137 FERC ¶ 61,212
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Philip D. Moeller, John R. Norris,
and Cheryl A. LaFleur.

Midwest Independent Transmission System Operator, Inc. — Docket No. ER11-4337-000

ORDER ON COMPLIANCE FILING

(Issued December 15, 2011)

1. On August 19, 2011, Midwest Independent Transmission System Operator, Inc. (MISO) submitted proposed revisions to its Open Access Transmission, Energy and Operating Reserve Markets Tariff (Tariff)[1] in compliance with Order No. 745 (August 19, 2011 Compliance Filing).[2] Among other things, MISO proposes to determine a Net Benefits Price Threshold that will define, on a monthly basis, the locational marginal price (LMP) at or above which it would be cost effective to pay demand response resources the LMP. MISO proposes to pay the applicable LMP to cost-effective demand response resources, as thus defined, that clear the day-ahead and/or real-time energy market and for which demand response is not facilitated by behind-the-meter generation. MISO proposes not to compensate demand response resources that clear the day-ahead and/or real-time energy market when they are not cost effective. MISO also proposes to allocate the costs associated with compensating demand response resources in the real-time energy market to market participants located within the reserve zone of demand response resources that either purchase energy and benefit from reduced LMPs or serve load and avoid selling energy to retail customers at a loss. MISO proposes to allocate any remaining costs to all load-serving entities system-wide on a *pro rata* load share basis. MISO also proposes to revise its Tariff provisions regarding demand response measurement and verification protocols and continues to propose, as it

[1] Midwest ISO, FERC Electric Tariff.

[2] *Demand Response Compensation in Organized Wholesale Energy Markets*, Order No. 745, 76 Fed. Reg. 16,658 (Mar. 24, 2011), FERC Stats. & Regs. ¶ 31,322 (2011), *order on reh'g*, Order No. 745-A, 137 FERC ¶ 61,215 (2011).

does in its Order No. 719[3] compliance filings in Docket No. ER09-1049 to provide the details of its measurement and verification protocols in its Business Practices Manuals.

2. In this order, as explained in the determinations below, we conditionally accept in part and reject in part MISO's filing, and require MISO to submit a compliance filing within 90 days of the date of this order. First, we accept MISO's proposal to pay the applicable hourly LMP to cost-effective demand response resources that clear the day-ahead and/or real-time energy market, subject to further clarification and compliance. Next, we reject MISO's proposal to deny such compensation to demand response that is facilitated by behind-the-meter generation and reject as beyond the scope of the Commission's directives in Order No. 745 MISO's proposal to modify its compensation for demand response resources that are not cost effective, and require MISO to submit Tariff revisions implementing this determination in its compliance filing. In addition, we reject MISO's proposed cost allocation methodology and require MISO to submit a revised methodology that is consistent with Order No. 745 in its compliance filing. Finally, as a general matter, we defer judgment as to whether MISO has complied with the measurement and verification protocol requirements of Order No. 745, subject to the outcome of the proceeding regarding MISO's compliance with the measurement and verification protocol requirements of Order No. 719. With respect to the Tariff provisions regarding MISO's demand response measurement and verification protocols proposed in this proceeding, we conditionally accept them in part and reject them in part, subject to further clarification and compliance.

I. Background

A. Order No. 719 and MISO Compliance Filings

3. In Order No. 719, the Commission established reforms to improve the operation of organized wholesale electric power markets, including with respect to demand response, and amended its regulations under the Federal Power Act (FPA) accordingly.

4. Specifically, in the area of demand response, the Commission required Regional Transmission Organizations (RTO) and Independent System Operators (ISO) to: 1) accept bids from demand response resources in RTOs' and ISOs' markets for certain ancillary services on a basis comparable to other resources; 2) eliminate, during a system emergency, a charge to a buyer that takes less electric energy in the real-time market than it purchased in the day-ahead market; 3) in certain circumstances, permit an aggregator of

[3] *Wholesale Competition in Regions with Organized Electric Markets*, Order No. 719, FERC Stats. & Regs. ¶ 31,281 (2008), *order on reh'g*, Order No. 719-A, 74 Fed. Reg. 37,776 (Jul. 29, 2009), FERC Stats. & Regs. ¶ 31,292 (2009), *order on reh'g*, Order No. 719-B, 129 FERC ¶ 61,252 (2009).

retail customers (ARC) to bid demand response on behalf of retail customers directly into the organized energy market; 4) modify their market rules, as necessary, to allow the market-clearing price, during periods of operating reserve shortage, to reach a level that rebalances supply and demand so as to maintain reliability while providing sufficient provisions for mitigating market power; and 5) study whether further reforms are necessary to eliminate barriers to demand response in organized markets.[4]

5. On April 28, 2009, MISO submitted a compliance filing, pursuant to Order No. 719, that proposes revisions to its Tariff.[5] In that filing, among other things, MISO addressed the aforementioned Order No. 719 requirements for demand response resources. MISO stated that work was continuing on provisions to allow the participation of ARCs in MISO's markets, and that such provisions were filed on an informational basis. On October 2, 2009, MISO submitted an additional filing that set forth proposed Tariff revisions to allow participation of such ARC resources in MISO's day-ahead and real-time markets.[6] In the MISO Order No. 719 Compliance Order,[7] issued concurrently with this order, the Commission conditionally accepts the April 28, 2009 Compliance Filing and conditionally accepts in part and rejects in part the October 2, 2009 Compliance Filing.

B. Order No. 745

6. On March 15, 2011, the Commission issued Order No. 745, a Final Rule amending the Commission's regulations under the FPA, regarding compensation for demand response resources participating in wholesale energy markets (i.e., the day-ahead and real-time markets) administered by RTOs and ISOs.[8] Specifically, Order No. 745 requires each RTO and ISO to pay a demand response resource the market price for energy (i.e., the LMP) when two conditions are met. First, the demand response resource must have the capability to balance supply and demand as an alternative to a generation resource. Second, dispatching the demand response resource must be cost-effective as

[4] Order No. 719, FERC Stats. & Regs. ¶ 31,281 at P 15.

[5] MISO April 28, 2009 Order No. 719 Compliance Filing, Docket No. ER09-1049-000 (April 28, 2009 Compliance Filing).

[6] MISO October 2, 2009 Supplemental Order No. 719 Compliance Filing, Docket No. ER09-1049-002 (October 2, 2009 Compliance Filing).

[7] *Midwest Indep. Transmission Sys. Operator, Inc.*, 137 FERC ¶ 61,214 (2011) (MISO Order No. 719 Compliance Order).

[8] Order No. 745, FERC Stats. & Regs. ¶ 31,322.

determined by a net benefits test in accordance with Order No. 745. The net benefits test, as described more fully below, is necessary to ensure that the overall benefit of the reduced LMP that results from dispatching demand response resources exceeds the costs of dispatching and paying LMP to those resources.

7. In order to implement the net benefits test, the Commission directed each RTO and ISO to develop a mechanism to approximate the price level at which dispatching demand response resources will be cost-effective. The Commission required each RTO and ISO to make a compliance filing by July 22, 2011, proposing tariff revisions necessary to implement the compensation approach adopted in Order No. 745, including the net benefits test, a cost allocation mechanism, and an assessment of their demand response measurement and verification protocols and any modifications to those protocols that may be necessary to ensure adequate baseline measurement and verification of demand response performance. The Commission stated that each RTO's or ISO's compliance filing will become effective prospectively from the date of the Commission order addressing that filing. This order addresses MISO's compliance filing.

C. MISO August 19, 2011 Compliance Filing

8. On August 19, 2011, MISO submitted its Order No. 745 compliance filing.[9] Among other things, MISO proposes to pay the applicable hourly LMP to demand response resources that clear the day-ahead and/or real-time energy market when the LMP equals or exceeds the Net Benefits Price Threshold (i.e., when the deployment of demand response resources is cost effective). However, MISO proposes to provide no compensation to such resources if: 1) the applicable hourly LMP is below the Net Benefits Price Threshold (i.e., when the deployment of demand response resources is not cost effective) or 2) the demand response is facilitated by behind-the-meter generation, regardless of whether the resource is cost effective. MISO also proposes that demand response resources should be ineligible to receive Revenue Sufficiency Guarantee credits[10] when they are ineligible to receive the applicable LMP.[11]

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[9] MISO states that it held discussions with its stakeholders regarding various issues related to its compliance with Order No. 745 at three Demand Response Working Group meetings beginning in May of 2011, as well as at a Market Subcommittee meeting in August of 2011. MISO August 19, 2011 Compliance Filing, Transmittal Letter at 2-3.

[10] Revenue Sufficiency Guarantee credits ensure that market participants that are committed and scheduled by MISO in the day-ahead and/or real-time energy market recover their production costs. MISO, FERC Electric Tariff, Fourth Revised Vol. No. 1, Original Sheet No. 113 and First Revised Sheet No. 255.

9. MISO proposes a bifurcated cost allocation methodology to recover the costs associated with compensating demand response resources in the real-time energy market. In particular, MISO proposes to allocate costs via: 1) a direct cost allocation to each load-serving entity responsible for serving the retail load of the demand response resources that benefits by avoiding losses from selling energy to retail customers at their respective retail rates (i.e., when the hourly *ex post* LMP exceeds the applicable Marginal Foregone Retail Rate, or MFRR); and 2) a zonal energy surcharge to all market participants in the reserve zone of the demand response resources that benefit by purchasing energy in the real-time market at reduced LMPs. To the extent that the total compensation paid to demand response resources exceeds the costs recovered under the bifurcated cost allocation methodology in 1) and 2) above, MISO proposes to allocate the remaining costs *pro rata* to all market participants on its system.[12] In addition, MISO proposes that load-serving entities with deviations between their day-ahead and real-time positions due to real-time deployments of demand response resources should be exempt from the associated real-time Revenue Sufficiency Guarantee charges.[13]

10. With regard to measurement and verification, MISO proposes Tariff revisions to keep the one-to-one relationship between the Host Load Zone[14] and Demand Response Resources – Type II that are regulation qualified, and to eliminate it for demand response resources providing energy, contingency reserves, or capacity, as proposed in its October 2, 2009 Compliance Filing in the Order No. 719 proceeding.[15] MISO also proposes to establish registration requirements for demand response resources.[16] MISO

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[11] MISO August 19, 2011 Compliance Filing, Transmittal Letter at 5.

[12] *Id.*, Transmittal Letter at 10-12.

[13] *Id.*, Transmittal Letter at 5. Real-time Revenue Sufficiency Guarantee charges allocate to market participants the costs associated with providing real-time Revenue Sufficiency Guarantee credits during a given hour. MISO, FERC Electric Tariff, Fourth Revised Vol. No. 1, First Revised Sheet No. 254.

[14] The term "Host Load Zone" was previously undefined in the definitions section of the Tariff. However, in the October 2, 2009 Compliance Filing and August 19, 2011 Compliance Filing, MISO proposes to define "Host Load Zone" as "[a] separate Commercial Pricing Node that has the same definition as a Demand Response Resource – Type II Commercial Pricing Node." *See, e.g.*, *id.*, FERC Electric Tariff, § 1.281a (1.0.0).

[15] *Id.*, Transmittal Letter at 7-8. *See also* MISO October 2, 2009 Compliance Filing, Docket No. ER09-1049-002, at 19-20, Ex. C at 22-23.

[16] *Id.*, FERC Electric Tariff, § 38.7.2 (0.0.0).

states that it intends to continue incorporating any applicable North American Energy Standards Board (NAESB) standards and reiterates the protocols and procedures submitted in its Order No. 719 compliance filing. As proposed in its October 2, 2009 Compliance Filing, MISO maintains that its Business Practices Manuals will be updated to provide the implementation details for measurement and verification of demand response.[17]

11. MISO requests an effective date for the proposed Tariff revisions that is at least 120 days following the issuance of a Commission order accepting MISO's compliance filing. MISO asserts that this additional time is necessary "to enable MISO to develop and implement the systems and software that may be required by the Commission's directives."[18] To enable the requested extension, MISO requests waiver of any applicable Commission requirements, including Order No. 745's directive that the compliance filing become effective immediately upon issuance of the Commission's order on the filing.[19]

II. Notice of Filing and Responsive Pleadings

12. Notice of MISO's filing was published in the *Federal Register*, 76 Fed. Reg. 56,674 (2011), with interventions and protests due on or before September 23, 2011.[20] Timely motions to intervene were filed by Ameren Service Company (Ameren);[21] Coalition of Midwest Transmission Customers (Midwest Transmission Customers); Comverge, Inc. (Comverge); Constellation Energy Commodities Group, Inc. and Constellation NewEnergy, Inc.; DC Energy Midwest, LLC; Detroit Edison Company (Detroit Edison); Electric Power Supply Association (EPSA); EnergyConnect, Inc. (EnergyConnect); EnerNOC, Inc. (EnerNOC); Exelon Corp.; Wal-Mart Stores, Inc. (Wal-Mart); and Wisconsin Electric Power Company.

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[17] *Id.*, Transmittal Letter at 7-8.

[18] *Id.*, Transmittal Letter at 13.

[19] *Id.* (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 6).

[20] On August 31, 2011, the Commission granted an extension of time up to and including September 23, 2011 to file comments.

[21] Ameren submitted the filing on behalf of its affiliated public utility operating companies, Ameren Illinois Co. and Union Electric Co., and its affiliated marketing and generating companies, Ameren Energy Marketing Co., Ameren Energy Generating Co., and Ameren Energy Resources Generating Co.

13. Timely motions to intervene and comments and/or protests were filed by Alcoa Inc. and Alcoa Power Generating, Inc. (jointly, Alcoa); American Municipal Power, Inc. (AMP); Consumers Energy Company (Consumers); Environmental Law & Policy Center (ELPC) and Wind on the Wires (WOW) (together, ELPC-WOW); Industrial Energy Consumers Group (Industrial Consumers); Midwest TDUs;[22] MISO Industrials;[23] and Xcel Energy Services, Inc. (Xcel).[24] A notice of intervention and comments were filed by the Organization of MISO States (OMS).[25] Comments and/or protests were filed by Demand Response Supporters;[26] Detroit Edison; Energy Spectrum, Inc. (Energy Spectrum); EPSA;[27] and Marathon Engine Systems (Marathon).[28]

14. A motion to intervene and protest out-of-time was filed by Association of Businesses Advocating Tariff Equity (ABATE). MISO filed a motion for leave to answer and answer to the comments and protests. Alcoa and Demand Response Supporters filed motions for leave to answer and answers to MISO's answer.

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[22] For the purposes of this filing, Midwest TDUs include: Madison Gas & Electric Co., Missouri Joint Municipal Electric Utility Commission, Missouri River Energy Services, Southern Minnesota Municipal Power Agency, and WPPI Energy.

[23] MISO Industrials include: Wisconsin Industrial Energy Group, Wisconsin Paper Council, and Minnesota Large Industrial Group.

[24] Xcel submitted the filing on behalf of its utility operating affiliates Northern States Power Co., a Minnesota corporation, and Northern States Power Co., a Wisconsin corporation.

[25] OMS states that the majority of its members agreed to support its comments, but Illinois Commerce Commission, Kentucky Public Service Commission, and Manitoba Public Utilities Board abstained from the vote on the pleading. OMS Notice of Intervention and Comments at 4.

[26] Demand Response Supporters include: American Forest & Paper Association; Comverge; EnergyConnect; EnerNOC; Midwest Transmission Customers; Viridity Energy, Inc.; and Wal-Mart.

[27] To the extent that EPSA's comments discuss Order No. 745 compliance filings submitted by other RTOs and ISOs or request rehearing of Order No. 745, they are outside the scope of this proceeding and are not discussed in this order.

[28] Energy Spectrum and Marathon each submitted a letter dated September 9, 2011; these letters are treated as comments. Similarly, while EPSA's filing was styled, in part, as a motion for leave to answer and answer, it is treated as comments.

III. Discussion

A. Procedural Matters

15. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure (Rules),[29] the notice of intervention and the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding. Pursuant to Rule 214(d)[30] of the Commission's Rules, we will accept ABATE's late-filed motion to intervene, given its interest in the proceeding, the early stage of the proceeding, and the absence of undue prejudice or delay. Rule 213(a)(2) of the Commission's Rules[31] prohibits an answer to a protest or an answer unless otherwise ordered by the decisional authority. We will accept the answers filed by MISO, Alcoa, and Demand Response Supporters because they have assisted us in our decision-making process.

B. Substantive Matters

1. Net Benefits Test and Demand Response Compensation

a. Order No. 745

16. In Order No. 745, the Commission recognized that, depending on the change in the LMP relative to the size of the energy market, dispatching demand response resources may result in an increased cost per unit ($/MWh) to the remaining wholesale load, due to the decreased amount of load paying the bill. This is referred to as the "billing unit effect."[32] In order to address this effect, the Commission required each RTO and ISO to implement a net benefits test to determine whether a demand response resource is a cost-effective alternative to generation for balancing supply and demand in any given hour.[33]

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[29] 18 C.F.R. § 385.214 (2011).

[30] 18 C.F.R. § 385.214(d) (2011).

[31] 18 C.F.R. § 385.213 (2011).

[32] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 3.

[33] Although the Commission noted that integrating the billing unit effect into the RTO/ISO dispatch processes has the potential to more precisely identify when demand response resources are cost effective, the Commission acknowledged the position of several RTOs and ISOs that it may be difficult to modify their dispatch algorithms in the near term. Therefore, the Commission required RTOs and ISOs to perform a net benefits test on a monthly basis to determine under which conditions it is cost-effective to pay full LMP to demand response resources. Additionally, the Commission directed RTOs and

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17. Specifically, Order No. 745 directed each RTO and ISO to undertake an analysis on a monthly basis, based on historical data and the prior year's supply curve, to identify a price threshold to estimate where customer net benefits would occur. The Commission further explained that the RTO or ISO should determine the threshold price corresponding to the point along the supply stack for each month at which the benefit to load from the reduced LMP resulting from dispatching demand response resources exceeds the increased cost to load associated with the billing unit effect, and update the calculation monthly as new information becomes available and post it on the RTO website.[34] The Commission required that the Commission-approved net benefits test methodology must be posted on the RTO or ISO's website, with supporting documentation.[35]

18. The Commission further explained that the threshold point along the supply stack for each month will fall in the area where the supply curve becomes inelastic, rather than the extreme steep portion at the peak or in the flat portion of the supply curve. In other words, LMP will be paid to demand response resources during periods when the nature of the supply curve is such that small decreases in generation being called to serve load will result in price decreases sufficient to offset the billing unit effect.[36]

b. MISO August 19, 2011 Compliance Filing

19. MISO proposes that when demand response resources clear in the day-ahead and/or real-time energy market in a given hour, the market would pay such resources the applicable hourly LMP (i.e., the day-ahead LMP or hourly *ex post* LMP in the day-ahead or real-time energy market, respectively) for non-excessive energy[37] if the applicable

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ISOs to study the feasibility of developing a dynamic net benefits approach to dispatching demand response resources that takes into account the billing unit effect in the economic dispatch in both the day-ahead and real-time energy markets and file the results of their study with the Commission by September 21, 2012.

[34] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 79.

[35] *Id.* P 81.

[36] *Id.* P 80.

[37] Non-excessive energy is any energy injected or withdrawn by a resource in an hour in the real-time market that is less than or equal to the maximum value of that resource's tolerance band (i.e., the resource's excessive energy threshold). The tolerance band defines the minimum and maximum amount by which a generation resource or demand response resource may deviate from its dispatch target for energy (or from its targeted demand reduction level for Demand Response Resources – Type I) during a

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hourly LMP equals or exceeds the Net Benefits Price Threshold in effect for that month.[38] MISO proposes that, if the applicable hourly LMP is instead less than the Net Benefits Price Threshold, cleared demand response resources would not receive any compensation because the demand response was not cost effective. MISO asserts that only compensating demand response resources that are cost effective is consistent with the existing MISO Tariff because, while demand response resources are currently paid the LMP when deployed, the "[load-serving entities] where the [demand response resources] are deployed are charged [the] LMP, resulting in a net payment of $0 for the [demand response resource]."[39]

20. MISO states that the proposed Net Benefits Price Threshold would define the LMP where demand response resources provide benefits to the energy market and would be constant for every hour of a given month.[40] In order to determine this threshold, MISO proposes to construct supply curves from the real-time offers of resources (excluding demand response resources) for the previous year. In conjunction with appropriate explanatory variables (i.e., fuel price indices, a resource outage index,[41] and binary dummy variables[42]), MISO would then use mathematical techniques to estimate a "smoothed," aggregate net benefits supply curve.[43] Proposed section 38.7.1 of the Tariff

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dispatch interval before Excessive/Deficient Energy Deployment Charges may apply. MISO, FERC Electric Tariff, Fourth Revised Vol. No. 1, Original Sheet No. 146; Second Revised Sheet Nos. 229, 1118, 1118A, & 1119; 1st Rev. First Revised Sheet No. 1116C; First Revised Sheet No. 1117.

[38] MISO August 19, 2011 Compliance Filing, Transmittal Letter at 5. MISO's proposed Tariff revisions regarding compensation for demand response resources that are facilitated by behind-the-meter generation when the applicable hourly LMP equals or exceeds the Net Benefits Price Threshold are discussed separately below.

[39] *Id.*

[40] *Id.*

[41] MISO states that the resource outage index compares the maximum quantity of resources available for each day with the maximum quantity of resources available for any day during that year. *Id.*, Att. A (Net Benefits Test for Demand Response Compensation) at 6.

[42] These dummy variables allow each month to have a unique supply curve shape and enable MISO to examine whether a unique shape for any given month is statistically supportable. *Id.*

[43] *Id.*, Transmittal Letter at 6, Att. A at 4-6.

provides that, for 2011, MISO would use historical real-time offers for 2010, and subsequently incorporate additional offer pairs on an annual basis, so that an updated net benefits supply curve would be determined on February 15th of each year to be effective on March 1st. MISO states that, for each operating month, it would determine the Net Benefits Price Threshold by finding the price that corresponds to the point on the net benefits supply curve where the elasticity of supply is less than or equal to one for all greater quantities.[44] Proposed section 38.7.1 of the Tariff provides that this threshold would be determined by the 15th day of each month prior to the operating month and that MISO would post the monthly threshold on its website.[45]

21. Using its proposed technique, MISO estimated an aggregate net benefits supply curve for the MISO region using historical data for 2010. MISO states that its estimation yielded statistically supportable and reasonable results and that the effects of changes in underlying fuel prices upon the threshold prices "were obtainable without resorting to administrative or ad hoc decisions regarding the magnitude or importance of such changes on the supply curve."[46] MISO states that, for each month in 2010, the resulting threshold price ranged from $26.93 to $31.53 per MWh.[47]

22. MISO contends that demand response resources that are not compensated at the LMP should not be kept whole for their production costs by receiving day-ahead and/or real-time Revenue Sufficiency Guarantee credits, "because providing such [resources] with a make-whole payment would be directly contrary to payment of zero dollars to a [demand response resource] that is priced at an LMP that is below the Net Benefits Price Threshold."[48] Specifically, MISO proposes to set demand response resources' hourly production costs to zero when the applicable hourly LMP is less than the Net Benefits Price Threshold.

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[44] *Id.*, Transmittal Letter at 6.

[45] MISO states that it would post the supply curves and calculated threshold prices, on a rolling, 12-month basis, for the day-ahead and real-time markets. *Id.*, Transmittal Letter at 7.

[46] *Id.*

[47] *Id.*, Att. A at 8.

[48] *Id.*, Transmittal Letter at 5.

c. Comments and Protests

i. General Comments

23. Detroit Edison and Xcel generally support MISO's compliance filing. Detroit Edison states that it supports the proposed methodology to calculate the Net Benefits Price Threshold and the concept that demand response resources should only be compensated when priced at or above the Net Benefits Price Threshold.[49] Xcel maintains that MISO's compliance filing conforms with Order No. 745, stating that the proposed net benefits test is based on historical data and provides the price at which the dispatch of demand response resources would be cost effective. Xcel adds that MISO proposes to update the supply curve used for the net benefits test by the 15th day of the preceding month in order to allow market participants to plan based on current supply conditions.[50] In addition, ELPC-WOW generally support MISO's proposal to pay the LMP for demand response in the day-ahead and real-time energy markets.[51]

24. OMS states that it cannot support MISO's demand response compensation proposal in the instant proceeding because the proposal is contrary to OMS' position in other proceedings. OMS restates the position it articulated in the Order No. 745 rulemaking and rehearing proceedings that the LMP minus the retail rate is the correct compensation for demand response load reductions.[52] OMS also notes that it filed comments in support of MISO's proposal to pay ARCs the LMP minus the retail rate in MISO's Order No. 719 compliance filings.[53] Nevertheless, OMS states that it believes that MISO's overall proposal complies with Order No. 745, and OMS does not oppose the filing.[54]

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[49] Detroit Edison Comments at 2.

[50] Xcel Motion to Intervene and Comments at 4.

[51] ELPC-WOW Motion to Intervene and Protest at 3.

[52] OMS Notice of Intervention and Comments at 2-3 (citing OMS May 13, 2010 Comments, Docket No. RM10-17-000; OMS April 14, 2011 Request for Rehearing, Docket No. RM10-17-000).

[53] *Id.* at 2 (citing OMS November 5, 2009 Comments, Docket No. ER09-1049-002).

[54] *Id.* at 3-4.

ii. Compensation Above and Below the Net Benefits Price Threshold

25. Alcoa and Demand Response Supporters are concerned that, in the real-time energy market, MISO may dispatch demand response resources based on five-minute *ex ante* LMPs that are above the Net Benefits Price Threshold, but by the end of the hour, the average hourly *ex post* LMP may fall below the threshold so that demand response resources would not receive compensation. Demand Response Supporters argue that, since MISO proposes to set demand response resources' production costs to zero, they would not be eligible to receive Revenue Sufficiency Guarantee credits during their specified minimum run time. Demand Response Supporters claim that generation resources are not treated in a comparable manner and argue that the Commission should require MISO to permit demand response resources to specify minimum run times and, if dispatched, compensate such resources at their offer prices.[55] Alcoa maintains that MISO's proposal is not compliant with Order No. 745. According to Alcoa, intra-hour price volatility is common in the MISO market, which could cause five-minute *ex ante* LMPs to be significantly higher than the associated hourly *ex post* LMP, and this problem would have occurred during three hours in June of 2011. To address its concerns, Alcoa recommends that, "if the five-minute LMP is above the Net Benefits Price Threshold, and Demand Response participants respond, then they should be compensated at that LMP with assurance that the minimum offer price (based upon lost production costs) will be recovered."[56]

26. Alcoa also argues that compensating real-time demand response resources at levels that vary depending on whether the LMP is below, at, or above the Net Benefits Price Threshold could cause demand response resources to be compensated for regulating reserves in a manner that is not comparable to the compensation of generation resources. Alcoa explains that MISO's current network and commercial model inappropriately treats demand response resources identically to generation resources so that, in order to sell regulating reserves, demand response resources must "create artificial loads in the MISO market model that must be sold back (as Demand Response) in order to create regulation 'room.'"[57] Alcoa claims that, while this practice creates unnecessary modeling, forecasting, and financial burdens, resources are currently able to create artificial loads by

[55] Demand Response Supporters Protest at 14-16.

[56] Alcoa Motion to Intervene, Limited Protest, and Comments at 4-6.

[57] Alcoa explains, for example, that if a demand response resource has a base load of 100 MW and has the capability to increase load to 110 MW (e.g., when energy prices are low) or reduce to 90 MW, the load must continuously buy 110 MW at the LMP, and sell back 10 MW at the LMP, under MISO's existing model. *Id.* at 7-8.

buying and selling power at the LMP in order to remain economically neutral. Alcoa is concerned that under the proposal, in the event that a demand response resource buys energy at the LMP in order to create an artificial load, the resource could receive no compensation when they sell back that energy if the LMP falls below the Net Benefits Price Threshold.[58] In addition, Alcoa argues that the Commission should require that MISO reexamine its use of monthly average supply curves, rather than dynamic, hourly or daily supply curves, as more sophisticated models and computational systems become available in the future.[59] Alcoa asks the Commission to establish a process for separately addressing the issues that Alcoa and other stakeholders raise before acting on MISO's proposal.[60]

iii. Eligibility for Demand Response Resources to Receive the LMP

27. Midwest TDUs and EPSA ask the Commission to limit eligibility for compensation at the LMP to demand response providers whose energy offers were "economically selected" by MISO (rather than those that self-schedule for energy).[61] To support this position, Midwest TDUs point to the Commission's finding in Order No. 745 that "[w]hen the net benefits test described herein is satisfied and the demand response resource clears in the RTO's or ISO's economic dispatch, the demand response resource is a cost effective alternative to generation resources for balancing supply and demand."[62] Midwest TDUs also note the Commission's finding that demand response resources should receive the LMP only when they clear the real-time energy market and "when dispatch of that demand response resource is cost-effective."[63] Midwest TDUs assert that self-scheduled demand response resources bypass MISO's economic selection process and do not clear the energy market. EPSA argues that self-scheduled demand response resources do not, and cannot, satisfy the narrow requirement in Order No. 745 that

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[58] Alcoa explains that, in its previous example, a demand response resource that buys 110 MW at an LMP of $10 per MWh could end up selling back 10 MW at $0 per MWh if the Net Benefits Price Threshold is greater than $10 per MWh, so that the resource would not be revenue neutral. *Id.* at 8-9.

[59] *Id.* at 9.

[60] *Id.* at 13.

[61] Midwest TDUs Motion to Intervene and Protest at 9, 13.

[62] *Id.* at 9 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322, at P 3).

[63] *Id.* (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 2, 53-54).

demand response resources must balance supply and demand to qualify for compensation at the LMP.[64] Midwest TDUs argue that self-scheduling is inconsistent with the assumptions underlying the measurement and verification criteria of demand response resources. They claim that, by self scheduling, demand response providers are stating that the relevant retail load will be dropped regardless of price, which is inconsistent with claiming that the load is part of the retail customer's baseline and treating the decrease as a load reduction that should receive financial credit.[65]

28. Midwest TDUs assert that MISO should not pay the LMP to, and should reject any energy offers from, a demand response resource unless the resource's offer price is greater than the applicable MFRR.[66] Midwest TDUs maintain that a retail demand response resource automatically receives cost savings equal to the MFRR by reducing its retail load. According to Midwest TDUs, "a retail [demand response] provider offering to sell [demand response] into the wholesale energy market for *less* than the [demand response] resource's avoided costs of consumption is a strong indication that the demand response is economically inefficient."[67] Midwest TDUs add that, since MISO's proposed cost allocation methodology does not compensate host load-serving entities when the LMP minus MFRR is negative, it is important to put a floor on the offers of retail demand response providers to avoid cost shifts that would otherwise result from the acceptance of demand response energy offers that are lower than the applicable MFRR (e.g., shifts between a load-serving entity's customers that provide demand response and those that do not).[68]

29. Midwest TDUs also argue that MISO should not pay the LMP to, and should reject any energy offers from, demand response resources that have dynamically-priced retail rates.[69] Their rationale is that such customers already receive economically

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[64] EPSA Comments, Motion for Leave to Answer and Answer at 6-13.

[65] Midwest TDUs Motion to Intervene and Protest at 10.

[66] *Id.* at 9-10, 13. At a minimum, Midwest TDUs argue that MISO's measurement and verification protocols should require scrutiny of retail demand response resources that submit energy offers below the applicable MFRR, as discussed in the measurement and verification section below.

[67] *Id.* at 10.

[68] *Id.*

[69] *Id.* at 9, 11, 13. In the alternative and at a minimum, Midwest TDUs argue that MISO should modify its measurement and verification protocols for retail demand response offers originating from retail customers within the footprints of load-serving

(continued…)

efficient price signals through their retail rates, so that receiving the LMP from MISO's energy market "would effectively double their compensation, a huge and unjustified subsidy."[70] Midwest TDUs note that the Commission may not have envisioned that Order No. 745 would apply in areas with dynamic retail pricing,[71] and conclude that the Commission should clarify what MISO needs to do with respect to demand resources from retail jurisdictions that have adopted dynamic pricing.[72]

30. Finally, Midwest TDUs argue that MISO should not pay the LMP to, and should reject any energy offers from, demand response resources that have been given the option of selecting dynamically-priced retail rates but have instead chosen fixed-priced rates, or at a minimum, such resources should be treated the same as retail customers with dynamically-priced rates and "should be required to demonstrate that any retail load reductions being sold in the wholesale market are truly a 'but for' load decrease that would not have occurred if the retail [demand response] provider had chosen to take service under the dynamically priced retail rate."[73] Midwest TDUs maintain that allowing customers to "cherry pick" wholesale LMPs, when they have refused to accept an offered dynamically-priced retail rate, encourages gaming and undermines retail ratemaking. They add that allowing retail customers to selectively receive the financial benefits of both fixed and dynamic rates would discourage the adoption of dynamic retail pricing and other retail rate mechanisms to encourage price-responsive demand, in violation of section 1252(f) of the Energy Policy Act of 2005.[74]

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entities with dynamic retail pricing, as discussed in the measurement and verification section below.

[70] *Id.* at 11.

[71] Midwest TDUs argue that the Commission previously identified dynamic retail pricing as a separate, independent method of achieving price responsive demand. *Id.* (citing *Demand Response Compensation in Organized Wholesale Energy Markets*, Notice of Proposed Rulemaking, 75 FR 15362 (Mar. 29, 2010), FERC Stats. & Regs. ¶ 32,656, at P 3 (2010)).

[72] *Id.* at 11.

[73] *Id.* at 11-13.

[74] *Id.* at 12-13 (citing Energy Policy Act of 2005, Pub. L. No. 109-58, § 1252(f), 119 Stat. 594 (2005) (EPAct 2005) ("It is the policy of the United States that . . . unnecessary barriers to demand response participation in energy, capacity and ancillary service markets shall be eliminated.")).

d. Answers

31. MISO contends that Alcoa and Demand Response Supporters seek compensation for demand response on a five-minute basis, rather than using the hourly *ex post* LMP, and MISO's response is that it compensates generation resources at the hourly *ex post* LMP and providing different treatment for demand response resources would be unduly discriminatory. MISO also notes that the settlement system for its real-time energy market is hourly for both loads and resources, and providing special treatment to demand response resources would require substantive changes to its settlement software. MISO also characterizes protesters' arguments as a collateral attack on the requirement in Order No. 745 to only compensate demand response resources when the LMP equals or exceeds the Net Benefits Price Threshold.[75]

32. MISO states that its whitepaper on potential barriers to demand response submitted in the MISO Order No. 719 compliance proceeding included Alcoa's concern that demand response resources must create artificial loads in order to provide regulating reserves and, in doing so, potentially incur a loss. MISO asserts that its Demand Response Working Group is trying to address this issue, which is beyond the scope of Order No. 745.[76] MISO adds that its compliance filing includes language to keep whole demand response resources that provide regulating reserves and must buy energy as part of their requirements, and it is willing to clarify any Tariff language on this issue in a compliance filing. In response to Alcoa's argument that MISO should model the net benefits supply curve using a dynamic real-time model, MISO maintains that Order No. 745 explicitly mandated the use of an average monthly supply curve until dynamic methodologies become more feasible, and MISO states that it is currently studying the implementation of a dynamic approach.[77]

33. MISO disagrees with Demand Response Supporters' assertion that, currently, generation resources committed at a certain price receive that price throughout their dispatch period, regardless of LMP fluctuations, if they specify a minimum run time that spans a period when LMPs drop below their offers. MISO asserts that this argument confuses its existing unit commitment and dispatch services, stating that committed resources are not guaranteed a level of compensation at a certain price but instead receive credits and are dispatched based on the LMP. With regard to Revenue Sufficiency Guarantee credits, MISO states that market participants recover their commitment costs if

[75] MISO Motion for Leave to Answer and Answer at 7-8.

[76] *Id.* at 8 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 12).

[77] *Id.* at 9.

they are committed by MISO. It notes that it proposes to set resources' production costs to zero when the applicable hourly LMP is below the Net Benefits Price Threshold.[78]

34. MISO believes that self-scheduled demand response resources should be paid the LMP. MISO contends that it provides the LMP to self-scheduled generation resources and that the risk of not receiving compensation at the applicable hourly LMP when the net benefits test is not met should provide the proper incentive for market participants to avoid self scheduling. MISO also disagrees with protesters who maintain that self scheduling should not be permitted, arguing that self schedules help balance supply and demand because such market participants must inform MISO of their schedule, and MISO's dispatch operators account for their expected output when considering the dispatch solution and in balancing energy. MISO adds that self-scheduled resources help to reduce the LMP by allowing dispatch operators to schedule fewer peaking units.[79] In response to Midwest TDUs' argument that the LMP should only be paid to demand response resources that submit offers higher than the applicable MFRR, MISO states that Order No. 745 levies no such requirement and MISO requests that the Commission reject this argument as a collateral attack on Order No. 745.[80]

35. In their answers, Alcoa and Demand Response Supporters state that they do not request that demand response resources be compensated on a five-minute basis rather than using the hourly *ex post* LMP. Instead, they explain that their position is that, under the proposal, demand response resources could be dispatched when they are expected to be cost effective and receive the LMP, but ultimately not receive any compensation because the hourly *ex post* LMP is below the Net Benefits Price Threshold.[81] Demand Response Supporters reiterate their request that demand response resources receive the same Revenue Sufficiency Guarantee credits as generators do, so that demand response resources receive the benefit that they expect when they reduce demand in response to price increases.[82]

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[78] *Id.* at 16-17.

[79] *Id.* at 12-13.

[80] *Id.* at 12.

[81] Alcoa Motion for Leave to Respond and Limited Response at 3-4; Demand Response Supporters Motion for Leave to Answer and Answer at 8-9.

[82] Demand Response Supporters Motion for Leave to Answer and Answer at 9-10.

e. Commission Determination

36. We find that MISO's compliance filing will ensure that demand response resources will receive the applicable hourly LMP when they have the capability to provide the service and when the payment of LMP for the provision of the service is cost-effective, as required by Order No. 745.[83] As discussed below, we will conditionally accept in part and reject in part MISO's proposal to pay the applicable hourly LMP to demand response resources for non-excessive energy when the applicable hourly LMP equals or exceeds the Net Benefits Price Threshold, subject to the outcome of the MISO Order No. 719 compliance proceeding[84] and the submission of a compliance filing in this proceeding, due within 90 days of the date of this order, to provide further information and Tariff revisions.

37. We will reject MISO's proposal to not compensate demand response resources when the applicable hourly LMP is below the Net Benefits Price Threshold. We will also reject MISO's proposal to make demand response resources ineligible for day-ahead and real-time Revenue Sufficiency Guarantee credits by setting their production costs to zero when the applicable hourly LMP is less than the Net Benefits Price Threshold. In both cases, we find that the proposed Tariff revisions are beyond the scope of the Commission's directives in Order No. 745 because they address demand response compensation when the applicable hourly LMP is below the Net Benefits Price Threshold. As we explain in the concurrently-issued order on rehearing of Order No. 745, the Commission's action in Order No. 745, undertaken pursuant to section 206 of the FPA, was limited to situations where a demand response resource has the capability to balance supply and demand as an alternative to a generation resource, and where dispatch of the demand response resource is cost-effective as determined by a net benefits test.[85] The Commission's section 206 action did not extend to situations where the LMP is not greater than or equal to the threshold price, and as a result, compensation of demand response resources in those situations is beyond the scope of this compliance proceeding. We will require MISO to submit, in the compliance filing directed below, Tariff revisions to remove these proposed provisions.[86] If MISO wishes to propose changes with respect to circumstances that were not addressed by the Commission's

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[83] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 47-48.

[84] We note that, in several instances, the proposed Tariff revisions are identical to or modify Tariff provisions proposed in the MISO Order No. 719 compliance proceeding.

[85] Order No. 745-A, 137 FERC ¶ 61,215 at P 133.

[86] *See* Midwest ISO August 19, 2011 Compliance Filing, FERC Electric Tariff, §§ 39.3.2B (1.0.0), 39.3.2C (2.0.0), 40.3.3.b.vi, 40.3.3.c.ii, & 40.3.3.c.iii (2.0.0).

section 206 action in Order No. 745, the appropriate forum for such a proposal would be a separate section 205 filing.

38. As a result of these findings, MISO's compensation practices in hours when the applicable hourly LMP is less than the Net Benefits Price Threshold will not change in this proceeding. Alcoa's and Demand Response Supporters' concerns regarding the possibility that demand response resources would not be compensated in the event that the five-minute *ex ante* LMP equals or exceeds the Net Benefits Price Threshold but the hourly *ex post* LMP does not are, therefore, moot. Alcoa's concern about the variation in real-time compensation for demand response resources that provide regulating reserves is also moot.[87] We note that, in Order No. 745, the Commission required RTOs and ISOs to examine "the requirement for, costs of, and impacts of implementing a dynamic net benefits approach to the dispatch of demand resources. . .."[88] We will not otherwise require MISO to re-examine its monthly supply curve as more sophisticated models and computational systems become available, as Alcoa requests, as this was not required by Order No. 745. Nor do we find it necessary at this time to require additional process to examine the issues Alcoa and other stakeholders raise.

39. We disagree with Midwest TDUs' and EPSA's argument that self-scheduled demand response resources do not balance supply and demand and should not receive the applicable hourly LMP when the applicable hourly LMP exceeds the Net Benefits Price Threshold. We find that, in the context of MISO's day-ahead and real-time energy market, self-scheduled resources do help balance supply and demand. In particular, as MISO explains, market participants inform MISO of the schedules of self-scheduled resources, and dispatch operators in MISO's energy market account for self-scheduled resources when meeting the energy balance and considering the dispatch solution.[89] As a result, MISO's proposal to pay the applicable hourly LMP to demand response resources that self schedule when the applicable hourly LMP equals or exceeds the Net Benefits Price Threshold complies with Order No. 745.

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[87] We note that, in the MISO Order No. 719 Compliance Order, the Commission rejects MISO's ARC compensation proposal and requires MISO to submit a just and reasonable ARC compensation proposal. MISO Order No. 719 Compliance Order, 137 FERC ¶ 61,214 at P 176. To the extent that MISO proposes and the Commission accepts compensation for ARCs that is below the applicable hourly LMP in the MISO Order No. 719 compliance proceeding, we note that Alcoa and Demand Response Supporters may raise their concerns in response to the ARC compensation portion of the compliance filing directed below.

[88] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 84.

[89] Midwest ISO Motion for Leave to Answer and Answer at 12-13.

40. We will not impose an offer floor equal to the applicable MFRR for demand response resources' offers, nor will we condition the payment of the LMP to demand response resources on whether demand response resources have been offered dynamic retail rates and/or have implemented such rates, as requested by Midwest TDUs. In Order No. 745, the Commission did not condition the payment of LMP to demand response resources on any of these requirements. As such, we will not address Midwest TDUs' arguments, as they are outside the scope of this proceeding.

41. With regard to the treatment of ARCs, we note that MISO did not propose to modify section 38.6 of the MISO Tariff, which was proposed in the MISO Order No. 719 compliance proceeding and, as proposed, would require that MISO compensate ARCs at the LMP minus MFRR. While the Commission rejects MISO's ARC compensation proposal in the MISO Order No. 719 Compliance Order and requires MISO to submit a just and reasonable ARC compensation proposal,[90] we note that the requirements in Order No. 745 pertain to all demand response resources, including ARCs. As such, we will require MISO to demonstrate that demand response resource offers from ARCs that are cost effective as determined by the net benefits test will be compensated at the applicable hourly LMP in the day-ahead and real-time energy market, and to submit any associated Tariff revisions, in the compliance filing directed below.

42. As for the proposed definitions of "Demand Response Resource – Type I" and "Demand Response Resource – Type II" in sections 1.141 and 1.142, we note that most of these revisions were already proposed in MISO's October 2, 2009 Compliance Filing.[91] However, in the Tariff revisions proposed here, MISO has omitted language providing that demand response resources may be hosted by "an Energy Consumer . . . or ARC" without explanation or support. As a result, we will require MISO to submit, in the compliance filing directed below, either an explanation of MISO's reasoning for removing language to allow energy consumers and ARCs to host demand response resources or Tariff revisions to reinsert this language.

43. We have several concerns regarding the proposed definitions of "Net Benefits Test," "Net Benefits Price Threshold," and "Net Benefits Supply Curve" in proposed sections 1.443a, 1.443b, and 1.443c, respectively. In particular, MISO proposes to define "Net Benefits Test" as an analysis that determines the minimum LMP at which it is cost-effective to compensate demand response resources at "a price other than zero," rather

[90] MISO Order No. 719 Compliance Order, 137 FERC ¶ 61,214 at P 176.

[91] MISO October 2, 2009 Compliance Filing, Docket No. ER09-1049-002, FERC Electric Tariff, Fourth Revised Vol. No. 1, Second Revised Sheet No. 119, Original Sheet No. 119A.

than "full LMP," as required by Order No. 745.[92] We also note that this term appears to be unnecessary, as it is not used in any other sections of the Tariff. As a result, we will reject proposed section 1.443a. If, at some point in the future, such a definition is required because the term is used in the Tariff, MISO would need to ensure that the definition is consistent with Order No. 745, as discussed herein.

44. MISO proposes in section 1.443b to define "Net Benefits Price Threshold" as the point along the net benefits supply curve beyond which the benefit from the reduced LMP resulting from dispatching demand response resources "exceeds the payments made to the Demand Response Resources." This definition is different from the language of proposed section 38.7.1.3, which defines the Net Benefits Price Threshold as the "price-quantity point where the Net Benefits Supply Curve becomes inelastic for all larger quantities supplied," consistent with the statement in Order No. 745 that "the threshold point along the supply stack for each month will fall in the area where the supply curve becomes inelastic."[93] We will conditionally accept the proposed revisions to sections 1.443b and 38.7.1.3, subject to the submission of Tariff revisions, in the compliance filing directed below, to make the definition of "Net Benefits Price Threshold" in section 1.443b consistent with proposed section 38.7.1.3.

45. The definition of "Net Benefits Supply Curve" in proposed section 1.443c provides that the curve is "[a] mathematical representation of the power system supply curve derived from prior year Real Time Offers of available Resources and other explanatory variables." We find that MISO's proposal to use "prior year" offers without updating the net benefits supply curve to reflect new data, as it becomes available, on a monthly basis or for any other significant changes to the historic supply curve is not compliant with the requirements in Order No. 745. In particular, Order No. 745 requires that the threshold prices be "updated monthly as new data becomes available" and that "the supply curve analysis for the historic month that corresponds to the effective month should be updated for current fuel prices, unit availabilities, and any other significant changes to historic supply curve . . . such as extended outages or retirements not previously reflected."[94] Further, MISO has not explained why it proposes in section 1.443c, as well as in proposed section 38.7.1.1, to use real-time offers, but not day-ahead offers, to derive the supply curve. The proposal to use the real-time offers "of available Resources" also contradicts MISO's statement that it will not consider demand response resource offers,[95] as well as proposed section 38.7.1.1, which provides, in part, that

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[92] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 78.

[93] *Id.* P 80.

[94] *Id.* P 79 and 81.

[95] MISO August 19, 2011 Compliance Filing, Transmittal Letter at 6.

MISO will use real-time offers "from all available Resources excluding Demand Response Resources." To address these concerns, we will require MISO to submit, in the compliance filing directed below: 1) revisions to section 1.443c that ensure that the real-time offers used by MISO are updated monthly as new data become available; and 2) an explanation of whether day-ahead offers and/or demand response resource offers should be used to derive the supply curve and, if needed, corresponding revisions to sections 1.443c and 38.7.1.1.

46. With regard to the proposed Tariff revisions concerning the determination of the Net Benefits Price Threshold in proposed section 38.7.1, we find that the proposed language is not compliant with Order No. 745 and is not sufficiently detailed. In particular, MISO proposes that, as new data becomes available, additional real-time offer pairs will be "captured annually and used to create the Net Benefits Supply Curve by February 15th of each year to be effective on March 1st."[96] However, MISO does not propose to update the net benefits supply curve to reflect new data, as it becomes available, on a monthly basis. This is contrary to the requirements in Order No. 745 that the threshold prices "be updated monthly as new data becomes available" and, for example, that "those numbers would be updated monthly during 2011 for significant changes in resource availability and fuel prices."[97] The Tariff language proposed in section 38.7.1 provides only that MISO will use real-time offer data for the previous year to determine, "in conjunction with appropriate external variables, a smoothed mathematical representation of the net benefits supply curve," which omits many of the details regarding the derivation of net benefits supply curves that MISO provided in the transmittal letter and Attachment A of its compliance filing. In particular, the proposed Tariff provisions do not include information regarding the explanatory variables that MISO will consider (e.g., a resource outage index), the elimination of explanatory variables that are not statistically significant, or the aggregation of daily supply curves. Given the rate implications of the net benefits supply curve (i.e., in determining whether demand response resources should receive the applicable hourly LMP), MISO should provide additional information regarding the derivation of net benefits supply curves in its Tariff. We will require MISO to submit Tariff revisions to address these issues in the compliance filing directed below.

47. We also find that further Tariff revisions are needed to ensure MISO's compliance with the website posting requirements of Order No. 745. In Order No. 745, the Commission directed posting of the Commission-approved net benefits test methodology on the RTO's or ISO's website, with supporting documentation, along with the price thresholds that would have been in effect in the previous 12 months, and any updated

[96] *Id.*, FERC Electric Tariff, § 38.7.1.3 (0.0.0).

[97] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 79.

supply curve analysis.[98] In the August 19, 2011 Compliance Filing, MISO states that it includes, in section 38.7.1.3 of the Tariff, a requirement for it to post on its website the supply curves and calculated threshold prices, on a rolling 12-month basis, for the day-ahead and real-time markets.[99] However, proposed section 38.7.1.3 of the Tariff provides only that MISO will determine the Net Benefits Price Threshold by the 15th day of each month prior to each operating month and "post this information on its website."[100] Proposed section 38.7.1.3 of the Tariff does not include the requirements for posting updated supply curve analysis, net-benefits methodology, the threshold price for the previous 12 months, or supporting documentation.[101] Consequently, we will require MISO to submit, in the compliance filing directed below, Tariff revisions to ensure that it posts on its website all of the information required by Order No. 745.

2. Compensation for Demand Response Facilitated by Behind-the-Meter Generation

a. MISO August 19, 2011 Compliance Filing

48. MISO states that demand response that is facilitated by behind-the-meter generation would not be paid the applicable hourly LMP when it clears the real-time and/or day-ahead energy market because behind-the-meter generation is not a demand response reduction in energy, pursuant to Order No. 745.[102] Rather, MISO asserts, behind-the-meter generation is an incremental increase in energy behind the meters.

49. MISO proposes several Tariff revisions to distinguish demand response resources that are facilitated by behind-the-meter generation from those that are not. Specifically, under proposed sections 39.3.2C and 40.3.3.c.ii, cost-effective demand response resources that are facilitated by behind-the-meter generation and that clear the day-ahead

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[98] *Id.* P 81.

[99] MISO August 19, 2011 Compliance Filing, Transmittal Letter at 7.

[100] *Id.*, FERC Electric Tariff, § 38.7.1.3 (0.0.0).

[101] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 79 and 81.

[102] MISO August 19, 2011 Compliance Filing, Transmittal Letter at 5, n.16 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 2, n.2 ("Demand response means a reduction in the consumption of electric energy by customers from their expected consumption in response to an increase in the price of electric energy or to incentive payments designed to induce lower consumption of electric energy. 18 C.F.R. § 35.28(b)(4) (2010).").

energy market and/or have non-excessive energy injections in the real-time energy market would not receive the applicable hourly LMP, unlike similar demand response resources that are not facilitated by behind-the-meter generation. For excessive energy injections in the real-time market, proposed section 40.3.3.c.iii stipulates that cost-effective demand response resources that are facilitated by behind-the-meter generation would not receive the lesser of the applicable hourly *ex post* LMP and hourly excessive energy price.[103]

50. MISO contends that demand response resources that are not compensated at the LMP should not be kept whole for their production costs by receiving day-ahead and/or real-time Revenue Sufficiency Guarantee credits, "because providing such [resources] with a make-whole payment would be directly contrary to payment of zero dollars to a [demand response resource] that is priced at an LMP that is below the Net Benefits Price Threshold."[104] Since MISO does not propose to compensate demand response resources that are facilitated by behind-the-meter generation, MISO proposes revisions to sections 39.3.2B and 40.3.3.b.vi of the Tariff to set such resources' hourly production costs to zero during all hours, regardless of whether the applicable hourly LMP is less than the Net Benefits Price Threshold.

b. Comments and Protests

51. Parties vary in their interpretation of MISO's proposal. Energy Spectrum, Marathon, MISO Industrials, and Demand Response Supporters have interpreted MISO's proposal to mean that it will not allow behind-the-meter generation to facilitate demand response. Demand Response Supporters state that MISO's proposal does not provide for any compensation for behind-the-meter generation, citing proposed sections 38.9.2C and 40.3.3.c.ii of the Tariff.[105] Together, these commenters encourage the Commission to reject proposals by RTOs and ISOs that prohibit behind-the-meter generation and – in the case of Energy Spectrum and Marathon – other resources such as behind-the-meter storage (e.g., batteries) from participating in wholesale energy markets by facilitating demand response.[106] Other parties, such as AMP and ABATE, appear to interpret

[103] Under the existing MISO Tariff, generation resources and demand response resources receive the lesser of the hourly *ex post* LMP and the hourly excessive energy price for real-time excessive energy. MISO, FERC Electric Tariff, Fourth Revised Vol. No. 1, Third Revised Sheet No. 1107 and Second Revised Sheet No. 1115.

[104] MISO August 19, 2011 Compliance Filing, Transmittal Letter at 5.

[105] Demand Response Supporters Protest at 7.

[106] Energy Spectrum Comments at 1; Marathon Comments at 1-2.

MISO's proposal to not permit payment of the full LMP to behind-the-meter generation that facilitates demand response.

52. MISO Industrials, Alcoa, and AMP argue that MISO's reliance on the definition of demand response in footnote 2 of Order No. 745 is misplaced. Alcoa notes that footnote 2 appears silent on the issue MISO states the footnote addresses (i.e., behind-the-meter generation not being a demand response reduction in energy but instead being an incremental increase in energy behind the meters).[107] MISO Industrials believe that MISO misinterpreted footnote 2 and that the Commission's intent was to focus on the reduction in load from what was anticipated in response to price signals. MISO Industrials also express an overall dissatisfaction with MISO's reasoning and legal justification for its position regarding behind-the-meter generation.[108] AMP argues that, on face value, the definition of demand response in footnote 2 does not exclude behind-the-meter generation from receiving full LMP compensation. AMP also asserts that Order No. 745 neither explicitly nor implicitly states that the new demand response compensation rules are inapplicable to behind-the-meter generation.[109]

53. Several parties argue that demand response resources facilitated by behind-the-meter generation should not be treated differently from other types of demand response resources. Alcoa believes that the Commission did not intend Order No. 745 to discriminate against customers that can facilitate – and have facilitated – load reductions through behind-the-meter generation. Instead, Alcoa believes that the Commission intended to allow additional and more equitable demand response participation. Alcoa asserts that behind-the-meter generation plays a significant role in reducing the net demand on MISO's system, as well as providing one of the few opportunities many participants have to incorporate their resources into the MISO system through demand response.[110] Alcoa also alleges that only minimal pre-filing discussion with stakeholders took place regarding MISO's proposal for behind-the-meter generation.

54. AMP maintains that the Commission chose not to explicitly address behind-the-meter generation in its new demand response compensation rules. AMP argues that instead the Commission focused on the justification for paying the LMP for demand response based on the benefits that demand response provides to the system. AMP asserts that it is unreasonable for MISO to extrapolate concepts from Order No. 745 that,

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[107] Alcoa Motion to Intervene, Limited Protest, and Comments at 10.

[108] MISO Industrials Motion to Intervene and Protest at 6.

[109] AMP Motion to Intervene and Comments at 7-8.

[110] Alcoa Motion to Intervene, Limited Protest, and Comments at 11.

it believes, the Commission did not intend. AMP holds that, from the RTO/ISO perspective, demand response resources that are facilitated by behind-the-meter generation would have the same system effect as load reduction that occurs without behind-the-meter generation. Thus, AMP argues, failing to compensate behind-the-meter generation at the LMP is unduly discriminatory.[111] As such, AMP contends that MISO should be required to remove the Tariff provisions that exclude behind-the-meter generation from receiving demand response compensation at the LMP. AMP also points out that MISO proposes to exclude behind-the-meter generation from receiving excessive energy credits and from being credited the applicable hourly *ex post* LMP for non-excessive energy injections when the LMP exceeds the Net Benefits Price Threshold.[112]

55. Demand Response Supporters argue that load with behind-the-meter generation can and does provide load reductions that balance supply and demand in at least two ways, each of which can be shown to provide identical or superior benefits to other customers under the net benefits test of Order No. 745. Demand Response Supporters explain that the first occurs when behind-the-meter generation capacity that is normally idle is ramped up and reduces energy consumption from external resources at the retail meter, thereby freeing that external generation to serve customers' needs and to displace the dispatch of higher-cost generation. The second occurs when load normally served by behind-the-meter generation is reduced, thus freeing up generation (previously consumed internally) to be exported to serve other customers, which displaces the dispatch of higher-cost generation. Demand Response Supporters assert that both of these types of load reductions have been 1) demonstrated to be economically and operationally equivalent to other demand response services and 2) proven to meet the Commission's net benefits test under any situation where similar services would meet the test. Therefore, Demand Response Supporters maintain that there is no reasonable or meaningful distinction between demand response that is facilitated by the use of behind-the-meter generation and demand response that occurs as a result of other actions by the customer. Demand Response Supporters argue that Order No. 745 does not permit or require RTOs or ISOs to discriminate against load reductions on the basis of the particular retail arrangements under which customers serve part of or their entire load.[113]

56. Demand Response Supporters also maintain that the only relevant evaluation of demand response as a resource is the difference between the customer's actual consumption and the customer's anticipated consumption, as measured pursuant to valid, Tariff-based measurement and verification protocols. Demand Response Supporters

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[111] AMP Motion to Intervene and Comments at 8-9.

[112] *Id.* at 7.

[113] Demand Response Supporters Protest at 8.

assert that, when metered, actual consumption drops below anticipated consumption in response to price, and the customer is to be compensated at the LMP if the Net Benefits Price Threshold is met. According to Demand Response Supporters, the fact that a portion of the resource's reduction in metered usage results from load being served by generation located behind the retail meter is irrelevant under Order No. 745 and cannot serve as a basis for denying that customer compensation at the LMP for its demand response. Therefore, Demand Response Supporters assert, the use of behind-the-meter generation should play no role in deciding whether a demand response resource is eligible for compensation at the LMP.[114]

57. Both Industrial Consumers and MISO Industrials urge the Commission to reject any portion of MISO's Order No. 745 compliance filing that prohibits or otherwise limits the participation of demand response resources that are facilitated by behind-the-meter generation in MISO's wholesale markets.[115] Industrial Consumers assert that there is no fundamental difference between load reductions provided by customers primarily served from behind-the-meter generation and those served from the market. Industrial Consumers maintain that discriminating against potential demand response resources, on the basis that they self-supply some or all of their electrical requirements, hurts all other ratepayers. Industrial Consumers argue that claims or suggestions that a self-supplied customer receives some payment greater or different than that received by an entity that controls both load and generation in front of the retail meter are false.[116] Industrial Consumers contend that MISO's proposal unduly discriminates against customers who rely on their own generation, and that the proposal will limit the participation of individual assets.[117] Industrial Consumers further argue that MISO's proposal goes beyond the scope of Order No. 745. According to Industrial Consumers, Order No. 745 only focuses on what it takes to develop the demand response resource efficiently. Industrial Consumers argue that MISO's compliance filing must be limited to those changes needed to comply with the requirements of Order No. 745, such that when load reduction displaces a generation resource in a manner that serves the RTO or ISO in balancing supply and demand, that load reduction must be paid the LMP.[118]

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[114] *Id.* at 8-9.

[115] Industrial Consumers Motion to Intervene and Protest at 3-4; MISO Industrials Motion to Intervene and Protest at 13.

[116] Industrial Consumers Motion to Intervene and Protest at 10-12.

[117] *Id.* at 9.

[118] *Id.* at 6-8.

58. MISO Industrials state that the Commission's intention in Order No. 745 was to focus on reducing load from what was anticipated in response to price signals. MISO Industrials affirm that a load reduction is a load reduction, whether it results from a combination of behind-the-meter generation and the switching of certain processes or solely by curtailing certain operations. MISO Industrials argue that to find otherwise would run afoul of demand response resources participating in the market.[119] MISO Industrials assert that nowhere in Order No. 745 does the Commission state that customers with behind-the-meter generation that provide demand response should not be compensated. Further, MISO Industrials argue that there is no difference to the grid – and no difference in impact on the balance of supply and demand on the grid – between a customer that reduces metered demand by reducing load behind the meter and a customer that reduces metered demand by increasing its own energy production behind the meter. MISO Industrials argue that MISO's proposal unfairly penalizes those customers with operational flexibility resulting, in part, from on-site generation, and there is no justification for this aspect of the proposal.[120]

59. ABATE argues that MISO's compliance filing arbitrarily discourages customers with behind-the-meter generation from participating in demand response programs by failing to adequately compensate them, thereby harming all MISO customers by perpetuating high peak electric rates and investment in unnecessary transmission infrastructure. ABATE requests that the Commission reject MISO's proposed Tariff language insofar as it prevents customers with behind-the-meter generation from receiving the LMP for their demand response.[121]

60. Industrial Consumers and MISO Industrials assert that MISO's behind-the-meter generation proposal erects a barrier to demand response participation in MISO's markets. Industrial Consumers argue that limiting or excluding customers with behind-the-meter generation from demand response programs is inconsistent with the Commission's policy, articulated in Order No. 719, of removing remaining barriers to demand response participation in wholesale markets. Industrial Consumers also maintain that, since the issuance of Order No. 719, the Commission has considered behind-the-meter generation to be a demand response resource.[122] MISO Industrials agree, arguing that if a reduction in consumption off-set by behind-the-meter generation is not "demand response," then

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[119] MISO Industrials Motion to Intervene and Protest at 6.

[120] *Id.* at 7-8.

[121] ABATE Motion to Intervene and Protest at 4 (citing MISO August 19, 2011 Compliance Filing, FERC Electric Tariff, §§ 39.3.2C (2.0.0) and 40.3.3c (2.0.0)).

[122] Industrial Consumers Motion to Intervene and Protest at 10.

customers with behind-the-meter generation would not qualify as demand response resources, thereby excluding a set of customers from participating in demand response. MISO Industrials contend that this is in direct contravention of Order No. 719, which clarified the eligibility of behind-the-meter generation as a demand response resource.[123] Further, Demand Response Supporters and Industrial Consumers assert that compensating demand response resources that utilize behind-the-meter generation is fully consistent with the Commission's determination, in Order No. 719, that with respect to demand response, ". . . the Commission has not excluded from eligibility any type of resource that is technically capable of providing the ancillary service, including a load serving entity's [. . .] or eligible retail customer's behind-the-meter generation or any other demand response resource."[124]

61. Demand Response Supporters state that the Commission does not permit different levels of energy market compensation based on how the supply resource's metered injection to the grid is accomplished. Demand Response Supporters argue that neither MISO nor the Commission should concern themselves with the other side of the supply or retail meter, beyond providing assurance that appropriate measurement and verification protocols are in place to accurately measure demand response. Demand Response Supporters believe that any and all reductions of metered usage that otherwise comply with the measurement and verification rules and Order No. 745 should be compensated at the LMP, irrespective of the actions taken by the customer to effectuate that response. Demand Response Supporters argue that this result is fully consistent with the FPA-based limitation on the Commission's jurisdiction, which they assert stops at the retail meter and only concerns impacts of metered consumption or reduction of metered consumption on the wholesale markets for energy, capacity, and ancillary services. Demand Response Supporters contend that it is beyond the Commission's authority to allow RTOs to second guess a market participant's legitimate corporate and business decisions.[125]

62. Industrial Consumers assert that an overwhelming proportion of self-supplied customers affected by MISO's proposed behind-the-meter generation exclusion are served by qualifying facilities, and most of these units are certified as qualifying cogeneration facilities pursuant to the Public Utility Regulatory Policies Act of 1978

[123] MISO Industrials Motion to Intervene and Protest at 6.

[124] *See*, *e.g.*, Demand Response Supporters Protest at 11-12 (citing Order No. 719, FERC Stats. & Regs. ¶ 31,281 at P 56).

[125] Demand Response Supporters Protest at 9-10.

(PURPA).[126] Industrial Consumers allege that MISO's proposal to exclude behind-the-meter generation unduly discriminates against qualifying facilities in violation of PURPA. Industrial Consumers argue that, under PURPA, MISO may not refuse to pay the LMP to qualifying facilities and may not unduly discriminate against them as customers.[127]

63. Detroit Edison agrees with MISO that the methodology developed in MISO's filing should only apply to demand response resources and not to behind-the-meter generation, even though behind-the-meter generation is treated similarly to demand response resources in terms of being able to receive capacity credits under Module E of the MISO Tariff.[128]

64. EPSA contends that behind-the-meter generation should be required to participate as generation resources rather than as demand response resources under Order No. 745. EPSA argues that behind-the-meter generation does not provide a real reduction in load and that it creates a perverse economic incentive for generation to move behind the meter when possible, even when it is less efficient. EPSA alleges that allowing behind-the-meter generation to participate as demand response could create gaming opportunities and market power and mitigation issues. EPSA claims that Order No. 745 is ambiguous as to whether behind-the-meter generation can be considered a demand response product, although EPSA asserts that a literal interpretation of the definition of demand response in Order No. 745 supports its position that it should not be considered demand response.[129] EPSA also points to comments made by the ISO-NE internal market monitor that found

[126] *See* Public Utility Regulatory Policies Act of 1978, Pub. L. No. 95-617, 92 Stat. 3117 (1978) (codified as amended in scattered sections of 16 U.S.C.).

[127] Industrial Consumers Motion to Intervene and Protest at 13-14, 18. Industrial Consumers state that qualifying facilities retain the right to sell their electric energy, capacity, and ancillary services to either an ISO/RTO independently administered, auction-based, non-discriminatory market or, if that is unavailable, to the local electric utility at incremental cost, or LMP. *Id.* at 18 (citing 16 U.S.C. § 824a-3).

[128] Detroit Edison Comments at 3-4.

[129] EPSA Comments, Motion for Leave to Answer, and Answer at 16-17 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 2, n.2).

behind-the-meter generation to be outside the scope of demand reduction payments.[130] EPSA asserts that wholesale generation cannot be discriminated against in order to provide an incentive and support for generation that is not part of the wholesale market.[131] EPSA requests that the Commission address whether Order No. 745 applies to behind-the-meter generation as well as analyze the impacts of behind-the-meter generation on organized markets and demand response programs.[132]

c. Answers

65. In response to protesters who believe that behind-the-meter generation should be eligible to facilitate demand response, MISO asserts that behind-the-meter generation is not load reduction and is thus not "demand response" as defined by Order No. 745.[133] MISO argues that a customer ramping up its behind-the-meter generation to meet its load is merely utilizing an alternative source of generation, rather than reducing load. MISO states that treating behind-the-meter generation differently from generation in front of the meter unfairly discriminates between the two.[134] MISO asserts that its existing Tariff allows behind-the-meter generation to provide energy, act as a planning resource, and provide operating reserves. MISO states that its Order No. 745 compliance filing makes no changes to its existing compensation to behind-the-meter resources for these services. MISO states that such resources are eligible to receive the LMP like any other generation resources selling into MISO's markets. MISO adds that a retail customer may still use behind-the-meter generation to reduce purchases from its host load-serving entity under its retail tariff.[135]

66. MISO expresses concern over the potential unintended consequences of treating behind-the-meter generation as a load reduction. MISO asserts that the benefits of

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[130] *Id.* at 17-18 (citing Dave LaPlante and Hung-po Chao, ISO-NE Internal Market Monitor, *Opinion on behind-the-meter generation in the proposed Order 745 Transition Rules* at 2 (May 26, 2011), *available at:* http://www.iso-ne.com/committees/comm_wkgrps/mrkts_comm/mrkts/mtrls/2011/jun22011/a3_imm_memo_05_26_11.doc (ISO-NE Internal Market Monitor Memo)).

[131] *Id.* at 16-24.

[132] *Id.* at 24-30.

[133] MISO Motion for Leave to Answer and Answer at 4 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 2, n.2).

[134] *Id.* at 4.

[135] *Id.* at 4-6.

demand response participation in RTO and ISO markets critically depend upon measured and verified load reduction. MISO states that it cannot monitor behind-the-meter generation as it can traditional generation resources and it echoes concerns raised in a memo prepared by ISO-NE's internal market monitor, which found that behind-the-meter generation can be ramped up to inflate the baseline from which a load reduction would be determined, thereby driving up costs and introducing additional gaming opportunities.[136] MISO asserts that treating behind-the-meter generation as demand response creates incentives for generators to move behind the meter, which MISO argues will erode RTO control and endanger reliability.

67. In response to Alcoa's criticism of its stakeholder process, MISO asserts that it properly vetted its proposal to exclude behind-the-meter generation from its demand response compensation scheme. MISO states that it presented its proposal at an August 1, 2011 Demand Response Working Group meeting and received six written comments on its proposal, two of which supported its proposed treatment of behind-the-meter generation.[137]

68. In its answer, Alcoa clarifies that it believes MISO's proposal unreasonably distinguishes between demand response by a load served by MISO system resources and demand response by a load served by behind-the-meter generation. Alcoa asserts that there is nothing in Order No. 745 that suggests the Commission intended this distinction. Alcoa also argues that, from an electrical perspective, there is no difference between demand response provided by MISO system resources and behind-the-meter generators because, in both cases, the generation previously used to serve curtailed load is made available to other loads on the system.[138]

69. In their answer, Demand Response Supporters characterize MISO's distinctions between behind-the-meter generators and MISO system resources as unduly discriminatory, emphasizing that the Commission did not specify the types of resources or the means of providing a demand reduction eligible to receive compensation under Order No. 745. The key issue, Demand Response Supporters argue, is whether or not a customer reduces its load with respect to the wholesale energy market. Demand Response Supporters assert that behind-the-meter generation can result in a demand reduction that benefits wholesale markets. Demand Response Supporters note that even if a customer ramps up on-site generation in response to an instruction to curtail wholesale load, the net change to the wholesale energy market is a decrease in energy.

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[136] *Id.* at 6 (citing ISO-NE Internal Market Monitor Memo).

[137] *Id.* at 5.

[138] Alcoa Motion for Leave to Respond and Limited Response at 2-3.

Demand Response Supporters argue that any action or inaction on the retail side of the meter should not be of concern to the Commission because the Commission's regulations and jurisdiction only apply to the wholesale energy market.[139]

70. Demand Response Supporters characterize as a red herring MISO's arguments regarding measurement and verification difficulties, gaming opportunities, and unintended consequences associated with treating behind-the-meter generation as demand response. Demand Response Supporters argue that MISO should not be allowed to deny all behind-the-meter generators from participating as demand response resources simply because of these perceived measurement and verification issues. Demand Response Supporters assert that they support and encourage proper measurement and verification protocols – for both behind-the-meter generators and MISO system resources – that ensure measurable and verifiable demand response.[140]

d. Commission Determination

71. We reject as beyond what is required to comply with Order No. 745 MISO's proposal to establish Tariff provisions that exclude from compensation demand response resources for which demand response is facilitated by behind-the-meter generation.

72. In Order No. 745, the Commission did not require an RTO or ISO to differentiate between demand response resources for which demand response is facilitated by behind-the-meter generation and other demand response resources. MISO's argument that Order No. 745 includes such a requirement is based on the definition of "demand response" that the Commission adopted in Order No. 719, which refers to "a reduction in the consumption of electric energy by customers from their expected consumption . . .."[141] In Order No. 745, the Commission did not alter or elaborate on this definition. We note that since the Commission adopted this definition MISO has continued to utilize its previously accepted definition of Demand Response Resources – Type II, which allows for demand response facilitated by the use of behind-the-meter generation,[142] and that MISO has agreed to modify its definition of Demand Response Resource – Type I such

[139] Demand Response Supporters Motion for Leave to Answer and Answer at 3-5.

[140] *Id.* at 5.

[141] 18 C.F.R. § 35.28(b)(4) (2011).

[142] *Midwest Indep. Transmission Sys. Operator, Inc.*, 122 FERC ¶ 61,172, *order on reh'g*, 123 FERC ¶ 61,297 (2008).

that it, too, allows for demand response facilitated by behind-the-meter generation.[143] For these reasons, we find that MISO's proposal to differentiate here between demand response resources for which demand response is facilitated by behind-the-meter generation and other demand response resources is beyond what is required to comply with Order No. 745. Accordingly, we will reject that MISO proposal,[144] and we will require MISO to submit corresponding Tariff revisions, in the compliance filing directed below.[145]

73. To the extent that MISO believes that revisions to its measurement and verification protocols are necessary to allow for demand response facilitated by behind-the-meter generation, MISO should submit revisions and modifications to those protocols as part of the compliance filing directed below.[146] With respect to MISO's concerns regarding the potential for deleterious "unintended consequences" that could ensue from allowing for demand response facilitated by behind-the-meter generation, we note that if MISO believes that adjustments to its existing demand response program are necessary based on its operational experience, it may propose appropriate Tariff revisions under FPA section 205.

3. Cost Allocation

a. Order No. 745

74. The Commission explained in Order No. 745 that while dispatching demand response resources results in a lower LMP, transmission constraints may affect which customers benefit from that lower LMP. In hours without transmission constraints, RTOs establish a single LMP for their entire system, in which case demand response would

[143] MISO December 15, 2009 Motion for Leave to Answer and Answer, Docket No. ER09-1049-002, at 15. The Commission accepts the proposed modification to the Demand Response Resource – Type I definition in the MISO Order No. 719 Compliance Order, issued concurrently with this order. MISO Order No. 719 Compliance Order, 137 FERC ¶ 61,214 at P 62.

[144] In light of our rejection of MISO's proposal, we do not address Protestors' arguments regarding non-compliance with PURPA.

[145] *See* Midwest ISO August 19, 2011 Compliance Filing, FERC Electric Tariff, §§ 39.3.2B (1.0.0), 39.3.2C (2.0.0), 40.3.3.b.vi, 40.3.3.c.ii, & 40.3.3.c.iii (2.0.0).

[146] *See* paragraphs 121-22 and footnote 253, *infra*, noting the Commission's determination in the MISO Order No. 719 Compliance Order that the measurement and verification protocols should be included in the Tariff.

result in a benefit to all customers on the system. In hours when transmission constraints exist, LMPs may vary by zone or other geographic area and dispatching a demand response resource in a particular geographic region may not reduce LMPs system-wide and, consequently, not all system customers would benefit.[147]

75. For these reasons, the Commission determined that it is just and reasonable to allocate the costs associated with demand response compensation proportionally to all entities that purchase from the relevant energy market in the area(s) where the demand response reduces the market prices for energy at the time the demand response resource is committed or dispatched.[148] Thus, the Commission required each RTO and ISO to make a compliance filing that either demonstrates that its current demand response cost allocation methodology appropriately allocates costs to those that benefit from the demand reduction or proposes revised tariff provisions that conform to this requirement.[149]

b. MISO August 19, 2011 Compliance Filing

76. MISO states that it considered three potential methods of allocating the costs associated with compensating cost-effective demand response resources in the real-time energy market: 1) a single energy surcharge, where costs would be recovered uniformly across the MISO region; 2) zonal energy surcharges, where separate surcharges would be applied to specified geographic zones within the MISO region to recover the compensation provided to demand response delivered within that zone; and 3) a bifurcated charge, where costs would be recovered through both a direct allocation to load-serving entities and zonal energy surcharges to real-time energy buyers.[150] MISO states that it rejected both the single and zonal energy surcharge approaches, as neither of these approaches would properly account for the benefits received by load-serving entities that have retail customers who provide demand response and, thus, benefit by purchasing less energy to serve their retail loads. MISO adds that it rejected the single energy surcharge approach, in part, because it would not reflect the benefits associated

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[147] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 100.

[148] *Id.* P 102.

[149] *Id.*

[150] MISO states that a cost allocation methodology for allocating the cost of compensating demand response resources for energy is necessary only for the real-time market because MISO does not experience any revenue shortfalls due to demand response resources in the day-ahead market that would need to be recovered. MISO August 19, 2011 Compliance Filing, Transmittal Letter at 10-11.

with demand response due to the considerable congestion in the MISO region.[151] MISO states that it has developed a bifurcated recovery methodology because, in MISO's view, it complies with the requirement in Order No. 745 that the costs of compensating cost-effective demand response resources should be recovered fairly, in a non-arbitrary manner. Accordingly, MISO proposes cost recovery in proportion to the benefits received by market participants.[152]

77. Under the proposed bifurcated cost allocation methodology, the costs of compensating demand response resources in the real-time energy market would be allocated via: 1) a direct cost allocation to each load-serving entity responsible for serving the retail load of the demand response resources that benefits by avoiding losses from selling energy to retail customers at their respective retail rates (i.e., the avoided loss benefit); and 2) a zonal energy surcharge to all market participants in the reserve zone of the demand response resources that benefit by purchasing energy in the real-time market at reduced LMPs (i.e., the reduced LMP benefit).[153] To allow MISO to determine the avoided loss benefit for each load-serving entity, market participants representing demand response resources would identify each retail customer that delivered the hourly demand response energy, along with that customer's MFRR. Based on this information, MISO would determine the avoided loss benefit for each load-serving entity during each hour by multiplying the MWs of demand response output from within that load-serving entity by the maximum of zero or the difference between the hourly *ex post* LMP for that location and the applicable MFRR. MISO would determine the reduced LMP benefits for each market participant during each hour by multiplying the MWs of energy purchased by the market participant by the estimated reduction in the LMP (i.e., the difference between MISO's estimate of what the LMP for an hour would have been absent the demand response and the actual hourly *ex post* LMP).[154]

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[151] *Id.*, Transmittal Letter at 9.

[152] *Id.*, Transmittal Letter at 9-10 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 101).

[153] According to MISO, such buyers would include load-serving entities that purchase energy, power producers that buy back their day-ahead position, and entities whose virtual supply offers cleared the day-ahead energy market. *Id.*, Transmittal Letter at 10, 12.

[154] *Id.*, Transmittal Letter at 11. MISO proposes to estimate the reduction in the LMP for each reserve zone during each hour by finding "the price point on the Net Benefits Supply Curve corresponding to the MW quantity equal to the sum of: (A) the MW quantity on the Net Benefits Supply Curve corresponding to the Reserve Zone

(continued…)

78. Using its estimate of the avoided loss benefits and reduced LMP benefits, MISO proposes to determine the Cost-Benefit Ratio for each reserve zone in each hour and the resulting direct cost allocation and zonal energy surcharge for that hour. In particular, MISO would determine the Cost-Benefit Ratio by dividing all of the compensation provided to cost-effective demand response resources in the reserve zone by the sum of all of the avoided loss benefits and reduced LMP benefits estimated for market participants within the reserve zone.[155] In the event that the compensation provided to demand response resources exceeds the sum of the estimated avoided loss benefits and reduced LMP benefits (i.e., so that the Cost-Benefit Ratio exceeds one), MISO would set the Cost-Benefit Ratio equal to one. To determine the direct cost allocation to each load-serving entity during each hour, MISO would multiply the Cost-Benefit Ratio for the applicable reserve zone by each load-serving entity's avoided loss benefit. To determine the zonal energy surcharge for each reserve zone during each hour, MISO would multiply the Cost-Benefit Ratio and the sum of the reduced LMP benefits estimated for the reserve zone. MISO states that this surcharge would apply to all buyers in the reserve zone for each hour.[156] MISO proposes that, to the extent that the total demand response resource compensation exceeds the estimated avoided loss benefits and reduced LMP benefits, any remaining costs would be allocated system-wide to all market participants based on load ratio share.[157]

79. In addition, MISO proposes to modify section 40.3.3.a.iii(4) of the Tariff so that load-serving entities would not be assessed real-time Revenue Sufficiency Guarantee Constraint Management Charges for deviations between their day-ahead and real-time positions caused by Demand Response Resource energy delivered in real-time.[158] MISO states that such deviations "do not cause Revenue Sufficiency Guarantee charges."[159]

Hourly Ex Post LMP; plus (B) the quantity of Real-Time Non-Excessive Energy for Demand Response Resources." *Id.*, FERC Electric Tariff, § 40.3.3.a.xvii (2.0.0).

[155] *Id.*, Transmittal Letter at 11.

[156] *Id.*, Transmittal Letter at 12.

[157] *Id.*, Transmittal Letter at 10, 12.

[158] Under section 40.3.3.a.iii(4) of the Tariff, load zones are assessed the Revenue Sufficiency Guarantee Constraint Management Charge based on the difference between their real-time Load Zone Demand Forecast in effect at the notification deadline and their actual energy withdrawals.

[159] MISO August 19, 2011 Compliance Filing, Transmittal Letter at 5.

c. Comments and Protests

i. Bifurcated Rate Methodology

80. Xcel and Detroit Edison express general support for MISO's bifurcated cost allocation proposal or aspects of its proposal. Xcel contends that the proposed bifurcated approach adheres more closely to the principles of cost causation than a single energy surcharge (i.e., allocating costs uniformly across the MISO region), which Xcel claims is not equitable due to transmission constraints, or a zonal energy surcharge (i.e., allocating costs uniformly across specific zones within the MISO region), which Xcel believes underestimates the beneficiaries of demand reduction.[160] Detroit Edison characterizes MISO's cost allocation mechanism as fair, so long as this methodology incorporates the proposed use of the MFRR, and asserts that, of the cost allocation approaches considered by MISO, the bifurcated methodology best complies with Order No. 745.[161] Detroit Edison maintains that, if the Commission objects to the proposed use of the MFRR, the Commission should order MISO to implement the zonal energy surcharge methodology, which MISO evaluated as an alternative cost allocation methodology.[162]

81. OMS states that it cannot support MISO's cost allocation proposal in the instant proceeding because the proposal is contrary to OMS' position in other proceedings. OMS restates the position it articulated in the Order No. 745 rulemaking and rehearing proceedings that the cost of the payments made for load reductions should be directly assigned to the load-serving entity that makes the load reductions.[163] Nevertheless, OMS states that it believes that MISO's overall proposal complies with Order No. 745, and OMS does not oppose the filing.[164]

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[160] Xcel Motion to Intervene and Comments at 4.

[161] Detroit Edison Comments at 2-3.

[162] *Id.* at 3 (citing MISO August 19, 2011 Compliance Filing, Transmittal Letter at 9).

[163] OMS Notice of Intervention and Comments at 2-3 (citing OMS May 13, 2010 Comments, Docket No. RM10-17-000; OMS April 14, 2011 Request for Rehearing, Docket No. RM10-17-000).

[164] *Id.* at 3-4.

82. Demand Response Supporters, ELPC-WOW, MISO Industrials, and Industrial Consumers[165] contend that the Commission should reject MISO's cost allocation proposal because it is not compliant with Order No. 745, which specifically rejected a bifurcated approach to cost allocation.[166]

83. Midwest TDUs generally support the proposed direct cost allocation to load-serving entities, asserting that this allocation reflects the economic benefits received by load-serving entities that host demand response. According to Midwest TDUs, the proposed direct cost allocation to load-serving entities would also avoid unintended market distortions by placing load-serving entities in financial positions similar to the positions they would have been in had the retail demand response not been sold.[167] They further maintain that such an approach is consistent with Order No. 745's requirement to allocate costs to those that benefit from the demand reduction.[168]

84. ELPC-WOW, MISO Industrials, and Industrial Consumers maintain that the proposed use of the avoided loss benefit in the proposed cost allocation biases that cost allocation by assigning extra costs to those load-serving entities that host greater amounts of demand response.[169] To support this claim, they point to an example provided by MISO during the August 2011 Demand Response Working Group meetings that, they maintain, demonstrates that more demand response provided by a load-serving entity means more costs would be imposed by MISO under the proposal.[170] They contend that

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[165] Industrial Consumers support MISO Industrials' protest and adopt the arguments contained therein.

[166] *See*, *e.g.*, Demand Response Supporters Protest at 5 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 101 ("We reject the various other methods of cost allocation suggested by commenters . . . Bifurcated assignment of costs to the [load-serving entity] and to others appears to represent an arbitrary division of cost responsibility without regard to the degree to which each receives benefits.").

[167] Midwest TDUs Motion to Intervene and Protest at 5.

[168] *Id.*

[169] MISO Industrials Motion to Intervene and Protest at 11; Industrial Consumers Motion to Intervene and Protest at 19; ELPC-WOW Motion to Intervene and Protest at 3-5.

[170] *See*, *e.g.*, ELPC-WOW Motion to Intervene and Protest at 6 (citing Demand Response Working Group, *Order 745 Cost Allocation Options* at 9-10 (Aug. 2011) *available at* https://www.midwestiso.org/Library/Repository/Meeting%20Material/Stakeholder/DRW

(continued…)

such a result is contrary to the requirement in Order No. 745 to allocate costs in proportion to customers' benefits from LMP reductions. MISO Industrials and Industrial Consumers argue that, by including the MFRR in its cost allocation proposal, MISO has disregarded that the Commission fully accounted for the benefits that need to be recognized when it required the use of a net benefits threshold to identify demand response resources that should be paid the LMP.[171] MISO Industrials and Industrial Consumers add that the proposed cost allocation would ultimately create a barrier to load-serving entities providing demand response.[172] ELPC-WOW contend that the cost allocation proposal would reduce incentives for load-serving entities to adopt policies to encourage demand response and decrease the beneficial LMP impacts of demand response.[173] They claim that a better approach would be to allocate costs proportionally, based on load, within each zone.[174]

85. Demand Response Supporters argue that MISO's cost allocation proposal should be rejected because its allocation of costs to load-serving entities based on supposed avoided losses on retail sales rests on faulty presumptions regarding load-serving entity market positions. In particular, they maintain that MISO incorrectly assumes that, absent demand response, load-serving entities would purchase their full energy needs from MISO's real-time energy market, even though load-serving entities may be fully hedged against exposure to the real-time market through capacity ownership or bilateral purchases.[175] Demand Response Supporters also contend that MISO incorrectly assumes that MISO's real-time energy prices will exceed the load-serving entity's retail charge to its customers. Demand Response Supporters maintain that demand response would make additional energy from the load-serving entity's generation resources available but no longer sold at the retail rate. They assert that, if the additional energy is not resold, the load-serving entity could lose revenue due to the demand response. Demand Response Supporters argue that these assumptions lead to the incorrect conclusion that load-serving

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G/2011/20110801/20110801%20DRWG%20Item%2003%20Order%20745%20Cost%20Allocation%20Options.pdf).

[171] MISO Industrials Motion to Intervene and Protest at 10 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 63).

[172] *Id.* at 11-12; Industrial Consumers Motion to Intervene and Protest at 19.

[173] ELPC-WOW Motion to Intervene and Protest at 6-7.

[174] *Id.* at 5.

[175] Demand Response Supporters Protest at 5-6.

entities "will always receive a benefit in addition to any benefit from lower real-time LMPs."[176]

86. Demand Response Supporters contend that, since the costs and benefits to load-serving entities from any given demand reduction are inherently unpredictable and differ from customer to customer, MISO should not be permitted to implement a standing rule that allocates a larger portion of the costs of demand response compensation to load-serving entities serving demand response customers.[177] They urge the Commission to reject MISO's cost allocation proposal, positing that a better cost allocation approach would be to allocate all costs on a zonal energy basis, as this approach is administratively feasible, more transparent than a bifurcated approach, and consistent with the directive in Order No. 745 to allocate costs to those entities purchasing in the relevant market during relevant hours.[178]

87. ELPC-WOW argue that MISO's assumption that load-serving entities will always benefit by not serving retail load is unsupported. ELPC-WOW maintain that, in some cases, deviations between a load-serving entity's day-ahead commitments and the real-time load that it serves can increase, not decrease, the load-serving entity's total costs. They add that, over time, load-serving entities will adjust their day-ahead commitments to reflect demand response participation, causing demand response to become variable, similar to weather, in load-serving entities' load forecasts. ELPC-WOW also claim that MISO's cost allocation proposal may encourage load-serving entities to pass through their extra costs directly to demand response providers, effectively reducing demand response providers' payments to the LMP minus the retail rate.[179]

88. ELPC-WOW assert that the proposed consideration of the MFRR in allocating costs is contrary to Order No. 745. ELPC-WOW maintain that Order No. 745 states that the retail rate should not be part of the compensation equation for demand response resources.[180] They contend that the proposal reduces the effect of the demand response compensation requirements of Order No. 745 by reintroducing a barrier to demand response participation that the Commission rejected. According to ELPC-WOW, "[f]orcing [a] [load-serving entity] to pay MFRR would undermine Order [No.] 745's

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[176] *Id.* at 6.

[177] *Id.* at 5-6.

[178] *Id.* at 7.

[179] ELPC-WOW Motion to Intervene and Protest at 7-8.

[180] *Id.* at 7 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 63).

proportionality requirement and discourage [load-serving entities] from promoting [demand response] in their service territories."[181]

ii. Zonal Energy Surcharge to Energy Buyers

89. Consumers argues that MISO incorrectly assumes that all market participants in a reserve zone benefit from lower LMPs due to demand response and, as a result, proposes to allocate costs to market participants that do not benefit from LMP reductions.[182] Consumers states that load in the MISO market does not effectively pay the LMP because of state regulatory requirements, such as Michigan Public Service Commission's restriction of cost recovery to power supply costs, so that any additional revenues are credited back to load. Consumers claims that, as a result of these regulatory requirements, reduced LMPs do not benefit load-serving entities that are net sellers to MISO's energy market (i.e., when output from a load-serving entity's generation resources are greater than their load for a given hour).[183] To address its concerns, Consumers requests that the Commission reject the cost allocation proposal or, at a minimum, set the issues it raises for hearing. Consumers requests that the Commission direct MISO to allocate costs only to those market participants that benefit from reduced LMPs that result from demand response.[184]

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[181] *Id.*

[182] Consumers Motion to Intervene and Protest at 3.

[183] *Id.*, Burgdorf Aff. at 3. For example, Consumers explains that, if a market participant has a 100 MW generator that serves a 100 MW load, and if the generator has a variable cost of $40 per MWh and the LMP is $60 per MWh, then a net payment of $0 would be paid to MISO, $4,000 would be paid to the generator to cover its costs, and $2,000 would be credited to the load from the generator. Consumers claims that, in the event that the LMP drops to $55 per MWh due to demand response, the credit to the load from the generator would drop from $2,000 to $1,500, demonstrating that the load does not benefit from the reduced LMP. *Id.*, Burgdorf Test. at Ex. A-1 (Demand Response Resource – Null Benefit Example).

[184] *Id.* at 3, 5. Consumers suggests that MISO should modify its cost allocation proposal so that load-serving entities that benefit from lower LMPs (i.e., net purchasers) pay for their portion of demand response costs. Consumers asserts that market participants should be allowed to net their generation and load in a given hour and that MISO should allocate demand response costs to load-serving entities based on net purchased power. *Id.*, Burgdorf Test. at 4.

90. Midwest TDUs argue that the Commission should require MISO to modify the proposed zonal energy surcharge to reduce its dependence on calculations of hypothetical LMPs that would have occurred in the absence of demand response. Midwest TDUs contend that the economic modeling necessary to adequately estimate hypothetical LMPs (e.g., requiring a parallel dispatch without demand response) may be difficult, time-consuming, and expensive to implement. Midwest TDUs express concern that the level of aggregation in MISO's proposal, and the mixing and matching between different levels of aggregation, will fail to accurately identify the monetary benefits associated with the reduced LMP attributable to demand response. Midwest TDUs believe that the additional economic modeling needed to increase the accuracy of MISO's calculations would be too costly to implement.[185] Midwest TDUs favor allocating costs using a direct cost allocation to load-serving entities that host demand response resources, with any remaining costs assigned *pro rata* to all real-time energy buyers within the relevant reserve zone. Midwest TDUs argue that such an approach would reduce complexity, expense, calculation errors, unintended consequences, and potential disputes compared to MISO's proposal.[186]

91. To the extent that the Commission does not modify MISO's cost allocation proposal, Midwest TDUs request, at a minimum, that the Commission direct MISO to modify or clarify Tariff language in proposed section 40.3.3.1.xvii, so that the same surcharge would apply to all real-time energy buyers within a reserve zone. Absent this change, Midwest TDUs believe that proposed language could be interpreted to provide a different surcharge to each node within a zone. Midwest TDUs argue that such a result would incorrectly allocate a larger share of demand response compensation costs to the nodes within the reserve zone that have comparatively low LMPs, regardless of whether demand response contributed to those lower LMPs. Midwest TDUs contend that this would cloud the intra-reserve zone price separation currently reflected in nodal LMPs and would not accurately assign demand response-related costs based on benefits.[187]

iii. Stakeholder Process

92. Detroit Edison states that MISO provided stakeholders with the opportunity to provide feedback on its demand response proposals, and many stakeholders – including Detroit Edison – provided MISO with written comments.[188]

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[185] Midwest TDUs Motion to Intervene and Protest at 5-7.

[186] *Id.* at 7-8.

[187] *Id.* at 8.

[188] Detroit Edison Comments at 2.

93. Demand Response Supporters allege that, contrary to statements made in MISO's compliance filing,[189] MISO failed to meaningfully engage stakeholders in developing its cost allocation proposal. Demand Response Supporters claim that MISO first approached stakeholders with potential cost allocation options at a Demand Response Working Group meeting only 18 days before submitting the August 19, 2011 Compliance Filing, and the subsequent meeting minutes fail to reflect feedback from MISO stakeholders. According to Demand Response Supporters, MISO does not provide evidence demonstrating the breadth or depth of stakeholder support for the bifurcated cost allocation methodology, and the options for allocating costs were not subject to any stakeholder votes in any MISO stakeholder forum.[190]

d. Answers

94. In its answer, MISO recognizes that in Order No. 745 the Commission rejected a bifurcated approach that appeared to be arbitrary, but MISO insists that its proposed bifurcated cost allocation approach is not arbitrary because it assigns costs to those market participants that benefit from demand response.[191]

95. As for arguments regarding the direct cost allocation proposal, MISO takes issue with MISO Industrials' assertion that its proposal would disproportionately allocate costs to market participants that provide greater amounts of demand response, claiming that their example uses faulty math.[192] In response to criticisms that calculating and accounting for MFRRs may be difficult, MISO states it has already developed a tool to accomplish these tasks, which it proposed in the MISO Order No. 719 compliance proceeding.[193] In response to Detroit Edison's argument that the proposed cost allocation should not be applied absent the use of the MFRR, MISO argues that use of the MFRR is an essential component of its bifurcated cost allocation proposal. MISO asserts that the Commission should view its filing as "an integrated set of proposals that depend upon each other to provide balance and reliability," and disturbing this interdependence could

[189] Demand Response Supporters Protest at 3-4 (citing MISO August 19, 2011 Compliance Filing, Transmittal Letter at 9).

[190] *Id.* at 4.

[191] MISO Motion for Leave to Answer and Answer at 14.

[192] *Id.* at 14-15.

[193] *Id.* at 16.

result in an unjust, unreasonable, and unworkable approach to allocating the costs of demand response.[194]

96. With regard to the zonal energy surcharge, MISO asserts that Consumer's suggestion that MISO would allocate a portion of costs to all load within a reserve zone is incorrect and emphasizes that it would allocate costs to those who benefit, which includes "only those market participants that buy from the particular market."[195] MISO also argues that it is incorrect to state that its proposed methodology results in an allocation of costs to market participants that do not benefit from lower LMPs because net buyers in the real-time energy and operating reserve markets would be allocated costs based upon the net purchases made in those markets. MISO adds that if a load-serving entity does not avoid any losses, then that entity would not be allocated any costs.[196]

97. In response to Demand Response Supporters' concerns regarding stakeholder vetting of the cost allocation proposal, MISO asserts that it worked with its stakeholders to develop its cost allocation proposal and that the proposal has significant support within the stakeholder community. MISO notes that it discussed its proposal, with substantive examples, at an August 1, 2011 Demand Response Working Group meeting, with a follow-up request for written comments.[197]

98. In their answer, Demand Response Supporters contend that MISO's cost allocation proposal does not comply with the Commission's finding in Order No. 745 that the bifurcated cost allocation approach represents an arbitrary division of cost responsibility. They also reiterate their position that the cost allocation proposal should be rejected because the proposed direct energy surcharge relies on presumptions and speculation about load-serving entities' market positions and an "'LMP minus G' formulation that was squarely rejected in Order No. 745."[198] Demand Response Supporters request that the Commission require MISO to revise its cost allocation proposal to adopt a simpler approach that allocates costs to those entities purchasing from the relevant market during the relevant hours.[199]

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[194] *Id.* at 15-16.

[195] *Id.* at 14.

[196] *Id.*

[197] *Id.* at 13-14.

[198] Demand Response Supporters Motion for Leave to Answer and Answer at 5-6.

[199] *Id.* at 6-7.

e. Commission Determination

99. MISO proposes a bifurcated cost allocation methodology that allocates the costs of compensating cost-effective demand response resources in the real-time energy market through a direct cost allocation to load-serving entities and a zonal energy surcharge to energy buyers, with any remaining costs allocated to all market participants based on load ratio share. We will reject MISO's cost allocation proposal.[200] MISO's proposal to rely on the MFRR to directly allocate costs to load-serving entities as part of the bifurcated rate is not sufficiently fixed and predictable,[201] as the MFRR component of the formula lacks the specificity required for ratemaking purposes and is not tied to any objectively identifiable criteria.[202] Rather, the proposal requires that the relevant electric retail regulatory authorities specify the MFRR during the registration of demand response resources,[203] as MISO "prefers not to get involved in such determinations because retail ratemaking is the purview of the [relevant electric retail regulatory authorities] . . . and defers to it."[204] Allowing relevant electric retail authorities such unfettered discretion to set the MFRR is contrary to the Commission's obligation to set jurisdictional rates.[205] Accordingly, we will require MISO to submit, in the compliance filing directed below: 1) revisions to remove any proposed Tariff language associated with the cost allocation

[200] Midwest ISO August 19, 2011 Compliance Filing, FERC Electric Tariff §§ 1.2 (1.0.0), 1.373a (1.0.0), 1.569a (2.0.0), 1.574b (0.0.0), & 1.574c (1.0.0).

[201] *Ocean State Power II*, 69 FERC ¶ 61,146, at 61,552 (1994).

[202] *See Fed. Power Comm'n v. Texaco*, 417 U.S. 380, 395-96 (1974); *Pacific Gas & Elec. Co. v. FERC*, 306 F.3d 1112, 1119 (D.C. Cir. 2002) (*PG&E*); *Pub. Utilities Comm'n of the State of California v. FERC*, 254 F.3d 250, 254-56 (D.C. Cir. 2001) (*California PUC*).

[203] MISO August 19, 2011 Compliance Filing, FERC Electric Tariff, §§ 1.373a (1.0.0) & 38.7.2 (0.0.0).

[204] MISO October 2, 2009 Compliance Filing, Docket No. ER09-1049-002, Robinson Test. at 16. *See also* MISO Order No. 719 Compliance Order, 137 FERC ¶ 61,214 at P 176 (citing MISO October 2, 2009 Compliance Filing, Docket No. ER09-1049-002, at 14).

[205] *California PUC*, 254 F.3d at 255; *PG&E*, 306 F.3d at 1119.

proposal;[206] and 2) a just and reasonable cost allocation proposal that addresses these issues.[207]

100. With regard to the other components of MISO's cost allocation proposal, we note that the proposed revisions to section 40.3.3.a.xvii include several formulas regarding the determination of demand response compensation, the reduced LMP benefit, and the avoided losses benefit. In its transmittal letter, MISO does not explain in detail its formula for calculating demand response compensation or how the net benefits supply curve would be used as part of the calculation of the reduced LMP benefit.[208] While the transmittal letter suggests that the proposed cost-benefit ratio would be used to determine the rate paid under the direct energy allocation and zonal energy surcharge,[209] the proposed Tariff language makes no reference to this cost-benefit ratio. Further, the proposed Tariff revisions suggest that the proposed cost allocation would be used "to recover the total Demand Response Resource compensation" for each reserve zone and each hour, rather than only during those hours when demand response resources are compensated pursuant to Order No. 745. In the compliance filing directed below, MISO should explain the entirety of its cost allocation proposal, including the associated formulas, and ensure that the proposal is accurately reflected in the Tariff and applies only to those hours when compensating demand response resources at the LMP is cost effective, as determined by the net benefits test.

101. MISO proposes to revise the definition of "Actual Energy Withdrawal" in section 1.2 of the Tariff so that the Actual Energy Withdrawal for load zones that host demand response resources that are committed during a given hour would be the metered volume

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[206] *See*, *e.g.*, Midwest ISO August 19, 2011 Compliance Filing, FERC Electric Tariff, §§ 38.7.2 (0.0.0) & 40.3.3.a.xvii (2.0.0).

[207] Given this determination, we need not address the remaining issues that parties have raised with respect to MISO's current cost allocation proposal. We encourage any interested parties to participate in MISO's stakeholder process to develop a new cost allocation proposal.

[208] For the purpose of determining the zonal energy surcharge, MISO proposes to define the "Reserve Zone Hourly Ex Post LMP" as "[t]he load-weighted Hourly Ex Post LMP for a Reserve Zone." MISO August 19, 2011 Compliance Filing, FERC Electric Tariff, § 1.574b. MISO does not address whether this determination should be limited to reserve zones with binding reserve zone constraints (i.e., so that the Reserve Zone Hourly Ex Post LMP is determined across MISO, rather than in individual reserve zones, when there is no transmission congestion on the MISO system).

[209] *Id.*, Transmittal Letter at 12.

that flows out of the transmission system at each load zone, rather than the metered volume of the load zone "plus Actual Energy Injects within the Load Zone for the Demand Response Resources," as proposed in MISO's Order No. 719 compliance filings.[210] While MISO does not explain its reasoning for this proposed change, the revisions would alter MISO's existing allocation of the cost of compensating demand response resources during all hours. MISO does not explain how this proposed revision could modify other sections of the Tariff that use the term "Actual Energy Withdrawal,[211]" or why such modifications are needed to comply with Order No. 745. In the compliance filing directed below, we direct MISO to explain the Tariff revisions that will be necessary to modify its existing cost allocation methodology to comply with the requirements of Order No. 745 and to ensure that those revisions apply only to the allocation of the cost of compensating demand response resources for energy when they are cost effective, as determined by the net benefits test.

102. MISO proposes to exempt load-serving entities from the allocation of real-time Revenue Sufficiency Guarantee charges that are caused by demand response in the real-time energy market, stating that "these deviations do not cause [Revenue Sufficiency Guarantee] charges."[212] To do this, MISO proposes to revise the allocation of Real-Time RSG Constraint Management Charges in section 40.3.3.a.iii(4) of the Tariff. MISO does not provide further support for its contention that deviations due to demand response resources do not cause Revenue Sufficiency Guarantee costs to be incurred, nor does MISO explain why the proposed revisions should be limited to Real-Time RSG Constraint Management Charges (e.g., they do not apply to Real-Time RSG Day-Ahead Schedule Deviation Charges in section 40.3.3.a.vii(4)). MISO also does not address whether the proposed modification to the allocation of Revenue Sufficiency Guarantee costs is related to the proposed changes to the cost allocation or is otherwise necessary to comply with Order No. 745. To the extent that MISO continues to propose this revision to section 40.3.3.a.iii(4) in the compliance filing directed below, it should address these issues.

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[210] MISO October 2, 2009 Compliance Filing, Docket No. ER09-1049-002, FERC Electric Tariff, Fourth Revised Vol. No. 1, Second Revised Sheet No. 75.

[211] For example, "Actual Energy Withdrawal" is used in the determination of "Midwest ISO Balancing Authority Load" in section 1.417, the allocation of real-time Revenue Sufficiency Guarantee charges in sections 40.3.3.a.ii(4) and 40.3.3.a.vii(4), the determination of Excessive/Deficient Energy Deployment Charges in section 40.3.4.b.i, and the allocation of regulating reserve deployment cost allocations in section 40.3.3.a.xii and Schedule 3

[212] MISO August 19, 2011 Compliance Filing, Transmittal Letter at 5.

4. Measurement and Verification

a. Order No. 745

103. In Order No. 745, the Commission noted concerns that compensating demand response resources at the LMP during all hours could make it difficult to determine baselines for demand response providers. However, because Order No. 745 required payment of LMP for demand response subject to a net benefits test – and not during all hours – the Commission found that implementation of Order No. 745 would not appear to prevent the determination of appropriate baselines.[213] Nonetheless, noting that measurement and verification protocols are critical to the integrity and success of demand response programs, the Commission directed each RTO and ISO to include in its compliance filing an explanation of how its current measurement and verification procedures will continue to ensure that appropriate baselines are set, and that demand response will continue to be adequately measured and verified as necessary to ensure the performance of each demand response resource. The Commission directed each RTO and ISO to propose, if necessary, any changes needed to ensure that measurement and verification of demand response will adequately capture the performance (or non-performance) of each participating demand response market participant to be consistent with the requirements of Order No. 745.[214]

b. MISO August 19, 2011 Compliance Filing

104. MISO states that, as noted in Order No. 745, the Commission previously adopted Phase I standards for measurement and verification, as published by NAESB.[215] Accordingly, MISO continues to propose, as it does in its October 2, 2009 Compliance Filing in the MISO Order No. 719 compliance proceeding, to incorporate NAESB standards regarding measurement and verification, while "simultaneously recognizing that more specificity may ultimately be required."[216] MISO maintains that its Business

[213] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 94.

[214] *Id.*

[215] MISO August 19, 2011 Compliance Filing, Transmittal Letter at 7 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 94 (citing *Standards for Business Practices and Communication Protocols for Public Utilities*, Order No. 676-F, FERC Stats. & Regs. ¶ 31,309, at n.182 (2010)).

[216] *Id.*

Practices Manuals will be updated to provide the implementation details for measurement and verification of demand response.[217]

105. MISO reiterates the protocols and procedures for measuring demand reduction submitted in its compliance filings with Order No. 719. In particular, MISO notes that it proposes to eliminate the Load Zone Dispatch Interval Demand Forecast and replace it with measurement and verification protocols and to modify its metering requirements to allow hourly metering measurements for the provision of energy and five-minute metering measurements for the provision of contingency reserves.[218] In addition, consistent with its Order No. 719 compliance filings, MISO states that it proposes to relax the one-to-one relationship between the Host Load Zone and demand response resource assets.[219]

106. However, for Demand Response Resources – Type II that are qualified to provide regulating reserves, MISO proposes, as it does in its Order No. 719 compliance filings, to maintain the one-to-one relationship between the Host Load Zone and the demand response resource asset. MISO states that given the rigorous requirements necessary for assets to provide regulating reserves (e.g., automatic generation control), MISO considers it important to closely monitor assets providing regulating reserves to ensure reliability.[220] MISO maintains that this close monitoring is also required due to the North American Electric Reliability Corporation's Control Performance Standards and Balancing Area Authority standards. However, MISO notes that the Host Load Zone and demand response resource need not be represented by the same market participant.[221]

107. MISO proposes in section 1.411 to define the term "Measurement and Verification," rather than "Measurement and Verification Procedures." The proposed revisions to the definition provide that, for demand response resources that are not

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[217] *Id.*, Transmittal Letter at 8.

[218] *Id.*, Transmittal Letter at 7-8. *See also* MISO October 2, 2009 Compliance Filing, Docket No. ER09-1049-002, at 19-20.

[219] MISO states that the one-to-one relationship might have represented a barrier to future participation by ARCs. MISO states that it would continue to link demand response resource assets to load zones when settling charges and credits with market participants. MISO August 19, 2011 Compliance Filing, Transmittal Letter at 8.

[220] *Id. See also* MISO October 2, 2009 Compliance Filing, Docket No. ER09-1049-002, Ex. C at 22-23.

[221] *Id.*

qualified to provide regulating reserves, the applicable measurement and verification procedures are "described in [the MISO] Tariff and the Business Practices Manuals."[222] The proposed revisions also state that the details of MISO's method of measuring the response of demand response resources will be provided in the Business Practices Manuals and "may include and will be consistent [with], but not be limited to, the applicable [NAESB] Measurement and Verification standards and other applicable standards."[223]

108. MISO proposes section 38.7.2 of the Tariff to provide procedures for the registration of demand response resources. In particular, proposed section 38.7.2 sets forth the information that must be provided to register such resources, including specification of the applicable relevant electric retail regulatory authority and the "MFRR(s), if any, specified by the [relevant electric retail regulatory authority], or if none is specified, as identified by the Market Participant."[224] Section 38.7.2 also requires that MISO notify the relevant electric retail regulatory authority of the registration of retail customers and provides that relevant electric retail regulatory authorities "seeking to assert that the laws or regulations expressly prohibit an end-use customer's participation in [MISO's] markets must provide requisite certification within ten business days of receipt of notice from [MISO] of a registration request."[225]

c. Comments and Protests

109. A number of parties express concern regarding MISO's proposal to put its measurement and verification provisions in its Business Practices Manuals, rather than the Tariff.[226] Citing the "rule of reason,"[227] Consumers and Demand Response

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[222] *Id.*, FERC Electric Tariff, § 1.411 (1.0.0).

[223] *Id.*

[224] *Id.*, FERC Electric Tariff, § 38.7.2 (0.0.0).

[225] *Id.*

[226] *See* Alcoa Motion to Intervene, Limited Protest, and Comments at 11; Consumers Motion to Intervene and Protest at 3-5; Demand Response Supporters Protest at 12-14; Industrial Consumers Motion to Intervene and Protest at 19; MISO Industrials Motion to Intervene and Protest at 8-9.

[227] Consumers Motion to Intervene and Protest at 4-5 and n.3 (citing *Midwest Indep. Transmission Sys. Operator, Inc.*, 136 FERC ¶ 61,038 (2011)); Demand Response Supporters Protest at 14 (citing *Cal. Indep. Sys. Operator Corp.*, 119 FERC ¶ 61,076, at P 656 (2007); *City of Cleveland*, 773 F.2d 1368, 1376 (D.C. Cir. 1985) (*City of*

(continued…)

Supporters argue that the measurement and verification provisions significantly affect the rates, terms, and conditions of service, and, therefore, the Commission should direct MISO to include the provisions in its Tariff, rather than its Business Practices Manuals.[228] Demand Response Supporters add that including the measurement and verification provisions in the Tariff would provide market participants with transparency and legal recourse in the event of a dispute and protect the rights of all parties.[229] MISO Industrials maintain that leaving important details in the Business Practices Manuals and not submitting them for Commission approval is inappropriate, since the amount of demand response that will be compensated is contingent upon MISO's measurement and verification methodology. MISO Industrials add that MISO has not provided any specific details regarding its measurement and verification methodology.[230] Industrial Consumers support MISO Industrials' comments in this regard, stating that measurement and verification procedures should be subject to thorough review and due process by including the procedures in the Tariff.[231] Alcoa asserts that placing the measurement and verification provisions in MISO's Business Practices Manuals subjects them to less Commission scrutiny and raises concerns that MISO may be less willing to work with demand response participants than in the past.[232]

110. Demand Response Supporters argue that, while MISO's August 19, 2011 Compliance Filing follows the measurement and verification protocols proposed in the October 2, 2009 Compliance Filing in MISO's Order No. 719 compliance proceeding, that compliance filing provides little detail regarding MISO's measurement and verification protocols and how they will be applied to demand response resources. They stress that, in the October 2, 2009 Compliance Filing, MISO merely proposes to define "Measurement and Verification Procedures" in section 1.411 of the Tariff. Demand

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Cleveland); *Prior Notice and Filing Requirements under Part II of the FPA*, 64 FERC ¶ 61,139, at 61,986-89, *order on reh'g*, 65 FERC ¶ 61,081 (1993)).

[228] Demand Response Supporters assert that this requirement would be consistent with a recent Commission order concluding that the methodology that impacts the amount of demand response to be provided "is a practice affecting rates that needs to be in PJM's Tariff." Demand Response Supporters Protest at 14 (citing *PJM Interconnection, LLC*, 134 FERC ¶ 61,066, at P 69 (2011)).

[229] *Id.* at 13.

[230] MISO Industrials Motion to Intervene and Protest at 8-9.

[231] Industrial Consumers Motion to Intervene and Protest at 19.

[232] Alcoa Motion to Intervene, Limited Protest, and Comments at 11.

Response Supporters maintain that, other than including a vague reference to NAESB standards, this proposed definition leaves all of the measurement and verification details to be determined later and eventually included in MISO's Business Practices Manuals.[233]

111. Consumers argues that MISO has failed to define "Measurement and Verification Procedures" in the August 19, 2011 Compliance Filing,[234] and that the proposed definition of "Measurement and Verification" in section 1.411 of the Tariff is vague and leaves to MISO's discretion the standards that will be used for the measurement and verification of demand response resources. Consumers argues that several Tariff sections refer to "Measurement and Verification procedures," which is not a defined term. Consumers also objects to the requirement in section 1.411 that the measurement and verification methodologies "may include and will be consistent [with], but not be limited to, the applicable [NAESB] Measurement and Verification standards and other applicable standards."[235] Consumers argues that, while it is important to follow the standards developed by NAESB and approved by the Commission, leaving the standards to MISO's discretion increases the probability of inconsistencies in the calculation of benefits and distribution of costs. Therefore, Consumers asks the Commission to direct MISO to include a definition of "Measurement and Verification Procedures" in its Tariff that limits such procedures to Commission-approved standards.[236]

112. EPSA stresses that measurement and verification tools and baseline calculation enhancements are critical to the implementation of Order No. 745 and that these must be clear and effective. EPSA argues that demand response participation must be measured as a verifiable reduction from expected use relative to an established and viable baseline. EPSA maintains that adopting minimal and/or ineffective measurement and verification tools may lead to market distortions or other problems and that resistance to meaningful tools indicates that demand response providers seek unduly preferential treatment and compensation. Noting the Commission's requirement for review of measurement and verification requirements in Order No. 745,[237] EPSA contends that ISOs and RTOs must

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[233] Demand Response Supporters Protest at 13.

[234] Proposed section 1.411 defines "Measurement and Verification Procedures" in the October 2, 2009 Compliance Filing and "Measurement and Verification" in the August 19, 2011 Compliance Filing.

[235] Consumers Motion to Intervene and Protest at 3-4 (citing MISO August 19, 2011 Compliance Filing, FERC Electric Tariff, § 1.411 (1.0.0)).

[236] *Id.* at 4.

[237] EPSA Comments, Motion for Leave to Answer and Answer at 13-14 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 66).

review and enhance their measurement and verification tools and baseline calculation methodologies as necessary, and the Commission should clarify that such improvements are necessary for compliance with Order No. 745.[238]

113. Xcel argues that MISO's proposal reasonably incorporates NAESB measurement and verification standards. Xcel also supports the proposed modifications to the measurement of demand reduction, including the relaxation of the requirement for a one-to-one relationship between the Host Load Zone and the demand response resource asset.[239]

114. Midwest TDUs request that the Commission direct MISO to modify its measurement and verification protocols with respect to retail demand response offers originating from retail customers within the footprints of load-serving entities with dynamic retail pricing. According to Midwest TDUs, in the absence of retail sales, retail demand may be relatively insensitive to changes in the LMP in areas where customers pay retail rates based on average energy prices. Midwest TDUs argue that, where retail customers instead pay dynamic prices, their load may not remain static in response to changing prices. Midwest TDUs add that the assumption that such loads will respond to changing prices underpins Order No. 745 and section 1252(f) of EPAct 2005.[240] Midwest TDUs conclude that demand response providers in areas with dynamic retail pricing should be required to meet a heavy burden of demonstrating that the retail customer load reduction at issue would not have already occurred in response to the dynamic retail price.

115. Midwest TDUs also contend that MISO's measurement and verification protocols should require scrutiny of any retail demand response resource that submits an energy offer below the applicable MFRR. Midwest TDUs argue that resources making such offers should bear a heavy burden of demonstrating that the claimed load reduction is appropriately considered demand response that is responding to wholesale energy prices rather than reflecting the baseline retail energy consumption in response to the MFRR.[241]

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[238] *Id.* at 13-15.

[239] Xcel Motion to Intervene and Comments at 2, 4.

[240] Midwest TDUs Motion to Intervene and Protest at 11-12 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 9-22; EPAct 2005, Pub. L. No. 109-58, § 1252(f), 119 Stat. 594, 966 ("It is the policy of the United States that . . . unnecessary barriers to demand response participation in energy, capacity and ancillary service markets shall be eliminated")).

[241] *Id.* at 10-11.

116. AMP argues that the demand response resource procedures proposed in section 38.7.2 require clarification, as some of these procedures disregard or attempt to trump section 35.28 (g)(1)(iii) of the Commission's regulations regarding ARCs. AMP states that section 35.28(g)(1)(iii) provides that RTOs and ISOs:

> must not accept bids from an aggregator of retail customers that aggregates the demand response of the customers of utilities that distributed more than 4 million megawatt-hours in the previous fiscal year, where the [relevant electric retail regulatory authority] prohibits such customers' demand response to be bid into organized markets by an aggregator of retail customers, or the customers of utilities that distributed 4 million megawatt-hours or less in the previous fiscal year, unless the [relevant electric retail regulatory authority] permits such customers' demand response to be bid into organized markets by an aggregator of retail customers.[242]

AMP argues that proposed section 38.7.2 of the Tariff essentially adds to section 35.28 of the Commission's regulations a 10-day deadline for relevant electric retail regulatory authorities to assert that laws or regulations expressly prohibit an end-use customer's participation in a transmission provider's markets. AMP also points out that MISO fails to explain the consequences if a relevant electric retail regulatory authority fails to meet the 10-day deadline and argues that the provision should be rejected if it would permit an otherwise prohibited customer to register its demand response resources because a relevant electric retail regulatory authority does not respond before the 10-day deadline expires. AMP argues that accordingly, MISO must incorporate language from section 35.28 of the Commission's regulations into proposed section 38.7.2 of the Tariff to clarify that MISO is not attempting to override the Commission's regulations and to explain what would happen if the relevant electric retail regulatory authority does not respond before the 10-day deadline expires.[243]

117. In addition, AMP notes that proposed section 38.7.2 does not provide for what would happen if the relevant electric retail regulatory authority rejects a demand resource's registration after the 10-day deadline expires; for example, if an ARC becomes non-compliant with the relevant electric retail regulatory authority's requirements after having registered with MISO. AMP asks the Commission to direct MISO to modify

[242] AMP Motion to Intervene and Comments at 5 (citing 18 C.F.R. § 35.28(g)(1)(iii) (2011)).

[243] *Id.* at 6.

proposed section 38.7.2 to address what would happen if a demand response resource's registration is rejected after the 10-day deadline expires.[244]

d. Answers

118. In response to protesters' contentions that its measurement and verification protocols should be included in the Tariff, MISO argues that Order No. 745 required only that RTOs and ISOs evaluate their existing criteria and, if necessary, develop appropriate modifications. MISO insists that Order No. 745 did not require RTOs and ISOs to provide new measurement and verification criteria as part of their tariffs.[245] MISO states that it has evaluated its existing measurement and verification protocols and proposes to amend them to remove the requirement for load-serving entities to forecast where load would be but for demand response.[246] MISO adds that it has also complied with the measurement and verification requirements of Order No. 745 by incorporating the relevant NAESB standards into its Tariff and by proposing modifications to its protocols in its October 2, 2009 Compliance Filing in the Order No. 719 compliance proceeding. MISO also maintains that detailed measurement and verification protocols already exist in its Business Practices Manuals, which MISO asserts is consistent with Commission precedent regarding such protocols for Module E and Schedule 30 of the Tariff.[247]

119. In response to AMP's concerns regarding demand response resource registration, MISO asserts that the August 19, 2011 Compliance Filing does not address notification and certification of ARCs by relevant electric retail regulatory authorities because this issue is more appropriately before the Commission in MISO's ongoing Order No. 719 compliance proceeding.[248]

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[244] *Id.*

[245] MISO Motion for Leave to Answer and Answer at 9-10 (citing Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 94).

[246] MISO claims that load-serving entities would have a financial incentive to inflate their load forecasts unless they are directly allocated the costs of compensating demand response resources, as required under MISO's existing Tariff. MISO asserts that, unless it removes the forecasting requirement, the difference between a load-serving entity's forecasted load and metered load would be used to instead allocate costs to other market participants, in accordance with the cost allocation requirements of Order No. 745. *Id.* at 10.

[247] *Id.* at 10-11.

[248] *Id.* at 11.

120. In their Answer, Demand Response Supporters assert that MISO admits that significant and substantive measurement and verification provisions remain in MISO's Business Practices Manuals, and they reiterate their objection that MISO's Order No. 719 compliance filings provide little insight into the details of the measurement and verification protocols or how they will be applied to demand response resources. Criticizing MISO's analysis of its existing measurement and verification procedures as incomplete, Demand Response Supporters urge the Commission to require MISO to include "*all appropriate*" measurement and verification provisions in its Tariff, and not allow MISO to keep substantive details in the Business Practices Manuals.[249] Further, they argue that including substantive provisions in the Tariff complies with the FPA, the rule of reason, and protects all parties in the event of substantive disputes.[250]

e. Commission Determination

121. As the Commission states in the MISO Order No. 719 Compliance Order, issued concurrently with this order, measurement and verification provisions significantly affect rates, terms or conditions of service, and therefore, pursuant to the rule of reason, they must be included in MISO's Tariff on file with the Commission, and not relegated to MISO's Business Practices Manuals.[251] As a result, the Commission finds that MISO is not in compliance with the relevant requirements of Order No. 719 and directs MISO to submit a compliance filing, due within 90 days of the date of that order, to set forth in the Tariff its measurement and verification protocols and metering guidelines for demand response resources.

122. Since MISO has not yet had the opportunity to file most of these measurement and verification provisions, pursuant to the Commission's directives in its concurrently issued order in MISO's Order No. 719 compliance proceeding, MISO has not yet demonstrated that it has complied with the measurement and verification requirements of Order No. 745.[252] Accordingly, we will defer judgment as to whether MISO has complied with the

[249] Demand Response Supporters Motion for Leave to Answer and Answer at 7 (emphasis in original).

[250] *Id.* at 8.

[251] MISO Order No. 719 Compliance Order, 137 FERC ¶ 61,214 at P 79 & n.118 (citing *City of Cleveland*, 773 F.2d at 1376).

[252] The Commission determined in the MISO Order No. 719 Compliance Order that the measurement and verification protocols should be included in the Tariff. Accordingly, arguments regarding whether these provisions belong in the Tariff are effectively moot, and we will not revisit them in this proceeding.

measurement and verification requirements of Order No. 745. We will require MISO to provide an explanation, in the compliance filing directed below, of how its measurement and verification protocols, as amended in the to-be-filed measurement and verification protocols in the ongoing Order No. 719 proceeding, comply with Order No. 745's measurement and verification requirements. Among other things, MISO should explain how its measurement and verification protocols "will continue to ensure that appropriate baselines are set, and that demand response will continue to be adequately measured and verified as necessary to ensure the performance of each demand response resource,"[253] and show that it has developed "appropriate revisions and modifications, if necessary, to ensure that their baselines remain accurate and that they can verify that demand response resources have performed."[254] As for the proposed Tariff revisions regarding measurement and verification submitted in this proceeding, we will conditionally accept them in part and reject them in part, subject to the outcome of the measurement and verification issues presented in the MISO Order No. 719 compliance proceeding and to the submission by MISO, in the compliance filing directed below, of the clarifications and Tariff revisions discussed below.

123. In proposed section 40.2.4.b, MISO proposes that Demand Response Resources – Type I that are deployed for contingency reserves must provide five-minute interval demand data, rather than "a minimum of" five-minute interval demand data, as proposed in MISO's Order No. 719 compliance filings.[255] We will require MISO to submit, in the compliance filing directed below, an explanation for this change or Tariff revisions to reinsert the "a minimum of" language.

124. In the MISO Order No. 719 Compliance Order, the Commission requires MISO to revise the Tariff to "remove references to the measurement and verification protocols being in the Business Practices Manuals."[256] Consistent with this requirement, we will require MISO to remove similar references from the proposed Tariff language in the compliance filing directed below.[257]

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[253] Order No. 745, FERC Stats. & Regs. ¶ 31,322 at P 94.

[254] *Id*.

[255] MISO October 2, 2009 Compliance Filing, Docket No. ER09-1049-002, FERC Electric Tariff, Fourth Revised Vol. No. 1, Fourth Revised Sheet No. 936.

[256] MISO Order No. 719 Compliance Order, 137 FERC ¶ 61,214 at P 79.

[257] *See*, *e.g.*, MISO August 19, 2011 Compliance Filing, FERC Electric Tariff, § 1.411 (1.0.0).

125. In several instances, MISO's Order No. 745 compliance filing includes language to relax the one-to-one relationship for most demand response resources to Host Load Zones. This would be applied to Demand Response Resources – Type I and Demand Response Resources – Type II that do not provide regulating reserves. The Commission accepts these Tariff changes in the MISO Order No. 719 Compliance Order.[258] In other instances, MISO proposes to retain the one-to-one relationship to the Host Load Zone for Demand Response Resources – Type II that are qualified to provide regulating reserves, as MISO proposed in its Order No. 719 compliance filings. While MISO reiterates its arguments in support of retaining this relationship that it provided in its Order No. 719 compliance filings,[259] we note that in the MISO Order No. 719 Compliance Order, the Commission requires MISO to provide sufficient justification of its decision to maintain the one-to-one relationship between a Demand Response Resource – Type II providing regulation and the Host Load Zone and to provide a definition of Host Load Zone "that is not simply stating the equivalence to another term, but rather defines the term, including in its broader context."[260] Accordingly, we will conditionally accept the proposed language regarding the definition of Host Load Zone and relationship between Host Load Zones and demand response resources, subject to the outcome of the MISO Order No. 719 compliance proceeding, and require MISO to submit, in the compliance filing directed below, Tariff revisions to revise the proposed definition of Host Load Zone.

126. We are concerned that, in several sections of the Tariff,[261] MISO has removed, without explanation, language specific to the one-to-one relationship to the Host Load Zone for Demand Response Resources – Type II that are regulation qualified, despite its arguments about the need for such a relationship in its Order No. 719 compliance filings.[262] Further, in proposed section 1.411, the definition of measurement and verification procedures excludes, without explanation, Demand Response Resources – Type II that are regulation qualified. We will require MISO to submit, in the compliance filing directed below, either an explanation for the removal of the language specific to

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[258] MISO Order No. 719 Compliance Order, 137 FERC ¶ 61,214 at P 81.

[259] *See* MISO August 19, 2011 Compliance Filing, Transmittal Letter at 8; MISO October 2, 2009 Compliance Filing, Docket No. ER09-1049-002, at 20.

[260] MISO Order No. 719 Compliance Order, 137 FERC ¶ 61,214 at P 81.

[261] MISO August 19, 2011 Compliance Filing, FERC Electric Tariff, § 1.61 (1.0.0), 39.3.1 (1.0.0), 39.3.2C (2.0.0), 40.2.5.b.xxxii (4.0.0), 40.3.3.a.i (2.0.0), 40.3.4.a.vii, 40.3.4.a.x, 40.3.4.a.xiii (4.0.0).

[262] In some cases, the language that MISO proposes to remove was proposed in MISO's Order No. 719 compliance filings.

regulation-qualified Demand Response Resources – Type II or revisions to ensure that the proposed Tariff revisions appropriately apply to such resources.

127. With regard to the proposed Tariff revisions concerning the registration of demand response resources in proposed section 38.7.2, we will reject the requirement that demand response resources specify their measurement and verification methodology as a part of the registration and certification process until MISO files its measurement and verification protocols as part of the Tariff, as directed in the MISO Order No. 719 Compliance Order.[263] Given our determination above regarding the use of the MFRR in the bifurcated cost allocation proposal, we will also reject the requirement in proposed section 38.7.2 of the Tariff that the MFRR, if any, must be specified at the time of registration. We will require MISO to submit Tariff revisions to remove both of these provisions from proposed section 38.7.2 in the compliance filing directed below.

128. AMP has raised a concern that proposed section 38.7.2 introduces a 10-day deadline for relevant electric retail regulatory authorities to assert that laws or regulations expressly prohibit an end-use customer's participation in a transmission provider's markets.[264] We find that the proposed registration requirement does not explain what will happen under the MISO Tariff if the relevant electric retail regulatory authority challenges a registration request before the 10-day deadline; if an otherwise prohibited customer registers its demand response resources; if an end-use customer becomes non-compliant after having registered with MISO; if a demand response resource submits an offer during the 10-day period permitted to the relevant electric retail regulatory authority to challenge a registration request; or if the relevant electric retail regulatory authority rejects the demand resource's registration after the 10-day deadline. Further, while we believe that the notification to the relevant electric retail regulatory authorities should be executed very quickly after a resource registers, the Tariff does not establish the timeline for MISO to provide these notifications and to complete the registration. MISO has also not addressed in the Tariff how it will deal with situations where a market participant fails to designate a contact person for the load-serving entity, relevant electric retail regulatory authority, and/or local balancing authority for notification purposes. To address these concerns, we will require MISO to further explain its registration requirements, and modify proposed section 38.7.2 of the Tariff, as appropriate.

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[263] MISO Order No. 719 Compliance Order, 137 FERC ¶ 61,214 at P 79.

[264] As MISO has proposed revisions to section 38.7.2 of the Tariff that pertain to the registration of all demand response resources, and are not limited to ARCs, we disagree with MISO's assertion that AMP's concerns are more appropriately before the Commission in the Order No. 719 proceeding.

5. Other Issues

129. To the extent that any of the proposed Tariff revisions are not specifically addressed herein, we accept them, except for those provisions that are related to the MISO Order No. 719 compliance filings, which we conditionally accept, subject to the outcome of that proceeding.

130. With regard to the effective date of the proposed Tariff revisions conditionally accepted herein, we will grant MISO's request for additional time to develop and implement the systems and software necessary to implement the Commission's directives, so that the Tariff revisions are effective 120 days from the date of this order.

131. Finally, we will require MISO to submit, in the compliance filing directed below, Tariff revisions to address the following concerns regarding the proposed Tariff revisions:

1) Section 1.441 proposes to define the term "Measurement and Verification" rather than "Measurement and Verification Procedures." As needed, the term "Measurement and Verification procedures" should be used consistently throughout the Tariff (e.g., proposed section 1.1a incorrectly refers to "Measurement and Verification Procedures);

2) Section 1.443c refers to a "power system" supply curve, which is not defined in the Tariff;

3) Section 1.443c refers to "explanatory variables," which are not defined in the Tariff;

4) Section 38.7.2 refers to "external variables," rather than "explanatory variables;"

5) Sections 39.3.2C and 40.3.3.c.ii refer to Financial Schedule "sales" and "purchases," which are not defined in the Tariff; and

6) Section 40.3.3.c.ii states that market participants will be charged the applicable hourly *ex post* LMP "for Non-Excessive Energy below their Day-Ahead Scheduled Injections," rather than "for Non-Excessive Energy injections for Demand Response Resources below their Day-Ahead Scheduled Injections."

The Commission orders:

(A) MISO's August 19, 2011 Compliance Filing is hereby accepted in part and rejected in part effective 120 days from the date of this order, as discussed in the body of this order.

(B) MISO is hereby directed to submit a compliance filing due within 90 days of the date of this order, as discussed in the body of this order.

By the Commission. Commissioner Moeller is dissenting in part with a separate statement attached.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

California Independent System Operator Corp.	Docket Nos.	ER11-4100-000
PJM Interconnection, L.L.C.		ER11-4106-000
Midwest Independent Transmission System Operator, Inc.		ER11-4337-000
Midwest Independent Transmission System Operator, Inc.		ER09-1049-000
		ER09-1049-002
		ER09-1049-003

(not consolidated)

(Issued December 15, 2011)

MOELLER, Commissioner, *dissenting in part*:

Demand response plays a very important role in markets by providing significant economic, reliability, and other market-related benefits when properly deployed.

For the reasons set forth in my dissents on Orders No. 745 and 745-A, I respectfully dissent.[1] While consumers may pay lower rates if some consumers voluntarily agree to use less electricity, the Federal Power Act requires this Commission

[1] *Demand Response Compensation in Organized Wholesale Energy Markets*, 134 FERC ¶ 61,187 (2011) (*Moeller Dissenting*) ("Order No. 745") and *Demand Response Compensation in Organized Wholesale Energy Markets*, 137 FERC ¶ 61,215 (2011) (*Moeller Dissenting*) ("Order No. 745-A"), respectively.

to establish just and reasonable rates that are not discriminatory.[2] If the Commission requires the RTOs and ISOs to overcompensate for providing demand response, the resulting rates are both discriminatory and not just and reasonable.

In addition, as stated in my dissent today in Order No. 745-A, rather than impose a nationwide approach to demand response compensation, the Commission's objective of promoting demand response would have been better served if the regions were free to propose compensation methods that recognize the very real differences in the structures of the regional markets.

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Philip D. Moeller
Commissioner

[2] 16 U.S.C. § 824d (2006).