

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Demand Response Compensation in
Organized Wholesale Energy Markets

Docket No. RM10-17-000

**WRITTEN STATEMENT OF MEGAN WISERSKY
ON BEHALF OF
MADISON GAS AND ELECTRIC COMPANY AND
MIDWEST TDUS
FOR THE SEPTEMBER 13 TECHNICAL
CONFERENCE**

Thank you for the opportunity to participate on behalf of Madison Gas and Electric (“MGE”) and Midwest Transmission Dependent Utilities (“Midwest TDUs”), in today’s important technical conference.

I am Megan Wisersky. I am Manager of Electric Planning at Madison Gas and Electric Company, a public utility organized under the laws of the State of Wisconsin. MGE is engaged in the generation, purchase, and distribution of electric energy, and the distribution of natural gas, in an area of southern Wisconsin that has Madison as its hub. MGE provides electric service to residential, commercial, and industrial customers (some 140,000 meters in total) in an area covering approximately 250 square miles, with a 2006 peak load of 742 MW and annual sales of approximately 3 million MWh. The service MGE provides to its retail customers is regulated by the Public Service Commission of Wisconsin (“PSCW”).

I am also speaking today on behalf of Midwest TDUs, a group of transmission-dependent load-serving entities that must participate in the organized markets of the Midwest Independent Transmission System Operator, Inc. (“Midwest ISO” or “MISO”). In addition to MGE, Midwest TDUs consist of Missouri River Energy Services, Missouri

Joint Municipal Electric Utility Commission, Midwest Municipal Transmission Group, Southern Minnesota Municipal Power Agency, and WPPI Energy.

Our panel has been asked to address cost allocation issues associated with compensation of retail demand response sold into wholesale energy markets. To give you MGE's and Midwest TDUs' perspective on these two intertwined aspects of demand response, I will first provide some background on MGE's PSCW-established reliability-based demand response programs. I then describe MISO's integrated approach to demand response compensation and cost allocation; explain why it is well-suited to MISO's region, which is dominated by traditional obligation-to-serve states whose retail regulators support MISO's approach; and why there is no basis to conclude that MISO's integrated approach is unjust and unreasonable, warranting the reforms proposed in the NOPR. I will also explain our concerns with the DR compensation proposal in the NOPR, which would aggravate the cost allocation issue and make it harder to solve.

My ultimate conclusion is that this is not the time to standardize demand response compensation and cost allocation. The Energy Policy Act of 2005 established that “[i]t is the policy of the United States to encourage States to coordinate, on a regional basis, State energy policies to provide reliable and affordable demand response services to the public.”¹ Consistent with Congress' directive, and because retail demand response is of necessity largely in the control of retail regulators, the Commission should allow each region to work with the retail regulators in its footprint to develop programs that work for the region, as MISO has done. Allowing regional experimentation with demand response

¹ Energy Policy Act of 2005, Section 1252(e)(1), 16 U.S.C. § 2642(e)(1); *see also id.*, Section 1252(f), 16 U.S.C. § 2642(f) (stating that it is the policy of the United States to encourage “time-based pricing and other forms of demand response”).

compensation and cost allocation schemes will enable assessment of their efficacy, and will allow regions to develop solutions tailored, so that they do not undermine existing reliability-based demand response programs. In fact, Commission action to prematurely adopt a standardized market design for demand response compensation and cost allocation would likely do more harm than good, and increase resistance from the state regulators whose support and cooperation is essential to any retail demand response effort.

A. MGE's Demand Response Programs

Demand response is not new. As directed by the PSCW, MGE has had its existing demand response programs in place since 1984. These programs are intended to enhance reliability and reduce MGE's power supply costs, and have achieved those purposes.

Approximately 25 MW of MGE's commercial and industrial load is under an interruptible schedule. These customers receive a reduction on their demand charges all year round in exchange for giving MGE the right to interrupt them in specified conditions. MGE has another 25 MW of residential air conditioning load, consisting of some 16,000 residential customers, that is subject to MGE's control with compensation.

Year in and year out, these demand response programs provide value to the retail customers served by MGE. These programs give MGE the flexibility to interrupt 50 MW of load to maintain reliability. They relieve MGE of the obligation to plan resources to serve that load and to carry reserves for that load. In fact, before authorizing any new large electric generating facilities, PSCW requires MGE to demonstrate that the

associated need for supply cannot be met with energy conservation and efficiency.² In addition, under the MISO tariff, MGE can use its existing demand response programs to provide Emergency Demand Response to MISO, which gives MISO greater tools to deal with reliability challenges.

Thus, MGE's ratepayers reap significant value from its existing demand response programs. Other Midwest TDUs have similarly reduced costs through reliability-based demand response programs. These programs, whose effectiveness has been recognized by the Commission Staff,³ should be preserved. The Commission's actions on this NOPR should be guided by Order 719-A's statement that the Commission was not intending to disrupt existing demand response programs.⁴

B. MISO's Demand Response Compensation and Cost Allocation Proposal Makes Sense.

In response to Order 719, MISO worked with its stakeholders and the state regulators in the thirteen states included in the MISO footprint, to develop a wholesale-market-based retail demand response compensation and cost allocation program that worked for its region.

² Wis. Stat. § 1.12(4)(a); Wis. Admin. Code PSC § 111.53(d)(1).

³ The 2007 FERC Staff Assessment of Demand Response and Advanced Metering (at 7) found load reductions in demand bidding programs of only 4-19% of enrolled demand response resources, and FERC's 2007 report distinguished between "economic" (demand bidding) DR (which is not as effective, *i.e.*, <20% response rate) and "reliability-based" DR (which has a much higher response rate—62% and 83% in the programs reported in the 2007 Staff Assessment). Available at <http://www.ferc.gov/legal/staff-reports/09-07-demand-response.pdf>.

⁴ Order No. 719-A, P 67 ("The intent of the Final Rule is not to interfere with, undermine, or change existing demand response programs. Nothing in the Final Rule would require a state or local regulator to take any action or prevent them from: (1) preserving existing aggregation programs, in whatever fashion is appropriate for its jurisdictional area; or (2) authorizing retail customers, via an ARC, to participate in wholesale markets.").

The MISO proposal compensates retail demand response sold into wholesale energy markets at LMP minus the Marginal Foregone Retail Rate (“MFRR”). Under this compensation scheme, the demand responder receives the LMP price signal in two parts: (1) the savings from avoiding the marginal retail purchase price; plus (2) the difference between the LMP and the marginal retail purchase price. Combining these two elements, the retail demand responder “sees the actual LMP,” enabling it to make economically efficient consumption decisions. Financially, this approach treats the retail demand responder as effectively purchasing from the LSE the retail service right it is reselling to the RTO as demand response.

This demand response compensation scheme fits together well with MISO’s proposed allocation of the costs to the host LSE of the demand responder. It is fair to LSEs (the wholesale transmission customer that FERC needs to protect from unjust and unreasonable rates), because the LSE is in the same financial position as if it had sold energy to the DR customer which turned around to resell it to the RTO. The LSE and its retail rate regulator still have to address the billing determinant mismatch through retail rate design and cost allocation (since MISO will treat the LSE as having purchased more MWhs of energy than the LSE’s retail meters show its retail customers consumed). However, the LSE is not underwriting demand response of other LSEs or the retail demand response approach of other state regulators, and it is not providing duplicative compensation to the retail customer that has chosen to sell its demand response into the wholesale energy market. It thus facilitates the ability of regulators and LSEs to accommodate and preserve existing demand response programs.

C. There is No Basis to Override Programs that Fail to Pay Demand Responders the “Full LMP,” Plus their Avoided Retail Purchase Savings.

As comments filed in this proceeding show, there is no basis to conclude that a compensation scheme like MISO’s, that fails to pay retail demand responders the full LMP for energy on top of their avoided retail purchase savings, is unjust and unreasonable.

The NOPR has been strongly opposed as unjustified on economic grounds. While I’m not an economist, I noticed that not only does the FTC think that the two-part compensation approach (like that proposed by MISO) is economically sound, so do other economists that FERC has relied upon, for example, Bill Hogan, PJM’s market monitor, and MISO’s market monitor. Just a few years ago, in *PJM Industrial Customer Coalition v. PJM Interconnection, L.L.C.*, 121 FERC ¶ 61,315 (2007), the Commission itself reached the opposite conclusion to the one that it relies upon as justification for its proposed rule. There, the Commission characterized full-LMP compensation for sales of demand response resources as including a system subsidy for these resources, declined to permanently maintain such a subsidy, and held that elimination of the subsidy does *not* make rates unjust and unreasonable.

The NOPR’s compensation proposal seems to be at cross purposes to Congress’ policy of encouraging price responsive demand through direct exposure to dynamic prices reflecting the LMP, *e.g.*, through smart meters.⁵ The excessive, LMP-plus compensation received by retail demand responders under the NOPR’s proposal would

⁵ See Energy Policy Act of 2005, Section 1252(f), 16 U.S.C. § 2642(f).

certainly be preferred by those demand responders—particularly if they can also enjoy the protection of average embedded-cost retail rates should they decide in any given hour that they do not want to drop load. And dynamic pricing for retail customers will only *increase* the dollar value of the LMP-plus compensation a demand responder could receive, and the missing money to be allocated, under the Commission’s proposal. Why bother with time-based or other forms of dynamic pricing, along with the smart meters to implement such pricing, if this Commission adopts a compensation scheme premised on the assumption that exposing retail customers to the LMP is not enough to induce efficient behavior and which reinforces that assumption, so that it becomes a self-fulfilling prophecy?

Further, given the Commission’s limited role with respect to retail demand response, it makes sense to allow RTOs to work cooperatively with state regulators to develop a demand response compensation and cost allocation program that meets the needs of states in the region, as MISO has done. As Order 719 correctly recognizes, it is up to the relevant electric retail regulatory authority (“RERRA”) to decide whether to allow retail customers to bid their demand response into organized wholesale markets.

For example, in response to Orders 719 and 719-A, the PSCW has temporarily barred the transfer of demand response load reductions to MISO generation markets directly by retail customers or by third-party aggregators of retail customers (“ARCs”)⁶

to prevent potential unlawful discrimination and to permit the Commission additional time to gather more information regarding ARCs, ARC compensation and the tariff

⁶ Order Temporarily Prohibiting Operation of Aggregators or Retail Customers at 1, PSCW Docket No. 5-UI-116, Investigation to Develop and Analyze Alternative Electric and National Gas Design Options which have the Potential to Reduce Emissions of Greenhouse Gases (Oct. 14, 2009).

provisions of the Midwest Independent Transmission System Operator, Inc. (“MISO”). Temporarily prohibiting ARCs will provide the Commission with an opportunity to analyze the financial implications that ARCs may have for Wisconsin ratepayers and electric utilities and to investigate the effects that ARCs may have on utility-sponsored demand response programs and utility planning.

After recognizing that ARCs may provide some advantages, the PSCW explained its concerns:⁷

[T]he Commission’s preliminary investigation reveals that customers selling load reductions through ARCs, or acting as ARCs themselves, have the potential for securing electricity at net lower rates than authorized by the Commission. Utilities could also be left with the legal responsibility and the associated costs of providing adequate generating capacity for customers which are reselling such capacity into the wholesale market through an ARC. Such outcomes could impose additional costs on other ratepayers and could be discriminatory.

As also noted by the PSCW, MISO’s proposal has not yet been approved by FERC.

Adoption by this Commission of a demand response compensation rule that prohibits the solution MISO worked out with its state regulators, and which was supported by the Organization of MISO States (“OMS”), is more likely to create new barriers to demand response than eliminate them. For example, the NOPR’s proposal to over-compensate retail customers for demand response would exacerbate the discrimination concerns identified by the PSCW.

The NOPR’s proposal to effectively pay DR more than the LMP, creates a much more difficult cost allocation issue than MISO’s proposal. For one thing, the NOPR’s “LMP-plus-savings” compensation results in a much bigger amount of “missing money”

⁷ *Id.* at 3-4.

than MISO's approach. In addition, the NOPR's proposal to over-pay for demand response as an inducement to get retail customers to forego consumption to reduce regional LMP does not mesh, from a cost causation/benefits perspective, with assigning the resulting significant costs to the host LSE, as MISO's proposed method does.

But more broadly allocating the missing money creates its own set of problems. Uplift would require MGE ratepayers, for example, to pay for 100% of MGE's state-mandated demand response programs, *plus* a share of the demand response of LSEs that may not have such robust reliability-based DR programs. By financially punishing LSEs with strong existing retail demand response programs, it thus runs contrary to Order 719's stated intent not to interfere with existing DR programs. It will also create friction in a multi-state region where the retail regulators in different states may have adopted differing retail demand response policies. In addition, broader allocation, where LSEs loads are not reconstituted for settlement purposes, leaves LSEs exposed to deviation charges (in MISO, Revenue Sufficiency Guarantee charges) for real time deviations.⁸

Broader cost allocation assumes the region-wide LMP is reduced by demand response, an assumption that depends on constraints. It matters where the retail customers providing demand response are physically located. Energy price is local, which is why you don't have the same LMP across the entire MISO footprint. You have local constraints, local congestion, and LMP differentiation. It doesn't make sense in terms of cost allocation to require RTO-wide socialization and uplift for retail demand

⁸ Elimination of deviation charges for real time reductions when MISO calls for an emergency, as required by Order 719, would likely cover only a subset of the demand response usage.

response sold into wholesale energy markets, when we don't socialize and uplift for energy from bricks and mortar generators.

If, in the alternative, the uplift of the missing money were limited only to the loads at nodes where the LMP changed as a result of the demand response resource, would the RTO have to run a complete parallel, hypothetical model to identify the prices that would have existed in the absence of the demand response energy? And would the costs of implementing that complicated system of shadow market models far outweigh any potential system benefits from demand response sales into energy markets?

As some of the comments submitted in this proceeding illustrate, efforts to accommodate a broader cost allocation may well involve a full redesign of the whole market algorithm and settlement scheme, potentially including how the LMP itself is calculated. All this effort will be very expensive, increase complexity, and potentially create new gaming opportunities, even beyond the vexing verification issues inherent in certifying retail demand response as a wholesale resource. The prospect of redesigning the settlement system to charge LSEs throughout the MISO region at a level *above* the actual LMP, in order to recover the LMP-plus compensation provided to the demand responders, is hardly a positive advertisement for the consumer benefit gained by this approach.

Adding a net benefits test might make the beneficiaries-based cost causation proposal more superficially plausible, but won't solve the underlining problems I've identified above. And it will add even more complexity.

These concerns demonstrate that standardization of demand response compensation and cost allocation is not warranted at this time. Even if the Commission

leaves it to each RTO to sort out the very difficult market redesign implementation problems, a Commission directive to standardize demand response compensation and cost allocation amounts to a new “SMD” in a context where there is a strong imperative to allow regional variation to accommodate the retail regulators whose consent is a necessary ingredient to making demand response work.

One size does not fit all. MISO’s approach works in the Midwest, where the states are predominantly traditional obligation-to-serve states. A different approach may be appropriate in regions where the retail regulatory context is different. Each RTO also has different settlement schemes, and different hardware and software, that may be more or less adaptable to different approaches.

Fundamentally, it is much too early to cut off regional experimentation and to standardize a single “right answer” to the hotly debated tangle of issues surrounding the compensation/cost allocation for sales of retail demand response into wholesale energy markets. Contrary to the NOPR’s suggestion, PJM’s experience does not demonstrate a failure of the MISO approach to compensation. As the report of PJM’s IMM makes clear, “[t]he evidence does not support the claim that the removal of the [PJM demand response] incentive program resulted in a reduction of activity in the [PJM demand response program],”⁹ since other unrelated factors—including a tightening of the demand response verification process and lower average PJM price levels due to the economic downturn—may have been responsible for the change.

⁹ Monitoring Analytics, Barriers to Demand Side Response in PJM 22, Docket No. RM07-19-000 (July 1, 2009) (“Market Monitor Report”), *available at* eLibrary Accession No. 20090701-5305; *see also* Demand Response Compensation in Organized Wholesale Energy Markets, 75 Fed. Reg. 15,362, 15,370 & n.6 (proposed Mar. 29, 2010), FERC Stats. & Regs. ¶ 32,656, at 33,998 & n.6 (2010) (Moeller, Comm’r concurring in part and dissenting in part), *supplemented*, 75 Fed. Reg. 47,499 (proposed Aug. 6, 2010),

The Commission should not assume that MISO's OMS-supported approach is inadequate before it is even tried. Experience with a variety of programs in different RTOs should provide data that plainly do not exist today to assess the effectiveness of various approaches, support more rational policy judgments by this Commission, and bring along the retail regulators whose cooperation is critical to the success of DR programs.

Again, I appreciate the opportunity to address these important issues and look forward to your questions.