

**FERC Conference on Competition in Wholesale Markets
Panel 1: Demand Response in Organized Markets**

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Comments of David Meade
Associate Director, Energy Strategy and Policy, Praxair, Inc.
Chairman, Technical Committee, ELCON

Thank you for this opportunity to provide industrial perspectives on demand response and wholesale competition.

Praxair is the largest producer of industrial gases in North America, and our manufacturing processes are highly electricity-intensive. We are a member of ELCON - the Electricity Consumers Resource Council - a national association of industrial electricity users.

The states where we and industrial consumers are located represent the full range of electric industry restructuring, from highly regulated traditional monopoly states to established RTO footprints where generation has been fully divested. ELCON members represent hundreds of facilities and over \$10 billion of electricity spend.

Given their size and operational flexibility, many industrial customers have ample capabilities to effectively provide significant levels of Demand Response. Effective integration of Demand Response is instrumental to operating the power system as reliably and economically as possible.

Demand Response is also the most environmentally friendly way to balance supply and demand in the markets. It actually results in a *reduction* in greenhouse gases emissions. Further, since the generation displaced by Demand Response typically consists of the most inefficient units, Demand Response has the added benefit of improving the overall efficiency of deployed generation.

Demand Response Opportunities / Barriers

Now when it comes to effective integration of Demand Response, there has been a diversity of experiences across the U.S., and many opportunities for improvement and the removal of barriers. Regarding barriers to Demand Response, I have organized these into three categories: Access, Compensation, and Uncertainties.

1) Access. Demand Response should have all the opportunities of generation to provide energy, capacity, and ancillary services.

In certain areas, Demand Response has access to providing only some of these services. In other areas, Demand Response has been hindered by the objections of market participants, administrators or regulators who are concerned about the effects of increased competition or are uncomfortable with the notion that customer demand response could be compensated at the same level as an unregulated generator. Stakeholder processes do not generally help the Demand Response cause, as these are weighted with load interests representing a minority of votes.

In one RTO, development of Demand Response has been talked about for a long time and is mentioned in the market tariff. But in reality, Demand Response there has not been effectively integrated or compensated. More recently, efforts to advance Demand Response here have been compromised by implementation hurdles that as a practical matter will not lead to increased demand response.

2) Compensation. Demand Response should be encouraged and fairly compensated for the significant reliability and economic value it provides.

Guaranteed minimum prices and event durations can be helpful in increasing Demand Response participation, particularly as these minimums are constituted in certain demand and emergency procedures.

There should be *no* generation offsets for Demand Response participation. A load that reduces its demand should be paid just as a generator is paid for providing supply. This capability is currently at risk of being lost in an eastern RTO where it currently exists.

Another form of Demand Response encouragement – in conjunction with fair compensation - is ease of use. RTOs that fairly and accurately automate the integration of Demand Response – from CBL determination to settlement – have an advantage over those who require ongoing and tedious user involvement.

3) Uncertainties. Regulatory uncertainty is a disincentive to participation.

Industry restructuring began in earnest over a decade ago. Nothing is settled, and Demand Response remains a work in progress. Corporate energy managers will not fully buy into speculative offerings that may not exist in the next budget cycle.

There are also uncertainties as to whether RTO Demand Response activities are prohibited by state rules – a battle that some customers have had to engage. Such uncertainty around potential federal/state regulatory conflicts ought to be removed, and all qualified loads should be fully eligible to serve as a Demand Response resource to the RTOs/ISOs. At a minimum, the RTO tariffs ought to make it clear that Demand Response is absolutely and fully encouraged at the federal level.

Uncertainties (cont'd)

Another uncertainty comes back to the abilities of local utilities to have undue influence as to whether customer demand response activities are allowable or legitimate. Associated RTO dispute resolution procedures may take many months to resolve, and the result is another uncertainty and barrier to demand response participation.

Combining Demand Response together with DSM would introduce more uncertainty, as it would include it in a much broader menu of energy efficiency services and subsidies. This creates regulatory confusion and delay, and distracts from the focused application of demand response for its significant value to reliability and economic efficiency.

These barriers to Demand Response – in the areas of Access, Compensation, and Uncertainties - need to be removed, and Demand Response needs to be fully integrated into the wholesale markets to achieve real supply/demand balance. Otherwise, we only have half a market, and half a market is not a real market.

What Actions should FERC take to promote Demand Response?

1. Direct the development of a full complement of North American business practices and standards to support Demand Response as a resource. These would include full and unencumbered compensation, automatic and undiluted determination of current base lines from which to measure demand response, and automatic settlement under RTO auspices. It is encouraging that NAESB is starting to consider Demand Response.
2. Integrate Demand Response into ISO/RTO market price clearing mechanisms.
3. Incorporate Demand Response standards and practices into the RTO market tariffs to assure permanency.
4. Require technology-neutrality and eliminate any bias that favors generation and transmission solutions for problems that can be solved with Demand Response.
5. Direct NERC to eliminate intended or unintended barriers to Demand Response in its existing FERC-approved Reliability Standards and to apply the principle of technology-neutrality in all applicable new or revised Reliability Standards.
6. Keep in mind that:
 - While Demand Response has great value in competitive “Day Two” wholesale electric markets, it also has value in regulated “Day One” markets as well. Demand response will bring reliability and economic benefits in any context.
 - Establishing Demand Response as an important feature of competitive wholesale markets needs to be done in tandem with solving other problems in the organized markets. ELCON lists seven necessary pre-conditions* for establishing true competition – as communicated at the last FERC conference on the subject - and Demand Response is *one* of the pre-conditions for real competition.

Footnote

*The seven necessary conditions for truly competitive markets are identified in the ELCON publication “Today’s Organized Markets – A Step towards Competition or an Exercise in Re-Regulation.”. These conditions are:

- Prices must be established through an interaction of supply and demand.
- New capacity must be “incented” through market forces – not administrative re-regulation.
- Market entry and exit should be determined by market forces.
- Consumers must be able to hedge future prices with long-term bilateral contracts.
- There must be an adequate transmission infrastructure.
- Market power must be mitigated.
- Finally, and in conjunction with all the above conditions necessary for competitive markets being met, wholesale price caps and bid mitigation measures may be relaxed

Further discussion of these conditions for true competition is available at:
<http://www.elcon.org/Documents/Publications/12-4piom.pdf>