC Energy and Integrys contend that Complainants are stretching section 206(b) beyond its rational limit by seeking to apply a new charge to transactions that are not subject to the charge under the currently effective tariff prior to the development of the new charge. They explain that section 206 permits refund effective dates but not new rate effective dates or new charge effective dates to create charges previously not permitted under the tariff. DC Energy and Integrys also assert section 206 does not authorize the Commission to require parties that neither provided the jurisdictional services nor collected the excessive charges to refund over-payments. The common and legal usage of the term "refund" does not encompass an increase in rates to other customers by establishing new rates which are not part of the filed and effective tariff, according to DC Energy and Integrys.

138. Edison Mission contends Complainants have failed to show that their proposed refund methodology would result in a just and reasonable allocation of Revenue Sufficiency Guarantee costs and they have failed to meet the section 206 requirement[76] that the overall rate level they paid was reasonable. Edison Mission argue complainants must show that virtual bidding causes Revenue Sufficiency Guarantee costs to increase in a way that increases the total rate paid to maintain a section 206 claim and to establish an entitlement to and the level of refunds.

[76] Edison Mission Brief at 41 (citing *City of Hamilton, Ohio*, 72 FERC ¶ 61,158, at 61,786 (1995) (citations omitted).

139. Since the Revenue Sufficiency Guarantee costs paid by different market participants bear no relationship to actual Revenue Sufficiency Guarantee costs, according to Edison Mission,[77] there is no evidence supporting the provision of refund relief to any category of market participants or the proper level of such refunds. Edison Mission also asserts that calculating refunds by adjusting the Revenue Sufficiency Guarantee allocations without the "actually withdraws energy" provision would penalize Edison Mission for engaging in activities that benefited the market.

140. DC Energy and Integrys dismiss the Commission precedent cited by Ameren and Northern Indiana. They note the California Refund Proceedings are not analogous to this proceeding since they involved refunds associated with overcharging customers, whereas virtual suppliers are not providing a jurisdictional service for which unjust and unreasonable rates were charged, they did not receive revenues from the over-charges and the public utility providing jurisdictional services is the Midwest ISO. DC Energy and Integrys distinguish this proceeding from the decision in *ISO-New England*[78] by noting that here Complainants request a refund effective date for an allocation methodology that still has not been appropriately developed whereas *ISO-New England* directed ISO-New England to implement a revised cost allocation mechanism one year prior to the order. They differentiate *Bangor Hydro-Electric*[79] based on the fact that the "last clean rate" doctrine is inapplicable in this proceeding since this is a complaint proceeding under section 206 and *Bangor Hydro-Electric* is akin to a typical rate case.

### 3. <u>Commission Determination</u>

141. We find refunds appropriate. The current tariff has been determined to be unduly discriminatory since it exempts certain market participants from an allocation of Revenue Sufficiency Guarantee costs that they cause, and allocates these costs to other market participants that did not cause them. In these circumstances we find it appropriate to require refunds to redress the inequities of the current cost allocation.

142. The rate we require to calculate the refund is the current tariff, revised to remove the energy withdrawal language. As discussed in the previous section, we consider this rate and its allocation of Revenue Sufficiency Guarantee costs to be just and reasonable

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[77] Edison Mission explains that a major portion of the Revenue Sufficiency Guarantee costs charged during the refund period have been shown to result from the fact that peaking units are frequently excluded from setting the real-time energy locational marginal price.

[78] *ISO New England Inc.*, 100 FERC ¶ 61,245 (2002).

[79] *Bangor Hydro-Electric Co.*, 122 FERC ¶ 61,038 (2008).

and not unduly discriminatory. Parties have had ample notice as to the potential for refunds and to possible compositions of a refund rate.[80] As discussed in the previous sections, the Commission concluded in Docket No. ER04-691 that the energy withdrawal provision did not comport with cost causation. The Commission also found, nearly a year ago, that the energy withdrawal provision could be unjust and unreasonable. Therefore, in this proceeding, parties have known for approximately 15 months that the Revenue Sufficiency Guarantee charge was subject to change. In consideration of this context and court precedent,[81] we find that parties have had sufficient time and notice to adjust their activities to avoid incurring potential refund costs. For this reason, we do not consider refunds to be an undue burden on those market participants who owe them.

143. We recognize that having two proposed alternative allocations, as well as abundant evidence of other factors that affect Revenue Sufficiency Guarantee charges, makes it impossible for parties to forecast with certainty the ultimate rate to be approved. However, parties have known the Revenue Sufficiency Guarantee Task Force proposal would not be ready until after the launch of the Midwest ISO's Ancillary Services Market and after at least seven months that the Midwest ISO estimates it will take to make necessary software modifications. Therefore, the only refund rate that could realistically be implemented was the current tariff revised to remove the energy withdrawal language. We find it reasonable to expect that parties would act on this knowledge and adjust their activities accordingly.

144. We recognize that we are ordering the refund of an ISO-administered cost allocation and therefore our refund directive means a resettlement of Revenue Sufficiency Guarantee costs paid by market participants, with some market participants paying for the difference between the billed costs and the costs assigned under the revised cost allocation and others receiving a refund equal to the difference between the billed costs and the costs assigned under the revised cost allocation. We agree with Ameren and Northern Indiana that the Commission has directed resettlements of markets in other

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[80] Responding to Financial Marketers, we consider the complaints to be clear as to the alternative allocations they propose, including the allocation being used for the refund rate. We note the refund rate does not require a future stakeholder process, and therefore is responsive to their concern.

[81] The courts have made clear the relevant question is whether "as a practical matter" a party had sufficient notice, *California Pub. Utils. Comm'n v. FERC*, 988 F.2d 154, 164 (D.C. Cir. 1993) and "notice from FERC is not always required." *Id.* at 165 (citing *Consolidated Edison v. FERC*, 958 F.2d 429 (D.C. Cir. 1992)). There will be sufficient notice when "the events surrounding" a matter "cannot have failed to alert" a party of a possible change. *Id.* at 164.

ISOs (and in the Midwest ISO itself, in Docket No. ER04-691) and therefore refunds are appropriate for resettlements in the Midwest ISO market.

145. DC Energy and Integrys' statement that "section 206(b) does not authorize the Commission to require parties that neither provided the jurisdictional services nor collected the excessive charges to refund over-payments" fundamentally mischaracterizes the situation at hand. Virtual market participants are market participants under the tariff, and therefore the justness and reasonableness of the terms and conditions of the tariff that are pertinent to them is an appropriate subject here. The issue is not whether virtual market participants "supplied or overcharged for the jurisdictional service" but rather whether any refunds made or any surcharges assessed by the Midwest ISO would apply to them also. We conclude that they would apply to virtual market participants in the same way that they would apply to other market participants, and whether a market participant is supplying a jurisdictional service does not affect this conclusion.

146. Responding to Edison Mission, we have determined that the refund rate is just and reasonable. The test recommended by Edison Mission is not required to establish that virtual offers can cause Revenue Sufficiency Guarantee costs, as we discuss in the previous section. We do not find the *City of Hamilton* precedent cited by Edison Mission to be relevant to the issues in this proceeding. Here, we are evaluating the reasonableness of an allocation that exempts market participants from Revenue Sufficiency Guarantee charges in the event they do not withdraw energy on that day, contrary to cost causation, and we are determining the rate is unduly discriminatory since it results in market participants paying for costs they do not incur. Complainants have made a sufficient showing that the existing rate is unjust and unreasonable with respect to this issue, and have met the requirements of section 206. As discussed in the previous section, while virtual transactions benefit the energy market, that fact does not mean cost causation should be ignored in developing a cost allocation.

147. For the foregoing reasons, we require the Midwest ISO to resettle Revenue Sufficiency Guarantee costs among market participants reflecting the revised cost allocation approved by the Commission in this order. We require the Midwest ISO to provide refunds including interest for the period starting on August 10, 2007 based on the revised tariff language that deletes the "actually withdraws energy" phrase from section 40.3.3.

## D. <u>Market Impacts</u>

### 1. <u>Briefs</u>

148. Ameren and Northern Indiana note that virtual trading activity is robust and increasing through 2007, according to the Independent Market Monitor. They also cite to the Independent Market Monitor's analysis indicating that arbitrage has been effective

such that price convergence in Midwest ISO markets is consistent with price convergence in other regional transmission organization markets.[82]

149. Ameren and Northern Indiana question the day-ahead/real-time market price convergence benefits of virtual transactions since load-serving entities only obtain about nine percent of their supply in these markets and Ameren's regression analysis shows that underbid load has a greater effect on convergence than virtual supply offers. Ameren and Northern Indiana assert that those arguing for cost avoidance based on benefits have the logic backwards. By their logic, if market participants could avoid charges because they bring benefits to the market, then market participants with physical transactions would pay no charges because they bring the greatest benefit. Also, by this logic since those engaging in virtual transactions would have no business if the physical players did not provide markets to be arbitraged, one could argue that virtual transactions should pay for all Revenue Sufficiency Guarantee costs. Furthermore, according to Ameren and Northern Indiana, without the Reliability Assessment Commitment process to bring down or bring on generating units to account for deviations, virtual supply offers and virtual demand bids could not be accommodated.

### 2. <u>Reply Briefs</u>

150. DC Energy and Integrys assert that removal of the "actually withdraws energy" phrase in the Complainants' proposal would all but eliminate virtual offers by financial participants. The average charge would be multiples of the average virtual market profits, and severely impede liquidity and the efficiency of the Midwest ISO market.

151. Noting that the average monthly profit for virtual transactions has been $0.22 per megawatt-hour and the real-time Revenue Sufficiency Guarantee rate was $2.57 per megawatt-hour, DC Energy and Integrys assert removal of the "actually withdraws energy" requirement would result in further curtailment or cessation of participation by financial entities. They also assert the day-ahead premium has increased when the Commission has issued Revenue Sufficiency Guarantee orders, and the Midwest ISO has stated that Revenue Sufficiency Guarantee charges would harm the virtual market and with it the efficiency and liquidity provided by virtual transactions. DC Energy and Integrys estimate the harm to be $1 billion annually as a result of the order on the Ameren complaint and $680 million as a result of the initial order in the Revenue Sufficiency Guarantee proceeding.

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[82] *2007 State of the Market Report* at 34, 37 and vi.

152. Financial Marketers also claim the allocation of Revenue Sufficiency Guarantee costs to virtual offers could adversely affect virtual trading[83] by potentially reducing market efficiency and liquidity, resulting in higher prices for consumers. They note virtual offers dropped 50 percent when the proposal was made to subject these transactions to Revenue Sufficiency Guarantee costs. Dr. Lesser, representing Financial Marketers, estimates that on average $1.30/megawatt in Revenue Sufficiency Guarantee charges would be shifted to virtual offers under the Complainants proposals. When compared to the average profit of $0.41/megawatt on virtual trades, this impact would have a devastating impact on virtual trading and would reduce the benefits of virtual trading to all market participants according to Dr. Lesser. Financial Marketers contend the proposed Revenue Sufficiency Guarantee rates are unlawful because their effect would be anticompetitive.

153. Addressing the Midwest ISO indicative proposal, DC Energy and Integrys recommend overall netting of cleared virtual offers and virtual bids before allocating costs to virtual offers, thereby addressing the concern raised by the Independent Market Monitor to avoid higher costs for virtual transactions that play a crucial role in determining efficient prices in the day-ahead market.

154. Virtual participation has decreased as a result of the uncertainty in the market and this unwillingness to participate will adversely affect price convergence, according to DC Energy and Integrys. They explain that uncertainty causes financial participants to bid more conservatively, causing a lower probability that the bid will clear the day-ahead market with the result that virtual offers are unavailable to converge the day-ahead and real-time prices. DC Energy and Integrys submit that a market with an increasing amount of uncleared virtual transactions is symptomatic of a market that is not functioning.

155. Responding to claims by Ameren and Northern Indiana that benefits provided by virtual transactions are overstated, DC Energy and Integrys explain that less virtual trading and higher day-ahead market premiums will be reflected in higher clearing prices for bilateral, hedging and futures contracts and this harm will be exacerbated if a high or volatile Revenue Sufficiency Guarantee charge is imposed.

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[83] Financial Marketers cite to a Commission decision stating that allocation of Reliability Must Run costs to virtual transactions would substantially and adversely affect the competitiveness or efficiency of ISO-New England markets. *See ISO New England Inc.*, 110 FERC ¶ 61,250 at P 25 (2005).

### 3. **Commission Determination**

156. As discussed in the previous section on refunds, parties have had notice for several years that the Revenue Sufficiency Guarantee charge allocation could change, and therefore have had ample opportunity to adjust their activity to account for this possibility. The Commission on a number of occasions in Docket No. ER04-691 concluded that virtual offers can cause Revenue Sufficiency Guarantee costs, irrespective of the withdrawal of energy.[84] As well, going forward, parties have been on notice in this proceeding of the possible change in the Revenue Sufficiency Guarantee charge allocation and therefore should be able to manage their activities to ensure that they do not become unprofitable. In this context, we expect parties subject to resettlement of Revenue Sufficiency Guarantee charges will be able to pay the refunds and participate in the markets going forward.

157. We do not consider it reasonable to void the refunds or not assess Revenue Sufficiency Guarantee charges based on cost causation principles because parties claim they will not be profitable or will cease to participate. Such an action would continue an unduly discriminatory rate and burden market participants with costs they did not cause.

158. We do not find a basis for the conclusion that the proposed cost allocation will eviscerate the virtual energy market or will nullify the price convergence benefits of virtual transactions. A number of market participants are currently being allocated Revenue Sufficiency Guarantee costs for their virtual transactions. Even with this allocation virtual activity has been increasing through 2007 and price convergence in the Midwest ISO is consistent with price convergence in other independent system operators, according to the Independent Market Monitor.[85]

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[84] *See* Revenue Sufficiency Guarantee Order, 115 FERC ¶ 61,108 at P 83-84 and First Rehearing Order, 117 FERC ¶ 61,113 at P 111 (clarifying that "virtual supply offers can cause [Reliability Assessment Commitment] and [Revenue Sufficiency Guarantee] costs whether they are made by financial trader market participants or other market participants with physical load and generation. . . ." and"any accepted virtual supply offer could result in physical unit commitment to meet the physical needs of the real-time energy market").

[85] Midwest ISO March 3, 2008 compliance filing in Docket No. ER04-691 at 12-13, Tab D.

### E. Rate Mismatch

#### 1. Briefs

159. Wabash Valley notes the Midwest ISO continues to ignore the Commission's interpretation that there is no rate mismatch. To the extent the Commission interprets the Midwest ISO tariff in such a manner that a mismatch exists between those being assessed Revenue Sufficiency Guarantee charges and those market participant megawatt-hours used in the denominator to calculate the Revenue Sufficiency Guarantee rate, Wabash Valley asserts this would be unjust and unreasonable. In the event the Commission considers a refund rate that includes a rate mismatch, Wabash Valley submits a more just and reasonable rate would eliminate the mismatch.

160. The Midwest TDUs and Indianapolis Power & Light note that 57 percent of Revenue Sufficiency Guarantee costs, or $585 million, are being recovered in the second pass Revenue Sufficiency Guarantee distribution that is assessed on all Midwest ISO loads, whether or not they had deviations, and therefore the charges cannot be minimized by customer actions. The Midwest TDUs and Indianapolis Power & Light assert the effect of the "actually withdraws energy" language is to shift more than half of Revenue Sufficiency Guarantee costs from one group of market participants who cause them to another group who may or may not have contributed to such costs and can do nothing to avoid or reduce such costs. The Midwest TDUs and Indianapolis Power & Light claim that such a mechanism is unjust, unreasonable and unduly discriminatory.

161. In the event the Commission concludes the record does not justify eliminating the "actually withdraws energy" language, the Midwest TDUs and Indianapolis Power & Light recommend that the group of market participants assigned a share of the second-pass Revenue Sufficiency Guarantee distribution should be expanded to include non-load-serving entity virtual supply offers, generators, importers and exporters. The Midwest TDUs and Indianapolis Power & Light support this cost allocation since it allocates residual real-time Revenue Sufficiency Guarantee costs to market participants that can be reasonably considered to cause the costs or otherwise benefit from the reliable operations that necessitate real-time Revenue Sufficiency Guarantee costs.[86]

162. As a general matter, Wisconsin Electric asserts that the Commission must acknowledge that the section 206 complaints were filed in response to the various interpretations of the Midwest ISO Revenue Sufficiency Guarantee mechanism given by the Commission and applied by the Midwest ISO, as well as the erroneous method of

[86] The Midwest TDUs and Indianapolis Power & Light note this cost allocation would be similar to the allocation of the costs of administering the day-ahead and real-time markets under Schedule 17.

calculating Revenue Sufficiency Guarantee charges that the Midwest ISO has adopted. Also, Wisconsin Electric supports the position of the Midwest TDUs and IPL on this issue.

163. Wisconsin Electric contends that the failure to address the refunds that are required going back to the start of the Midwest ISO market leaves in place rates that have been unjust and unreasonable and misaligned with cost causation principles. Accordingly, Wisconsin Electric recommends the Commission find a remedy for this earlier period (prior to the August 10, 2007 complaint period) while it fashions an appropriate remedy for the next period. Wisconsin Electric notes the Midwest ISO currently calculates the Revenue Sufficiency Guarantee allocation by including deviations exempt from the associated assessment of the charge[87] in the denominator, creating an automatic shortfall that must be assessed to market participants on a load ration share basis via the second-pass charge.

164. Wisconsin Electric argues the Midwest ISO application of this portion of its tariff is unjust and unreasonable. Wisconsin Electric recommends the Commission rectify this problem by modifying the tariff to only include volumes in the denominator for market participants that actually withdraw energy, thereby making the distribution volumes equal to the sum of asset owner distribution volumes.

### 2. <u>Reply Briefs</u>

165. The Midwest ISO does not consider recent Commission statements denying the existence of a rate mismatch to have the legal effect of reversing the Commission's earlier statements that recognized and did not reject the asymmetry in the numerator and denominator.

166. The Organization of Midwest ISO States encourages the Commission to address the period prior to August 10, 2007 and direct the Midwest ISO to resettle the market for that period.[88]

167. Otter Tail argues the Commission must deny requests for Revenue Sufficiency Guarantee-related refunds as applied to virtual offers that occurred prior to August 10, 2007 because those refunds are prohibited by the FPA, would violate due process and are contrary to prior Commission orders. Otter Tail explains that section 206 only allows for

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[87] These are deviations when the market participant is *not* withdrawing energy.

[88] Montana Public Service Commission, the North Dakota Public Service Commission and the South Dakota Public Utilities Commission do not support refunds for periods prior to the potential refund date of August 10, 2007.

refunds on a prospective basis and the effective date can be no earlier than the date the complaint was filed at the Commission. Otter Tail notes market participants have not had notice in the Commission orders in this proceeding that it would even consider imposing refunds before the refund effective date. Otter Tail also states the Order Revenue Sufficiency Guarantee Complaints made clear there has been no cost shift and no mismatch in Revenue Sufficiency Guarantee rate design and Commission orders on this issue in Docket No. ER04-691 are no longer subject to further rehearing or appeal, and therefore Wisconsin Electric's reliance on a non-existent rate mismatch offers no justification for retroactive refunds.

168. DC Energy and Integrys assert that virtual supply offers are not part of the denominator of the Revenue Sufficiency Guarantee rate and the Revenue Sufficiency Guarantee charge cost allocation does not include market participants that did not actually withdraw energy in a day.

169. Edison Mission recommends the Commission reject refund relief for the period prior to the refund effective date since those arguments are beyond the scope of this proceeding. Edison Mission asserts Wisconsin Electric must file a complaint if it believes it is entitled to refunds because of the Midwest ISO's non-compliance with Commission orders in Docket No. ER04-691.

### 3. Commission Determination

170. As the Commission explained in the Order on Revenue Sufficiency Guarantee Complaints,[89] the Commission has addressed the rate mismatch issue in previous orders[90] by requiring further compliance to eliminate the mismatch and requiring refunds for interpretations by the Midwest ISO that are contrary to the terms of the tariff for the periods prior to the complaint period. Inasmuch as the rate mismatch issue for this earlier time period is being addressed in other proceedings and is outside the scope of this proceeding, we will not address commenters' issues further.

171. By accepting the elimination of the "actually withdraws energy" tariff language in the alternative cost allocation, we have ensured there is no rate mismatch for the period starting on August 10, 2007, and applicable to the calculation of refunds. Also, there is no rate mismatch in the Revenue Sufficiency Guarantee Task Force proposal. We consider those actions sufficient to ensure the Revenue Sufficiency Guarantee rates are

[89] *See* Order on Revenue Sufficiency Guarantee Complaints, 121 FERC ¶ 61,205 at P 86.

[90] *See Midwest Indep. Trans. Sys. Operator, Inc.*, 121 FERC ¶ 61,132, at P 26 (2007).

just and reasonable, and we do not consider it necessary for the Commission to take further actions on this issue in this proceeding.

The Commission orders:

(A) The Commission finds the rate in effect to be unjust and unreasonable, as discussed in the body of this order.

(B) The Commission finds that the replacement cost allocation proposal that eliminates the "actually withdraws energy" language from the current tariff provides a just and reasonable basis for future cost allocations, as described in the body of this order.

(C) The Midwest ISO is hereby directed to make a compliance filing within 30 days of the date of this order, as discussed in the body of this order.

(D) The Midwest ISO is hereby required to refund to customers the amounts due, with interest, as specified in the body of the order, from August 10, 2007.

(E) The Commission also finds that the Midwest ISO's "indicative" tariff sheets provide a just and reasonable basis for future cost allocations, as described in the body of this order.

By the Commission. Commissioner Moeller not participating.

( S E A L )

Kimberly D. Bose,
Secretary.

APPENDIX

PROPOSED REVENUE SUFFICIENCY GUARANTEE TARIFF LANGUAGE
REVENUE SUFFICIENCY GUARANTEE TASK FORCE (INDICATIVE) PROPOSAL

Indicative RSG Tariff Language

*Section 40.3.3.a*

ii. The Real-Time Revenue Sufficiency Guarantee Charge shall be determined by the sequential application of the following four charge types, as further described in this Section 40.3.3.a:

- RSG Constraint Management Charge
- RSG Intra-Hour Demand Change Charge
- RSG Day-Ahead Schedule Deviations Charge
- RSG Second Pass Charge

Such Real-Time Revenue Sufficiency Guarantee Charges shall be determined for each Asset Owner, and assessed, as appropriate, to its Market Participant.

iii. RSG Constraint Management Charge

(a) Real-Time Revenue Sufficiency Guarantee Make Whole Payments paid to each Resource committed by the Transmission Provider to manage transmission constraints, will be determined for Asset Owners under the RSG Constraint Management Charge first.

(b) For schedule modifications occurring prior to the Notification Deadline, the RSG Constraint Management Charge will be determined on an hourly basis for Asset Owners in proportion to the billing determinants set forth below. This excludes any such increases for Resources committed by the Transmission Provider in any RAC processes conducted for the Operating Day.

(1) Change in flow due to increases in Real-Time Generator Hourly Economic Minimum Level. This component of the charge will be equal to the product of (1) the Generation Shift Factor; and (2) the greater of the Real-Time Hourly Economic Minimum Level in effect at the Notification Deadline minus the Day-Ahead Schedule, and zero.

(2) Change in flow due to decreases in Real-Time Generator Hourly Economic Maximum Level. This component of the charge will be equal to the product of (1) the Generation Shift Factor; and (2) the lesser of the Real-Time Hourly Economic Maximum Level in effect at the Notification Deadline minus the Day-Ahead Schedule, and zero.

(3) Change in flow due to deviations from Day-Ahead Demand Bids. This component of the charge will be equal to the product of (1) the Generation Shift Factor; and (2) the cleared Day-Ahead Demand Bid minus the Real-Time Demand Forecast at the Notification Deadline. If a Real-Time Demand Forecast is not submitted, then the Real-Time Demand Forecast will equal the cleared Day-Ahead Demand Bid.

(4) Change in flow due to Virtual Supply Offers. This component of the charge will be equal to the product of (1) the Generation Shift Factor; and (2) the cleared Virtual Supply Offers.

(5) Change in flow due to Virtual Bids. This component of the charge will be equal to the product of (1) the Generation Shift Factor; and (2) the negative of cleared Virtual Bids.

(6) Change in flow due to deviations from Day-Ahead Imports. This component of the charge will be equal to the product of (1) the Generation Shift Factor; and (2) the Real-Time scheduled Import quantities at the Notification Deadline minus the Imports scheduled in the Day-Ahead Energy Market.

(7) Change in flow due to deviations from day ahead Exports. This component of the charge will be equal to the product of (1) the Generation Shift Factor; and (2) the Exports scheduled in the Day-Ahead Energy Market minus the Real-Time scheduled Export quantities at the Notification Deadline.

(8) Internal Bilateral Transactions for Deviations volumes. This component of the charge will be equal to the product of (1) the Generation Shift Factor at the Internal Delivery Point of the Internal Bilateral Transaction for Deviations; and (2) either the negative MW value for Internal Bilateral Transactions for Deviations purchases, or the positive MW value for Internal Bilateral Transactions for Deviations sales.

(c) For schedule modifications occurring after the Notification Deadline, the RSG Constraint Management Charge will be determined for Asset Owners in proportion to the billing determinants set forth below. This excludes Resources committed by the Transmission Provider in any RAC processes conducted for the Operating Day.

(1) Increase in flow due to increases in Real-Time Generator Economic Minimum Dispatch. This component of the charge will be equal to any positive quantities resulting from the product of (1) the Generation Shift Factor; and (2) the greater of the Real-Time Hourly Economic Minimum Dispatch minus the Day-Ahead Schedule adjusted for changes to the Real-Time Hourly Economic Maximum Level and Real-Time Hourly Economic Minimum Level in effect at the Notification Deadline, and zero.
(2) Increase in flow due to decreases in Real-Time Generator Economic Maximum Dispatch. This component of the charge will be equal to any positive quantities resulting from the product of (1) the Generation Shift Factor; and (2) the lesser of the Real-Time Economic Maximum Dispatch level minus the Day-Ahead Schedule adjusted for changes to the Real-Time Hourly Economic Maximum Level and Real-Time Hourly Economic Minimum Level in effect at the Notification Deadline, and zero.
(3) Increase in flow due to deviations from Target Resource Dispatch. This component of the charge will be equal to any positive quantities resulting from the product of (1) the Generation Shift Factor; and (2) the Energy output based on the Metered quantity of Energy (MWh) minus the hourly integrated Dispatch Instruction in the Real-Time Energy Market (excluding MW designated for either Regulation Down or Regulation Up).
(4) Increase in flow due to Load deviations from Real-Time Demand Forecasts. This component of the charge will be equal to any positive quantities resulting from the product of (1) the Generation Shift Factor; and (2) the Real-Time Demand Forecast at the Notification Deadline minus the Real-Time Metered Load. If a Real-Time Demand Forecast is not submitted, then the Real-Time Demand Forecast will equal the cleared Day-Ahead Demand Bid.
(5) Increase in flow due to deviations from Day-Ahead Exports. This component of the charge will be equal to any positive quantities resulting from the product of (1) the Generation Shift Factor; and (2) the Real-Time scheduled Exports at the Notification Deadline minus the Real-Time scheduled Export quantities.
(6) Increase in flow due to deviations from Day-Ahead Imports. This component of the charge will be equal to any positive quantities resulting from the product of (1) the Generation Shift Factor; and (2) the Real-Time scheduled Import quantities minus the Imports at the Notification Deadline.

(d) For each Asset Owner, the net positive sum of amounts described in Section 40.3.3.a.iii (b) (1) through (8) plus the sum of amounts described in Section 40.3.3.a.iii (c) (1) through (6) shall be multiplied by the per unit RSG Constraint Management Charge rate to determine the Asset Owner's RSG Constraint Management Charge, provided, however, that no charges shall be assessed for any difference caused by lags in the State Estimator and Unit Dispatch System tracking of unit output that complies with Dispatch Instructions.

(e) The per unit RSG Constraint Management Charge deviation rate for any given Hour for a transmission constraint shall equal the Real-Time Revenue Sufficiency Guarantee Make Whole Payments paid to each Resource committed by the Transmission Provider to manage a transmission constraint, divided by the greater of:

(1) the net positive sum of the amounts described in Section 40.3.3.a.iii (b) (1) through (8), and the sum of amounts described in Section 40.3.3.a.iii (c) (1) through (6), and any positive adjustment due to the combined effect of incremental loop flow and topology changes and/or deratings to Transmission Facilities occurring during Real-Time, or;
(2) the sum of the products of (a) the Economic Maximum Dispatch amounts of each Resource committed to manage flow on the transmission constraint for the Operating Hour, and (b) its Generation Shift Factor.

(f) The RSG Constraint Management Charge will be calculated for individual transmission constraints on an hourly basis. In the event that the aggregate Real-Time Revenue Sufficiency Guarantee Charge Make Whole Payment (in that Hour) paid to Resources committed to manage a transmission constraint exceeds the aggregate of the RSG Constraint Management Charges to Market Participants, the shortfall shall be recovered first under the RSG Intra-Hour Demand Change Charge. The RSG Constraint Management Charge will be reduced to reflect the impact of incremental loop flows, topology changes, and/or Real-Time Transmission Derates. Any RSG Constraint Management Charge associated with such causes will be recovered under the Second Pass Charge. These amounts will be the volumes associated with incremental loop flows, topology changes and/or Real-Time Transmission Derates multiplied by the rate determined in section 40.3.3.a.iii (e).

iv. RSG Intra-Hour Demand Change Charge

(a) Any Real-Time Revenue Sufficiency Guarantee Make Whole Payments paid to Resources committed for a purpose other than constraint management and any residual Real-Time Revenue Sufficiency Guarantee Charge Make Whole Payments not recovered under the RSG Constraint Management Charge including RSG Second Pass Charge assignment will be determined under the RSG Intra-Hour Demand Change Charge, described below.

(b) The RSG Intra-Hour Demand Change Charge will be the product of: (1) the amount set forth in Section 40.3.3.a.iv (a), and; (2) the minimum of (a) the Real-Time Headroom for the Hour, over the sum of the Real-Time Economic Maximum Dispatch that were not used in support of transmission constraint management, plus the sum of the residual of the Real-Time Economic Maximum Dispatch for Resources used in support of transmission constraint management after reduction by the Capacity allocated under the RSG Constraint Management Charge. This residual shall equal the total Real-Time Economic Maximum Dispatch attributable to Resources committed to manage a transmission constraint, multiplied by the percentage of the Real-Time Revenue Sufficiency Guarantee Charges attributable to Resources committed to manage a transmission constraint not recovered under the RSG Constraint Management Charge, or; (b) the value of 1. The Real-Time Headroom shall be equal to the sum of the differences between the Real-Time Economic Maximum Dispatch and Actual Injections of Resources committed by the Transmission Provider in any RAC processes conducted for the Operating Day..

(c) The aggregate Real-Time Revenue Sufficiency Guarantee Charge in an Hour calculated under the RSG Intra-Hour Demand Change Charge shall be assessed to Market Participants through the RSG Second Pass Charge.

(d) In the event that the aggregate Real-Time Revenue Sufficiency Guarantee Charge described in Section 40.3.3.a.iv (b) in that Hour exceeds the aggregate of the RSG Intra-Hour Demand Change Charges to Market Participants and the RSG Constraint Management Charge, any excess shall be recovered under the RSG Day-Ahead Schedule Deviations Charge.

v. RSG Day-Ahead Schedule Deviations Charge

(a) Any residual Real-Time Revenue Sufficiency Guarantee Make Whole Payments not recovered under the RSG Intra-Hour Demand Change Charge or the RSG Constraint Management Charge, including RSG Second Pass Charge assignment, will be recovered under the Day-Ahead Schedule Deviations Charge.

(b) For schedule modifications occurring prior to the Notification Deadline, Real-Time Revenue Sufficiency Guarantee Charges will be assessed to Market Participants in proportion to the deviation billing determinants set forth below.

(1) Deviations from Real-Time Hourly Economic Maximum Level. This component of the charge will be equal to the Day-Ahead Schedule minus the Real-Time Hourly Economic Maximum Level at the Notification Deadline. This difference excludes Resources committed by the Transmission Provider in any RAC processes conducted for the Operating Day.
(2) Deviations from Day-Ahead Demand Bids. This component of the charge will be equal to the Real-Time Demand Forecast at the Notification Deadline minus the cleared Day-Ahead Demand Bid. If a Real-Time Demand Forecast is not submitted, then the Real-Time Demand Forecast will equal the cleared Day-Ahead Demand Bid.
(3) Deviations from Day-Ahead Import Schedules. This component of the charge will be equal to the Imports scheduled in the Day-Ahead Energy Market minus the Real-Time scheduled Imports at the Notification Deadline.
(4) Deviations from Day-Ahead Export schedules. This component of the charge will be equal to the Real-Time scheduled Exports at the Notification Deadline minus the Export scheduled in the Day-Ahead Energy Market.
(5) Virtual Supply Offers. This component of the charge will be equal to the cleared Virtual Supply Offers.
(6) Virtual Bids. This component of the charge will be equal to the negative of cleared Virtual Bids.
(7) Internal Bilateral Transactions for Deviations volumes. This component of the charge will be equal to the negative MW value of Internal Bilateral Transactions for Deviations purchases or the MW value of Internal Bilateral Transactions for Deviations sales.

(c) For schedule modifications occurring after the Notification Deadline, Real-Time Revenue Sufficiency Guarantee Charges will be assessed to Market Participants in proportion to the deviation billing determinants set forth below:

(1) Decreases in Real-Time Generator Economic Maximum Dispatch for Resources committed by the Transmission Provider in any RAC processes conducted for the Operating Day. This component of the charge will be equal to negative one times the lesser of the Real-Time Economic Maximum Dispatch minus the Hourly Economic Maximum Level at the Notification Deadline, and zero.
(2) Decreases in Real-Time Generator Economic Maximum Dispatch for Resources not committed in any RAC processes conducted during the Operating Day. This component of the charge will be equal to negative one times the lesser of the Economic Maximum Dispatch minus the Hourly Economic Maximum Level at the Notification Deadline, and zero.
(3) Decreases from Target Resource Dispatch. This component of the charge will be equal to negative one times the lesser of the Energy output based on the Metered quantity of Energy (MWh) (excluding MW designated for either Regulation Down or Regulation Up) minus the Hourly integrated Dispatch Instruction, and zero.
(4) Increases in Load from Real-Time Demand Forecasts. This component of the charge will be equal to the greater of the Real-Time Metered Load minus the Real-Time Demand Forecast at the Notification Deadline, and zero. If a Real-Time Demand Forecast is not submitted, then the Real-Time Demand Forecast will equal the cleared Day-Ahead Demand Bid.
(5) Decreases from Day-Ahead Import Schedules. This component of the charge will be equal to the greater of the Real-Time scheduled Imports at the Notification Deadline minus the Real-Time Import scheduled quantities, and zero.
(6) Increases from Day-Ahead Export schedules. This component of the charge will be equal to the greater of the Real-Time Export scheduled quantities minus the scheduled Exports at the Notification Deadline and Real-Time Export scheduled quantities, and zero.

(d) For each Asset Owner, the net positive sum of amounts described in Section 40.3.3.a.v (b) (1) through (7) and the sum of amounts described in Section 40.3.3.a.v (c) (1) through (6) shall be multiplied by the per unit Real-Time RSG Day-Ahead Schedule Deviations Charge rate to determine the Real-Time RSG Day-Ahead Schedule

Deviations Charge, provided that, no charges shall be assessed for any difference caused by lags in the State Estimator and Unit Dispatch System tracking of unit output that complies with Dispatch Instructions.

(e) The per unit Real-Time RSG Day-Ahead Schedule Deviations Charge Rate for any given Hour shall equal any residual Real-Time Revenue Sufficiency Guarantee Charge in that Hour remaining after application of the RSG Intra-Hour Demand Change Charge allocation, divided by the greater of:

(1) the net positive sum of the deviations described in Section 40.3.3.a.v (b) (1) through (7) and the sum of the deviations described in Section 40.3.3.a.v (c) (1) through (6), or;
(2) the aggregate of the residual Economic Maximum Dispatch amounts of Resources not allocated under the RSG Constraint Management Charge or the RSG Intra-Hour Demand Change Charge.

vi. RSG Second Pass Charge: In the event that the aggregate Real-Time Revenue Sufficiency Guarantee Charge exceeds the aggregate of the RSG Constraint Management Charges, the RSG Intra-Hour Demand Change Charges. and the RSG Day-Ahead Schedule Deviations Charges in an Hour, the excess shall be recovered through an assessment of debits on all Market Participants on a pro-rata basis across the Transmission Provider Region. The pro-rata allocation will be based upon Metered Load and Exports in the Real-Time Energy Market, whether scheduled in the Day-Ahead or the Real-Time Energy Market.

vii. Exemptions: In addition to Exemptions specified elsewhere in the EMT, or through Settlement Agreement on file with the Commission, Market Participants may receive exemptions from allocations of Real-Time Revenue Sufficiency Guarantee Charges for deviation associated with certain transactions, market conditions, or system limitations described below. In all cases, deviations associated with exempted transactions will not be included as billing determinants in the calculation of allocation or rate determinations in sections 40.3.3.a.iii or 40.3.3.a.v.

(a) An Asset Owner shall not incur Real-Time Revenue Sufficiency Guarantee Charges under Sections 40.3.3.a.iii and 40.3.3.a.v for deviations of Interchange Schedules supported by Firm Transmission Service, provided such deviations are in compliance with the directives of the Transmission Provider. Deviations of Interchange Schedules supported by Non-Firm Transmission Service shall not be exempt from Real-Time Revenue Sufficiency Guarantee Charges under Sections 40.3.3.a.iii and 40.3.3.a.v, unless the Asset Owner is in compliance with the directives of the Transmission Provider under a declared emergency situation, including declared Energy Emergency Alert level 2 or 3 conditions, and declared local emergency conditions requiring a reduction in Load at the direction of the Transmission Provider.

(b) An Asset Owner shall not incur Real-Time Revenue Sufficiency Guarantee Charges under Sections 40.3.3.a.iii and 40.3.3.a.v for deviations directly related to scheduling of Carved-Out GFAs.

(c) An Asset Owner shall not incur Real-Time Revenue Sufficiency Guarantee Charges under Sections 40.3.3.a.iii and 40.3.3.a.v for deviations associated with Generation Resources that are exempted from Uninstructed Deviation Penalties per section 40.3.4.d.

(d) An Asset Owner shall not incur Real-Time Revenue Sufficiency Guarantee Charges under Sections 40.3.3.a.iii and 40.3.3.a.v for deviations directly related to transactions required for certain modeling and systems limitations specified in the Business Practice Manuals.

(e) An Asset Owner shall not incur Real-Time Revenue Sufficiency Guarantee Charges under Sections 40.3.3.a.iii and 40.3.3.a.v for deviations directly related to scheduling of Real-Time Dynamic Dispatchable transactions.