

UNITED STATES OF AMERICA  
BEFORE THE  
FEDERAL ENERGY REGULATORY COMMISSION

Midwest Independent Transmission System  
Operator, Inc.  
Open Access Transmission and Energy  
Markets Tariff

Docket No. ER04-691-000

Motion to Intervene and Comments of the  
Electricity Consumers Resource Council (ELCON),  
American Iron and Steel Institute (AISI) and  
American Chemistry Council (ACC)

Dated: May 7, 2004

The Electricity Consumers Resource Council (ELCON), the American Iron and Steel Institute (AISI) and the American Chemistry Council (ACC) hereby submit this motion to intervene and comments regarding the March 31, 2004 filing of the Midwest Independent Transmission System Operator, Inc. (Midwest ISO). The proposed tariff includes the rates, terms and conditions necessary for the implementation of a centralized security-constrained economic dispatch platform supported by a Day-Ahead and Real-Time Energy Market design, including Locational Marginal Pricing (LMP) and Financial Transmission Rights (FTRs) within the ISO's footprint. Our comments focus on the proposed integration of demand bids and offers into the market design.

## **I. Summary of Recommendations**

- A.** The Midwest ISO's proposal to integrate Demand Response in its Energy Markets is exemplary and a long-overdue refinement of FERC's bid-based market design.
- B.** The Tariff provisions on offer specifications and requirements for DRR Offers and other demand-side products are in dire need of clarification.
- C.** The Midwest ISO should eliminate barriers to entry in the Real-Time Energy Market by making the Tariff's offer rules technology neutral.
- D.** The Midwest ISO should adopt as a "rebuttable presumption" that Demand Response Resources (DRRs) may qualify in all energy and capacity markets.
- E.** The term "Load Serving Entities (LSEs)" should be reserved for entities that are public utilities. Market Participants that are end-use customers should be designated as "Market Participating Loads."
- F.** The Tariff should explicitly allow individual end users to qualify as Market Participants.
- G.** The Business Practices Manuals should be submitted to the Commission for formal adjudication.
- H.** The Midwest ISO's Independent Market Monitor should evaluate the improvements in market efficiencies as a result of DRR Offers.
- I.** The Commission should use this proceeding to reaffirm its policy that ISOs and RTOs phase-out and replace existing demand response "programs" with market

rules to integrate demand response resources directly into each ISO or RTO's energy and capacity markets.

## II. Description of Midwest ISO's Markets for Demand Response

The Midwest ISO's March 31st filing intends to provide the basic tariff framework for implementing the ISO's "Midwest Market Initiative" (MMI). The MMI establishes a wholesale power market in the Midwest region in compliance with FERC Order No. 2000. Defining features of the Order's mandate are real-time energy imbalance services and a market-based congestion management system.<sup>1</sup>

The Midwest ISO proposes to operate two energy markets: (1) a Day-Ahead Energy Market and (2) a Real-Time Energy Market. The Day-Ahead market is a forward market in which hourly clearing prices are calculated for each hour of the next Operating Day based on locational marginal pricing (LMP). The market is cleared using security-constrained unit commitment (SCUC) and security-constrained economic dispatch (SCEC) software to satisfy energy demand and reserve requirements by minimizing the offer-based production cost. Energy demand requirements include Demand Bids, Price-Sensitive Demand Bids, Virtual Demand Bids, and External Demand.<sup>2</sup> Supply "Offers" include Resource Offers (Generation and Demand Response Resource Offers), External Supply, Virtual Supply Offers, No-Load Offers

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<sup>1</sup> Implementation of these two features is often referred to as the "Day Two" market.

<sup>2</sup> A "Demand Bid" is a request to purchase a specified MW quantity of energy at specified locations during specific hours of the next Operating Day submitted to the Day-Ahead market Tariff at 65. Demand Bids are requests to purchase in which the purchaser is a "price taker" and agrees to the price determined for the specific location (*e.g.*, node). Tariff at 482. Price-Sensitive Demand Bids are bids (up to nine MW quantity/price pairs) in which the purchaser expresses a willingness to buy more energy at lower prices, *i.e.*, the purchaser specifies a maximum price (\$/MW) at which he or she desires to purchase the designated MW of energy. Tariff at 484. A Virtual Demand Bid is a bid to purchase energy only in the Day-Ahead market with no intention of consuming the energy. Tariff at 485. These bids are used to hedge the price difference between the Day-Ahead and Real-time energy markets. External Demand is an energy purchase in the Day-Ahead market through External Bilateral Transaction Schedules. Tariff at 485. The sink for this energy is outside the metered boundaries of the ISO.

and Start-Up Offers.<sup>3</sup> The results of the Day-Ahead market clearing include hourly LMP values, hourly demand and supply quantities, and hourly control area tie schedules.

Demand Response Resource Offers (DRR Offers) consist of a monotonically increasing curve with no more than ten (10) price and quantity (MW) pairs, or a piece-wise linear curve of up to ten (10) price-quantity pairs representing the price at which the DRR will voluntarily adjust its Day-Ahead Schedule, *i.e.*, reduce its withdrawals from the grid.<sup>4</sup> DRR Offers are also eligible to supply non-spinning Operating Reserves but the specific DRR decrement must be identified as such.<sup>5</sup> The Tariff is unclear if DRR Offers may contain the same “parameters” as Generation Offers (*e.g.*, Ramp Rates, Hourly Economic Minimum and Maximum Levels, Hourly Emergency Minimum and Maximum Levels, Minimum and Maximum Run Times, Minimum Down Time, and Notification times).<sup>6</sup> The Day-Ahead offer cap (\$1,000/MWh) does not apply to DRR Offers and, instead, are submitted at “actual, verifiable prices.”<sup>7</sup>

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<sup>3</sup> An “Offer” is a request to sell energy in either the Day-Ahead or Real-Time energy markets at a specified price, location, quantity, and time period. Tariff at 108. Generation Resources also include External Resources (which are located outside the metered boundaries of the ISO) and Self-Scheduled Resources (a fixed block sale in which the seller is a price-taker). Tariff at 73 and 122. External Supply is any offer to sell energy from External Resources by submitting External Bilateral Transactions Schedules. Tariff at 497. Virtual Supply Offers are requests to sell energy not supported by a physical injection or reduction in withdrawals in commitment by a resource. Tariff at 140. A No-Load Offer is compensation requested by a Generation Resource to operate at zero (0) MW. Tariff at 107. A Start-Up Offer is compensation requested by a Generation Resource to bring an off-line resource on-line. Tariff at 125.

<sup>4</sup> Tariff at 490-491.

<sup>5</sup> Id. and Schedule 6, Tariff at 880. Interruptible load must be “removed within ten minutes” to qualify as non-spinning reserves, *i.e.*, “Supplemental Reserve Service.”

<sup>6</sup> Tariff at 492-493. The Tariff specifies that only “[a] Generation Offer may contain ...” the relevant offer specifications or parameters but the subsection title is “Additional Generation Resources (or DRR) Parameters.” Other provisions in the Tariff suggest that some of these “parameters” are intended to apply to DRR (*e.g.*, Hourly Emergency Maximum is implied in Section 39.2.10, “Shortage Conditions in the Day-Ahead Energy Market,” Tariff at 507).

<sup>7</sup> Tariff at 495.

The ISO's Operating Day processes includes (i) Reliability Assessment and Commitment ("The RAC Process"), and (ii) Real-Time Energy Market Operations. The main purpose for the RAC process is to ensure that expected system conditions in the Operating Day are represented in the ISO's Network Model and that the ISO can reliably operate the grid and serve its load forecast and capacity requirement, *i.e.*, ensure short-term reliability.<sup>8</sup> The RAC process allows Market Participants to submit new or modify existing Offers or Bilateral Transaction Schedules for the Real-Time Energy Market (including Self-Schedules) up to thirty (30) minutes prior to each Dispatch Hour in the Operating Day.

The Midwest ISO will dispatch resources in the Real-Time Energy Market using a security-constrained economic dispatch (SCED) optimization program every five (5) minutes of the Operating Day to simultaneously balance "injection" and "withdrawals" while managing congestion and calculating *ex post* LMPs.<sup>9</sup> The Real-Time Energy Market is cleared based on Offers to create dispatch instructions and net scheduled interchange targets for the end of the next dispatch interval. Offers to supply energy in the Real-Time Energy Market have the same price, quantity and data requirements as Resource Offers in the Day-Ahead Energy Market provided that such resources can respond to five-minute dispatch instructions.<sup>10</sup> Virtual Supply Offers are not permitted in the Real-Time Energy Market.

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<sup>8</sup> Tariff at 530.

<sup>9</sup> Tariff at 539.

<sup>10</sup> Tariff at 543-544. Section 38.2.2(g) of the Tariff states: "A Market Participant Applicant seeking to submit Demand Response Resource Offers in the Energy Markets shall: (i) demonstrate to the satisfaction of the Transmission Provider [ISO] that it has exclusive rights through ownership, operational control or other contractual rights to the output of Demand Response Resources capable of responding to the Dispatch Instructions; (ii) designate those Resources as Demand Response Resources with the Transmission Provider; and (iii) demonstrate to the satisfaction of the Transmission Provider that it complies with all metering, telemetry, data storage and communications protocols, and other reliability, operation, planning and accounting standards and requirements for operating in the Transmission Provider Region [ISO footprint] to validate the ability of the Demand Response Resource to respond to the Dispatch Instructions provided by the Transmission Provider." Tariff at 373-374.

DRR Offers in the Real-Time Energy Market are exempt from the Real-Time Energy offer cap (\$1,000/MWh).<sup>11</sup> Section 40.2.3 (“Offer Rules and Obligations for Market Participants in the Real-Time Energy Market”) states that DRRs are eligible to submit Start-Up Offers and No-Load Offers. The Start-Up Offers reflect the minimum charge (in dollars) for initiating curtailment regardless of the quantity curtailed or the duration of the curtailment.<sup>12</sup> The No-Load Offers reflect the minimum charge per hour of curtailment at the lowest MW level of curtailment.<sup>13</sup>

If the Midwest ISO forecast of real-time demand cannot be satisfied with all available Offers (Generation, Self-Schedules and DRR Offers) at its Hourly Economic Maximum Level, the ISO will issue a Maximum Generation Emergency warning due to a shortage of economic resources.<sup>14</sup>

The “interim” resource adequacy requirements proposed by the Midwest ISO are based upon the pre-existing reliability mechanisms of the states within the ISO Region and within the relevant Regional Reliability Organizations (RROs) (*e.g.*, MAPP, MAIN and ECAR).<sup>15</sup> Market Participants serving load within the ISO Region are required to comply with reserve requirements of the appropriate RRO(s) governing the location(s) where the load is located. Market Participants serving load must also comply with any state requirements. Generally, these requirements are met with resources that are “Designated Network Resources (DNRs).” These resources must be submitted as a Self-Schedule or Offer in the Day-Ahead Energy Market and

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<sup>11</sup> Tariff at 550.

<sup>12</sup> Tariff at 551.

<sup>13</sup> *Id.*

<sup>14</sup> Tariff at 567.

<sup>15</sup> Tariff at 810.

RAC Process.<sup>16</sup> Two additional “Qualifying Resources” may also satisfy the criteria for state or RRO resource adequacy standards: (1) Interruptible Demand, and (2) Behind-the-Meter Generation. In both cases the Midwest ISO will determine the applicability of each Qualifying Resource for satisfying the resource adequacy standards and the procedures for commitment and dispatch.<sup>17</sup>

Under the Midwest ISO’s Tariff proposal, Demand Response Resources may qualify to be alternative System Support Resources (SRR). The ISO’s SRR procedures maintain system reliability by providing a mechanism for the ISO to enter into agreements with Market Participants that own or operate generators or synchronous condenser units (SCUs) which are required to maintain reliability if such resources are uneconomic to remain in service and otherwise would be decommissioned, placed into extended reserve shutdown or disconnected from the ISO Region.<sup>18</sup>

The Midwest ISO requires that any entity that wishes to participate in one or more of the ISO’s Market Activities must register as a Market Participant. Once properly registered (via a “duly executed Market Participant Application”), a Market Participant may participate in “all Market Activities.”<sup>19</sup> A Market Participant (or its Designated Agent) must also comply with the ISO’s requirements for metering, data storage and transmission, and other requirements as specified in the Business Practices Manuals and the Tariff, and execute a credit agreement,

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<sup>16</sup> Tariff at 820-825.

<sup>17</sup> Tariff at 826-827. Exhibit MISO-1 of the Transmittal Letter recommends that resource adequacy and capacity markets principles include “allow dispatchable demand response, verifiable load reduction and renewable resources to participate in the capacity market,” and “allow LSEs to meet their capacity reserve responsibilities through such mechanism as ... [d]emand response or load reduction.”

<sup>18</sup> Tariff at 407-423.

<sup>19</sup> Tariff at 366-367.

provide any financial security or otherwise comply with the ISO's credit policy.<sup>20</sup> The Market Participant is financially responsible and liable for all Market Activities in the Energy Markets in which it engages regardless of on whose behalf it has arranged to make purchases and sales.<sup>21</sup> The ISO must be informed by each Market Participant of its intent to submit Bids, Offers, and other market instruments.

A Market Participant seeking to submit Demand Bids into the Day-Ahead Energy Market must demonstrate to the satisfaction of the ISO that the end users to be served by the energy purchased in the Energy Market are located within the ISO Region. Demand bids may also only be submitted by a Market Participant that is a Load Serving Entity (LSE), or is purchasing energy to serve an LSE.<sup>22</sup>

### **III. Comments of ELCON, AISI and ACC**

#### **A. The Midwest ISO's Proposal To Integrate Demand Response In Its Energy Markets Is Exemplary And A Long-Overdue Refinement Of FERC's Bid-Based Market Design.**

The Midwest ISO is commended for proposing to integrate demand response directly into its Day-Ahead and Real-Time Energy Markets and not—as other ISOs and RTOs have done—relegate the demand side of the market to ancillary programs. Several overarching principles or objectives in the filing are worth highlighting (all direct quotes):

- Explicit demand bids and actions taken by price-responsive loads helps the ISO meet loads reliably and define prices during periods of scarcity or near scarcity. This helps to mitigate shortages and mitigate peak period prices. For the same

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<sup>20</sup> Tariff at 368 and 373. The Business Practices Manuals—which the ISO does not intend to file with the Commission for approval—are underdevelopment. Prepared Direct Testimony of Joe Gardner (MISO-7) at 14. A Market Participant may assign certain responsibilities to a Scheduling Agent, a Meter Data and Management Agent (MDMA), or other Market Participant. Tariff at 368.

<sup>21</sup> Tariff at 369.

<sup>22</sup> Tariff at 65.

reasons, demand-side response during peak and/or shortage conditions reduces both the incentive and ability of generators to exercise market power.<sup>23</sup>

- A Market Participant may participate in *all* Market Activities.<sup>24</sup>
- LMPs are established based on Generation Offers, DRR Offers, Virtual Supply Offers, Price Sensitive Demand Bids, Dispatchable External Bilateral Transaction Schedules, and Virtual Bids.<sup>25</sup>
- Offers to supply energy in the Real-Time Energy Market have the same price, quantity, and data requirements as Generation Offers or DRR Offers in the Day-Ahead Energy Market.<sup>26</sup>
- DRR Response will settle like any other generation resource... [T]he key is that the net of these two values represents the settled load.<sup>27</sup>
- The Market Participant is financially indifferent to offering with a Load/DRR pair rather than a price sensitive demand bid, but has the ability to reflect the cost of offering the DRR in a 3-part offer and can specify other parameters, such as minimum run times, to reflect the underlying DRR economics and physical constraints of the resource.<sup>28</sup>

These issues are not trivial and mark a long overdue sea change in the implementation of the market rules under Order No. 2000. The first ISO was approved by FERC in 1997, and the first RTO in 2002, yet no ISO or RTO has thus far demonstrated resolve to truly test active demand participation in emerging markets – an essential component of real competition. Instead, a quasi-competitive bidding framework was implemented for supply resources only, with demand resources allowed a more limited role in separate “programs” that are generally removed from actual market clearing processes.<sup>29</sup> Integration of demand-related offers and price-sensitive demand bids into the actual energy markets begins to correct this

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<sup>23</sup> Prepared Direct Testimony of Ronald R. McNamara (MISO-4) at 30.

<sup>24</sup> Tariff at 366. Emphasis added.

<sup>25</sup> “Instruments Eligible to Set LMP.” Tariff at 500.

<sup>26</sup> Tariff at 544.

<sup>27</sup> MISO-4 at 71.

<sup>28</sup> *Id.*

<sup>29</sup> The false, supply-only competition in existing ISO or RTO market designs has been pejoratively called a “one hand clapping.”

oversight and the first real demonstration of competition in the Commission's preferred "bid-based" market paradigm may be at hand.

Under cost-of-service regulation, the rates used to recover a utility's revenue requirement from end-use customers are based on an implied discriminatory auction, *i.e.*, the energy costs of base-loaded, intermediate and peaking capacity are separately priced based on each technology's respective scale economies, heat rates, and fuel costs. Fixed costs are treated separately in the two-part tariff. The Commission's bid-based market design imposes a uniform-price auction format on each market and all generators (whether nuclear, coal-fired or natural gas fired) that are dispatched are eligible for the same market-clearing price. If consumers are to realize any benefit from switching from cost-of-service regulation to bid-based markets, the uniform-price auction format of bid-based markets must create sufficient and sustained market efficiencies on both the supply and demand sides of the market to more than offset the total revenue requirement otherwise charged to end-use consumers resulting from an implied discriminatory auction for generation under cost of service. In other words, the intent of competition is to induce downward shifts in both the supply and demand curves. If the supply and demand curves are not shifted as such, end users are, by definition, worse off with bid-based markets. This assumes that utilities under cost-of-service regulation and generators in competitive markets are equally efficient (or inefficient) at making technology choices and investments. To its credit, the Midwest ISO is attempting this feat.

**B. The Tariff Provisions On Offer Specifications And Requirements For DRR Offers And Other Demand-Side Products Are In Dire Need Of Clarification.**

It is clear from the March 31 Filing that the following demand-side products are allowed in the energy markets: Demand Bids, Price Sensitive Demand Bids, Virtual Demand

Bids, External Demand, Demand Response Resource (DRR) Offers, and Virtual Supply Offers.<sup>30</sup> Loads (energy or capacity) are also eligible to provide non-spinning Operating Reserves and to submit offers for Emergency Energy, interim resource adequacy requirements, and System Support Resources (SRR). Loads may be eligible to make offers in the RAC Process. But it is not clear how Offers are to be structured to “reflect the underlying DRR economics and physical constraints of the resource.”

Section 40.2.3 of the Tariff clearly states that DRRs are eligible to submit Start-Up Offers and No-Load Offers. In fact, in his Prepared Direct Testimony, Ronald R. McNamara states that a Market Participant “has the ability to reflect the cost of offering the DRR in a 3-part offer and can specify other parameters, such as minimum run times, to reflect the underlying DRR economics and physical constraints of the resource.”<sup>31</sup> However, McNamara’s Testimony also contradicts this and the Tariff language. McNamara says: “DRRs will be allowed to set the LMP based on their cleared curves, but will not be eligible to receive Revenue Sufficiency Guarantees to recover cost for start-up and operation at zero load.”<sup>32</sup> The Tariff is also not clear with respect to the eligibility of DRRs to include Hourly Economic Maximum and/or Hourly Economic Minimum, or Hourly Emergency Maximum and Minimums in its Offers.<sup>33</sup>

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<sup>30</sup> Conceptually, competing “bids” are used to construct the demand curve and competing “offers” establish the supply curve.

<sup>31</sup> MISO-4 at 71.

<sup>32</sup> MISO-4 at 70. The term “Revenue Sufficiency Guarantees” is not defined in the Definitions section of the Tariff, but is explained in McNamara’s testimony. MISO-4 at 73-74. The intent of the Midwest ISO seems to be as follows: DRR Offers do not qualify for Revenue Sufficiency Guarantees notwithstanding the true economic costs of DRR market participation that might warrant just compensation for Start-Up and/or No-Load Offers. However, DRR Offers—unlike Generation Offers—are exempt from Offer Caps and Uninstructed Deviations Penalties.

<sup>33</sup> Subsection 40.2.39(b) is entitled “Generation Offers (Demand Response Resource Offers) Rules and Specifications in the Real-Time Energy Market.” But the twelve rules are prefaced with the statement: “The

Also, it is not clear if DRR are eligible to participate in the procedures used by the ISO to clear the market under these conditions because the ability to submit Hourly Emergency Maximum and Minimums in the DRR Offers is ambiguous.<sup>34</sup> The same applies when the ISO is forecasting a surplus of resources.

The March 31 Tariff Filing is seriously deficient by its lack of clarity on both the ISO's intentions and the detailed offer specifications (or "parameters") that may be provided with each Offer that are ultimately used to establish the resource's compensation. This deficiency should be corrected as soon as possible.

**C. The Midwest ISO Should Eliminate Barriers To Entry In The Real-Time Energy Market By Making The Tariff's Offer Rules Technology Neutral.**

The Midwest ISO's proposal for integrating demand in the Day-Ahead Energy Market is much more developed and complete than what is proposed for the Real-Time Energy Market. In fact, we observe a bias in favor of the Day-Ahead market. In Prepared Direct Testimony, ISO witness McNamara said: "The added flexibility provided by the Day-Ahead Energy Market is expected to allow many price-sensitive loads to pursue demand-side options they might not otherwise pursue if there were only a real-time balancing market. In particular, the Midwest ISO expects to see more demand response from price-sensitive loads participating in the Day-Ahead Energy Market than it would otherwise have seen if loads had to be

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following rules also apply to Generation Offers in the Real-Time Energy Market." Rules ix, x, and xi explicitly reference DRR Offers.

<sup>34</sup> In "Step Two" of the procedures for alleviating shortage conditions, the ISO calls on Operating Reserves to achieve energy balance. Elsewhere in the Tariff, DRR do qualify as non-spinning Operating Reserves. Also, in the Prepared Direct Testimony of Ronald R. McNamara, energy balance under a declared energy emergency may be achieved by dispatching 'non-economic interruptible load (economic load reduction not under Midwest ISO control taken when appropriate) [sic]." MISO-4 at 65.

dispatchable on a five-minute basis in the Real-Time market.”<sup>35</sup> This may be generally true but the ISO’s assumptions may be missing an important economic reality.

Perhaps the most acclaimed demonstration of price response in day-ahead and real-time markets is the Real Time Pricing (RTP) tariffs offered by Southern Company’s affiliate, the Georgia Power Company. Georgia Power introduced RTP in the late 1980s and now offers a “suite” of tariffs that include associated risk management products—called *Price Protection Products*—that its customers may take on a strictly voluntary basis (*e.g.*, price caps, contract for differences, collars, index swaps, and index caps). Approximately 1,700 C&I customers subscribe to the tariffs with a total peak demand of 5,000 megawatts (MW). Up to 1,000 MW of load reduction is achieved under the tariffs—or 5% of Georgia Power’s system peak.<sup>36</sup>

Participation in Georgia Power’s RTP offerings is highest (75%) under the day-ahead tariffs than under the hour-ahead tariffs where participation is only 25%.<sup>37</sup> Customers with a minimum load of 250 kW are eligible for day-ahead, but the limit for the hour-ahead market is 5 MW.<sup>38</sup> However, Georgia Power’s RTP customers in the hour-ahead market are extremely price-responsive with price elasticities ranging from approximately  $-0.2$  at moderate prices, to  $-0.28$  at prices of \$1/kWh or more.<sup>39</sup> Among day-ahead customers, price elasticities

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<sup>35</sup> MISO-4 at 30.

<sup>36</sup> Demand Response and Advanced Metering Coalition (DRAM), “Real-Time Pricing Case Study: Georgia Power Company.” Downloaded from: <http://www.dramcoalition.org/id54.htm>. Also, *see*, Severin Borenstein, Michael Jaske and Arthur Rosenfeld, “Dynamic Pricing, Advanced Metering and Demand Response in Electricity Markets,” Center for the Study of Energy Markets, University of California Energy Institute, CSEM WP 105, October 2002.

<sup>37</sup> Steven Braithwait, “Real-Time Pricing and Demand Response – 5 Basic Facts About Power Markets and RTP,” California Energy Commission Workshop, March 15, 2002.

<sup>38</sup> Michael T. O’Sheasy, “Time-Sensitive Pricing for a Competitive Electricity Marketplace– Real-Time Pricing at Georgia Power Company,” October 3, 2002.

<sup>39</sup> Borenstein, Jaske and Rosenfeld (2002) at A-3. A price elasticity of  $-0.2$  means that an increase in price of 1% will produce a decrease in demand of 0.2%.

range only from approximately  $-0.04$  at moderate prices to  $-0.13$  at high prices.<sup>40</sup> These differences are significant and clearly the more price-responsive customers are in the hour-ahead (real-time) market.

While there is value in having price-responsive load in both markets, we would argue that from the perspective of overall market efficiency, price-responsiveness needs to be maximized in the real-time (spot) market. The ISO's Day-Ahead Energy Market is, by design, a forward market. It will always (and should) reflect prices in the Real-Time Energy Market and to the extent that adequate price-response is missing from the real-time price clearing process, market power can be exercised. Hedging Day-Ahead prices with virtual bids does not always protect consumers from the exercise of market power in the Real-Time Energy Market.<sup>41</sup>

The market rules of all ISOs and RTOs recognize the underlying economics and physical constraints of generating resources and Generator Offers are structured accordingly. For example, in addition to Start-Up and No-Load Offers, the ISO's Tariff explicitly provides for the submission of the following "additional parameters" in Generation Offers:

- i. Ramp Rate (MW/minute). Ramp rates shall vary by no more than ten (10) segments.
- ii. Hourly Economic Minimum Level (MW).
- iii. Hourly Economic Maximum Level (MW).
- iv. Hourly Emergency Minimum Level (MW).
- v. Hourly Emergency Maximum Level (MW).
- vi. Minimum Run Time.
- vii. Maximum Run Time.

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<sup>40</sup> These customers had previous experience with load reduction/curtailment tariffs. Day-ahead customers with no or little such experience exhibit price elasticities in the range  $-0.02$  to  $-0.06$ .

<sup>41</sup> For example, if the actual load increases after the Day-Ahead market closes, or market power in the Real-Time market has impacted the forward curve.

- viii. Minimum Down Time.
- ix. Notification times.<sup>42</sup>

The Midwest ISO's Tariff also recognizes the unique features of nuclear generating units, and combustion turbines and combined cycle combustion turbines (and the influence of weather on both), and provides special treatment for these factors.<sup>43</sup>

We recommend that the Midwest ISO should make every attempt to minimize barriers to entry in the Real-Time Energy Market by making the Tariff's Offer rules technology neutral. More specifically, Offers should be structured such that all resource technologies are treated even-handedly and that Generation Resources are not given preference over Demand Response Resources. We recognize that one hundred years of cost-of-service regulation has unwittingly created a generation-oriented inertia in the collective industry mindset. But this has to be overcome. To execute this recommendation, the Midwest ISO should (i) inventory the range of industrial process technologies within the ISO Region that are likely candidates as Demand Response Resources; (ii) develop Offer rules with the input of demand-side stakeholders; and (iii) seek other industry recommendations for maximizing DRR Offers in the Real-Time Energy Markets. We recognize that DRR Offers in the Day-Ahead Energy Market will automatically benefit from such efforts.

**D. The Midwest ISO Should Adopt As A “Rebuttable Presumption” That Demand Response Resources (DRRs) May Qualify In All Energy And Capacity Markets.**

The Midwest ISO Tariff appears to limit the ability of Demand Response Resources to supply ancillary services to just non-spinning Operating Reserves. Yet, in other parts of the

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<sup>42</sup> Tariff at 492-493.

<sup>43</sup> Tariff at 399, “Combined Cycle Units,” Tariff at 544, and “Weather Curves,” Tariff at 545.

country, large industrial end users have successfully provided (and been compensated for) reactive power and spinning reserves. We recommend that the Tariff not automatically deny Demand Responsive Resources (or Loads in general) from submitting offers in any energy (real or reactive) or capacity market. The ISO still has the right and obligation to review and evaluate the qualifications of such resources when they seek status as Market Participants. Hardwiring such options in the Tariff will encourage new investments to take advantage of these new market opportunities. Thus, as a rebuttable presumption, the Tariff should be rewritten so as not to preclude any Market Participant from offering its resources in any Market Activity. The Tariff design is already close to fulfilling this recommendation and the Midwest ISO is commended for that.

**E. Market Participants That Are End-Use Customers Should Be Designated As “Market Participating Loads.” The Term “Load Serving Entities (LSEs)” Should Be Reserved For Entities That Are Public Utilities.**

The Tariff uses a variety of terms for “load” and the potential for load to act as or provide a resource in competition with Generation Resources. The terms used in different parts of the Tariff or in the ISO’s Prepared Direct Testimony include: Interruptible Demand, Behind-the-Meter Generation, price-responsive loads, price-sensitive loads, demand-side options, demand-side response, interruptible load, and load reduction. Also, any end-use consumer that wishes to buy power (submit “Bids”) in the Day-Ahead Energy Market must be a “Load Serving Entity (LSE).”

For the sake of clarify, and to avoid needless litigation in the future, we recommend that end-use consumers that wish to offer any resource into an energy or capacity market should be designated as a Market Participating Load (MPL). An MPL would have to qualify as a

Market Participant under the Tariff's rules in order to submit bids or offers, and meet all applicable state laws and regulations. Load Serving Entities (LSEs) under the Tariff would be exclusively public utilities (including various forms of retail service providers) that have federal and/or state jurisdictional obligations that end users do not have. This recommendation does not prevent any end user from delegating certain authorities to an LSE or other agent.

Loads (end users) and traditional LSEs are different entities with very different market interests. They are not interchangeable. Forcing loads to be LSEs exposes the end user to unintended consequences of requirements that are intended for LSEs that are public utilities, or the tendency of some entities to want to treat "all" LSEs alike.<sup>44</sup>

**F. The Tariff Should Explicitly Allow Individual End Users To Qualify As Market Participants.**

The Tariff should be amended to explicitly allow individual end users who are Market Participating Loads to qualify as Market Participants for the purpose of submitting bids and offers, or to participate in other ISO Market Activities, consistent with applicable state laws and regulations. There is some confusion in the industry on this issue because of concern that end user participation may cause merchant generators that are Exempt Wholesale Generators (EWGs) to lose their exempt status under the pretense that energy sold by an EWG into an ISO or RTO's market could ultimately be purchased by an end user and thereby raise an argument that the EWG is no longer selling exclusively at wholesale.

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<sup>44</sup> For example, there is a general tendency by some ISOs or RTOs to treat "all" generators alike, and thus impose obligations on Behind-the-Meter generators that are only relevant for merchant or rate-based generators owned by public utilities. Such actions are discriminatory and may violate PURPA, the Federal Power Act or both.

The Commission recently approved an amendment to the NEPOOL Agreement in which it determined that participants selling into a bid-based market (*e.g.*, day-ahead or real-time energy market) were engaged in wholesale sales and that entities that otherwise met the EWG criteria of Section 32 of PUHCA and that bid energy into such market(s) would maintain their EWG status.<sup>45</sup>

**G. The Business Practices Manuals Should Be Submitted To The Commission For Formal Adjudication.**

The Midwest ISO has indicated that it does not intend to file its Business Practices Manuals with the Commission for approval. Given the lack of clarity in the proposed Tariff on the precise specifications and requirements of DRR Offers, our concern regarding the lack of technology neutrality, and the fact that the ISO's proposal on demand response is a major change from the market designs of other ISOs and RTOs, we strongly urge the Commission to require that the first drafts of the relevant Business Practices Manuals be filed for Commission approval.

**H. The Midwest ISO's Independent Market Monitor Should Evaluate The Improvements In Market Efficiencies As A Result Of DRR Offers.**

As stated above, one reason for abandoning cost-of-service regulation in favor of bid-based wholesale markets is to create sufficient and sustained market efficiencies on both the supply and demand sides of the market. The Midwest ISO's exemplary proposal to integrate demand response resources in the ISO's Day-Ahead and Real-Time Energy Markets should be evaluated on a regular basis by the Independent Market Monitor (IMM). The IMM should estimate on a control area by control area basis the imputed total revenue requirement under a cost-of-service regime and compare that result to the total revenues charged to end users under

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<sup>45</sup> 106 FERC ¶ 61,051 (2004).

the bid-based Midwest Market Initiative. This recommendation addresses an important public policy objective. Consumers are entitled to evidence that the uniform price auction format of the ISO's bid-based markets result in a lower revenue requirement than would otherwise result from cost of service regulation.

**I. The Commission Should Use This Proceeding To Reaffirm Its Policy That ISOs And RTOs Phase-Out And Replace Existing Demand Response “Programs” With Market Rules To Integrate Demand Response Resources Directly Into Each ISO Or RTO’s Energy And Capacity Markets.**

Finally, we strongly urge the Commission to establish a clear policy in support of the Midwest ISO's innovative proposal on demand response. The Commission should use this proceeding to send a clear signal to other ISOs and RTOs that any demand response “programs” should be converted to market rules that provide for permanent and direct participating of demand resources in all ISO- and RTO-coordinated markets. Seams problems may emerge if this is not done, but more important, it is the right thing to do to promote market efficiencies in the other regions.

**DESCRIPTION OF INTERVENORS**

The Electricity Consumers Resource Council (ELCON) is an association of industrial consumers of electricity organized to promote the development of coordinated and rational federal and state policies that will assure an adequate, reliable, and efficient electricity supply for all users at competitive rates. ELCON member companies produce a wide range of products from virtually every segment of the manufacturing community. The member companies of ELCON consume approximately five percent of all electricity in the United States.

The American Iron and Steel Institute (AISI) is the principal trade association of the North American steel industry. Its member companies account for about seventy percent of the raw steel production in the United States. The steel industry is one of the most energy-sensitive sectors in the United States; the cost of electricity for AISI members may constitute as much as twenty percent of the manufacturing cost of a steel mill product.

The American Chemistry Council (ACC) is a nonprofit trade association whose member companies represent more than ninety percent of the productive capacity of basic industrial chemicals in the United States. The manufacturing processes of many ACC member companies are highly-energy intensive. In addition, the chemical industry used a substantial amount of self-generated electricity. Total electricity used by the industry, purchases plus self-generated, represented approximately eighteen percent of industrial electricity consumption in the U.S. and approximately six percent of national electricity consumption.

### **NOTICES AND COMMUNICATIONS**

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Dated: May 7, 2004

**CERTIFICATE OF SERVICE**

I hereby certify that copies of the foregoing Motion to Intervene and Comments were today mailed to parties on the service lists of these proceedings by U.S. mail, postage prepaid.

Dated at Washington, D.C., this 7th day of May, 2004.

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