

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Demand Response Compensation in Organized)
Wholesale Energy Markets) Docket No. RM10-17-000

**JOINT POST-TECHNICAL CONFERENCE COMMENTS
OF Demand Response and Smart Grid Coalition**

On March 18, 2010, the Federal Energy Regulatory Commission ("Commission") issued a Notice of Proposed Rulemaking ("NOPR") to adopt an approach for compensating demand response resources (DR) in order to improve the competitiveness of organized wholesale energy markets and to ensure just and reasonable wholesale rates.¹ On August 2, 2010, the Commission issued a Supplemental Notice of Proposed Rulemaking and Notice of Technical Conference² ("SNOPR") seeking comment on whether the Commission should adopt requirements related to two issues addressed in the comments: (1) if the Commission were to adopt a net benefits test for determining when to compensate demand response providers, what, if any, requirements should apply to the methods for determining net benefits (net benefits test); and (2) what, if any, requirements should apply to how the costs of demand response are allocated (Cost Allocation). On August 27, 2010, the Commission issued a Supplemental Notice of Technical Conference and Notice of Comment Date ("Supplemental Notice"). In its

¹ *Demand Response Compensation in Organized Wholesale Energy Markets*, 130 FERC ¶ 61,213 (2010).

² 132 FERC ¶ 61,094 (2010).

Supplemental Notice, the Commission allowed for Post-Technical Conference Comments to be filed on or before October 13, 2010.

At this time, the Demand Response and Smart Grid Coalition (DRSG) respectfully submits comments on the issues that the Commission is seeking to resolve in this Docket. We do so in support of a final rule that adopts full locational marginal pricing ("LMP") compensation for demand response in all hours. We also oppose the net benefits test as redundant with least cost dispatch and for other reasons explained below.

I. INTRODUCTION

DRSG is the trade association for the demand response and smart grid industry. It includes among its members companies that provide DR products and services into wholesale markets. It also includes, however, companies from other parts of the demand response industry that view the imminent ruling by FERC as not just a surgical ruling on one small aspect of demand response but as an action that is important to the future of all demand response and smart grid. A list of members of DRSG may be found at www.drsgcoalition.org.

In the decade that DRSG has been an active observer and voice in the development of demand response, at both the retail and wholesale levels, two important trends stand out. First, there has been a steady increase in the quantity of demand response resources made available as well as the number of end customers and third parties providing such. Second, DR has increasingly been accepted as a resource that can qualify for other markets in addition to that for capacity. These two trends are both founded on the same conclusion—that demand response has proven itself. Contrary to some of the earlier criticisms of it, DR has demonstrated that it will quickly and reliably

“show up” and that it can be counted on as if it were a generation resource. This represents an important breakthrough, in both real and conceptual terms, not only for demand response but also for the pursuit of an electricity system that is more optimized in the way it is planned and operated. DR’s development has been key to understanding of the smart grid and the many benefits that it can unleash. This view of the current stage of demand response is the foundation and context in which this rulemaking should be completed.

DRSG believes that the Commission initiated this NOPR with the correct approach, i.e. a rebuttable presumption that full LMP compensation for demand response service is the correct approach for all RTOs, and that LMP compensation should include all hours of all days throughout the year.

As the Commission has previously recognized, the LMP of energy (which by definition is the marginally-priced unit plus congestion plus losses that is necessary to service the marginal demand on the grid) is the clearing price for energy in the day-ahead and real-time energy markets. It is thus appropriate that in this proceeding that the Commission acknowledge that demand response resources should be treated comparably to generation resources whenever possible in wholesale markets subject to the Commission's jurisdiction. DRSG believes that the concept of "comparability," required by Orders 719 and 719-A, and dating back to Order 888, means that demand response resources should be compensated at full LMP. DRSG believes that the comments of regulatory economist Dr. Alfred E. Kahn in this proceeding also support full LMP compensation. Kahn states that "the costs saved by curtailments in demand clearly will be LMP—including the marginal costs of generation. So, in the end the LMP

inducement is clearly the correct one."³ Dr. Kahn has also testified that "demand response (DR) is in all essential respects economically equivalent to supply response; and that economic efficiency requires, as the NOPR recognizes, that it should be rewarded with the same LMP that clears the market."⁴ Dr. Kahn has also stated in this proceeding that "all resources—energy saved equivalently to energy supplied—the two blades of a pair of scissors in the familiar metaphor—that bid lower than the LMP should receive the same market-clearing LMP in remuneration."⁵

DRSG subscribes to the concept that demand response resources should be compensated at full LMP only if they provide sufficient offsetting value to customers whose cost of electricity is impacted by wholesale energy markets. But there are two key variables that are necessary to consider—first, what is the Commission's understanding of what constitutes "value" and, second, over what timeframe should the value determination occur.

DRSG believes that interval (hourly) evaluation is not necessary. DRSG urges the Commission to adopt a sufficiently lengthy evaluation period to allow the full value of demand response to be available as evidence that full LMP compensation is appropriate in all hours.

DRSG also urges the Commission to adopt an approach on the cost allocation issue that will not delay issuance of a Final Rule. Prompt consideration of the remaining issues followed by prompt issuance of a Final Rule is wholly appropriate.

II. COMMENTS

³ Reply Comments of Demand Response Supporters, Attachment A, Kahn Affidavit at 3-4.

⁴ *Id.* at 2.

⁵ *Id.*

A. Net Benefits Test

1. The Commission Does Not Need To Require A "Net Benefits" Test Because Least-Cost Dispatch Serves As A Net Benefits Test.

The Commission does not need to determine how to structure an appropriate "Net Benefits Test." RTO markets already ensure that the goal of such a test is met via competitive auctions, and the Proposed Rule will compensate demand response only when the demand response clears in a competitive auction. To the extent that the Commission desires a "test" to ensure that value is being delivered to the market as a result of DR participation, the Proposed Rule actually has a built-in "benefits test," and demand response will indeed displace more costly options.

There is consistency in the Commission's use of the clearing mechanism itself as the benefits test and its approach to marginal cost pricing principles. A demand response offer that does not clear will be rejected by this built-in benefits test. A demand response resource will bid in the market at a certain price and certain quantity, along with supply-side resources, or self-dispatch at certain price levels, along with supply-side resources. Based on its bid, demand response will either be selected, or not be selected. Compensation at full LMP to offers that clear the market will create optimum levels of cost savings and this will happen in all hours.⁶ No additional test is required.⁷

The concerns expressed by some parties in this Proceeding that some additional "test" is necessary to ensure market efficiency is based on an assumption that the cost of demand response might be larger than its beneficial effect on prices—or, at least, that there will be some net costs to customers in some hours. DRSB believes that this scenario is simply not likely to occur in the real world. DR could only impose net costs

⁶ See Comments of Robert A. Weishaar, Jr., ("Weishaar Comments") Technical Conference, Tr. at 44.

⁷ Reply Comments of Demand Response Supporters, Kahn Affidavit at 15.

on customers if two conditions are met: (1) demand response represented a large percentage of the resources that cleared and (2) low demand levels are persistent such that additional demand response would not reduce LMP.

DRSG notes that basic economic principles dictate that the quantity of DR offered will increase as the price increases.⁸ But with considerable costs involved in bringing demand response to market, it is not likely that a great deal of demand response will occur at very low LMPs. DRSG believes that the Commission should allow the RTO markets themselves to implement the benefits test, and that the Commission should refrain from establishing any unnecessary administrative construct that would interfere.

Demand Response Will Not Impose Costs on Consumers

The belief that a "net benefits test" is needed seems to be founded on the assumption that demand response participation, particularly as it grows in RTO markets, will end up costing consumers more than the value being provided. DRSG believes this to be incorrect.

DRSG believes that use of a "net benefits test" would involve weighing the positives and negatives and would permit participation of DR when there is some level of "net benefit." DRSG believes that this test ignores the fact that RTO markets already perform that function (see, IIA, above). It also ignores the evidence produced in this proceeding that demonstrate the significant benefits that demand response provides to consumers and the wholesale energy market.

In Order 719-A, the Commission identified multiple ways in which demand response benefits the wholesale markets—lessening price volatility; aiding system reliability; lowering wholesale prices; reducing potential exercises of market power; and

⁸ *Id.*

increasing competition. The Commission is correct—greater participation by demand response resources will "smooth" system load duration curves, reducing peak load forecasts and increasing the system load factor, which will reduce capacity requirements and contribute to system reliability.

Empirical evidence from RTOs confirms that demand response will produce benefits across a wide range of conditions.⁹ Under high-load, high-price conditions, demand response has produced \$650 million of benefits in the form of reduced prices, with direct payments to demand response of only \$5 million.¹⁰ Also, a study performed by the Brattle Group for the Mid Atlantic Distributed Resources Initiative ("MADRI") indicates that a 3% load reduction in only 5 PJM zones (equating to less than a 1% reduction in total PJM load) benefits non-curtailing customers by as much as \$203 million/year.¹¹ Finally, PJM has noted that the benefits of demand response have exceeded its costs over the course of several years. It has observed that:

In summary, direct administrative costs for the PJM Economic Program were about \$0.50 per MWh of actual load reductions in 2005. It was about \$1 per MWh in 2004, 2003, and 2002. The subsidy costs were about \$13 per MWh of load reductions in 2002, about \$6 per MWh of load reductions in 2003, about \$4 per MWh of load reductions in 2004 and \$28 per MWh in 2005. Thus, total program costs were approximately \$14 per MWh, in 2002, about \$7 per MWh in 2003, about \$5 per MWh in 2004 and about \$29 per MWh of load reductions

⁹ Peterson Comments, Technical Conference, Tr. at 98-99 "If you have a lot of DR participating, I don't think anyone here disagrees that energy prices on average will be lower. Energy prices will not be as volatile. You will not have spikes in prices because you won't have spike in demand. The demand will drop off the system as prices go up. So you end up with prices that fluctuate between 50 dollars and 100 dollars all year long, rather than prices that fluctuate between 50 dollars and occasionally 150 or 200 dollars or 500 dollars. It's the dampening effect that Demand Response would have. It's a disciplining effect on other bids in the marketplace, and if they can't recover infra-marginal rents in the energy market, they're going to have to raise the capacity bids in the capacity market, and some generation won't clear. So we will attrition the generation fleet, because we don't need all of these generation resources that run half the time; we could use two-thirds of them and run them two-thirds of the time. That, I think, is one of the big benefits of including robust Demand Response participation in the markets."

¹⁰ Demand Response in Wholesale Markets, FERC Docket No. AD07-11-009; Testimony of PJM witness Andrew Ott, April 23, 2007.

¹¹ Quantifying Demand Response Benefits in PJM (The Brattle Group, January 2007).

in 2005. The benefits of the Economic Program when measured as the impact on overall market prices were much larger than the costs. These benefits are a direct function of prevailing market price levels and will thus increase if prices rise compared to 2005 levels or decrease if prices decrease compared to 2005 levels. The evaluation of the benefits associated with overall market price reductions must consider that these benefits do not necessarily represent an increase in market efficiency but represent a transfer from generation to load, in the short term. Whether this results in a lower overall market cost in the long run remains to be seen. Regardless, the potential benefits of increasing demand side responsiveness in improved efficiency of the market are large and certainly exceed the relatively small program costs by a wide margin. These benefit calculations do not include any calculation of reliability benefits of the demand side programs. It was not necessary to make such a calculation to demonstrate that there are substantial net benefits to the Economic Program.¹²

From a conceptual standpoint, it must be acknowledged that DR cannot increase the total cost to society of satisfying fixed, inelastic load. In order to clear in an RTO auction, a demand resource must necessarily displace a more costly resource. DR that clears in the competitive auction, regardless of the hour, is less costly than some alternative resource offered for that same hour. Only if there is a perfectly flat part of the cost curve would this not be the case.

DRSG strongly believes that total societal welfare—measured by the cost of satisfying load—will never be diminished by paying the competitively chosen demand resource the clearing price in any hour in which it clears. As long as LMP clears in a competitive auction, the costs associated with satisfying load will always be the same as or lower than when DR is not included. DRSG contends that LMP for DR in all hours can only make society better off. It will not make it worse off. DRSG believes that is the most compelling fact in this proceeding—that paying competitively-cleared demand resources LMP can only decrease the cost of serving load and cannot increase it.

¹² "Assessment of PJM Load Response Programs, Report to FERC" (2005).

2. Demand Response Savings Should Not Be Viewed On an Interval or "Snapshot" Basis

Should the Commission decide that a "test" is needed to ensure net benefits, the Commission should not seek or try to view benefits at any one particular time and view such as representative. DRSG insists that the proper way to evaluate the true savings of demand response is over some duration of time, in addition to taking such view in the aggregate.

DRSG agrees that every single interval observation may not reveal benefits to the market as from DR participation. However, when viewed in an overall sense, the "benefit" provided by demand response is definitively net positive. In addition, it bears noting that even a "snapshot" view will rarely produce "net benefits" in the negative. Should the Commission implement some form of net benefits test, it must consider whether the high amount of net benefit gains that occur during peak load hours should be spread across those hours in which the net benefits may be slightly negative. For example, if \$5 million in Demand Response payments produces \$650 million in avoided costs for customers during a single week, the \$645 million in net benefits should be credited to Demand Response providers, and offset any slight negative net benefits that occur in other hours.¹³

Any netting should occur not only within an hourly interval but across all hours, such that the net benefits that are created during certain peak load hours are made available to offset any slightly negative net benefits during certain off-peak hours. To not do this would be to not provide full credit to Demand Response resources and would result in sub-optimal delivery of demand response benefits.¹⁴

¹³ Weishaar Testimony at Tr. 46.

¹⁴ Id. at 47.

IV. CONCLUSION

WHEREFORE, the Demand Response and Smart Grid Coalition respectfully requests that the Commission consider these Comments and, in a Final Rule, adopt regulations requiring the payment of market-clearing prices in all hours and across all regions for demand response in organized wholesale energy markets, and not adopt a net benefits test.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that I have this day served, via first-class mail, electronic transmission, or hand-delivery the foregoing upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 13th day of October, 2010.

/s/ Vananh Le

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