

**FERC Technical Conference on Demand Response and Advanced Metering**  
January 25, 2006

Comments of David Meade  
Praxair, Inc. – Manager, Structured Power  
ELCON – Chairman, Technical Committee

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

***Praxair, ELCON and Electricity***

Praxair is a member of ELCON - the Electricity Consumers Resource Council - a national association of industrial electricity users. Praxair itself is a large producer of industrial gases. Industrial gases are used to improve efficiency, quality, productivity, and environmental compliance in a wide variety of industries.

To manufacture our products, we process over a billion cubic feet of air per day. There are significant energy costs associated with the large motors and compressors used to handle this volume of air. Our prime mover is electricity, and we spend hundreds of millions of dollars per year for it.

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. Our portfolio of suppliers includes investor-owned utilities, municipal systems, cooperatives, and state and federal power systems. And we are one of many ELCON members, who in total represent hundreds of facilities and over \$10 billion of electricity spend.

***Positive Operating Characteristics***

Some **positive attributes** of large industrial operations can include:

- Facilities operate at **high power demand levels** – often many MW in size.
- Constant Usage Profile – Facilities often operate at high load factors; some are 24/7 operations.
- Members can often **shift load** from more to less expensive hours, e.g. nights and weekends. In some cases, production can be adjusted in **real time**.
- Some operations can **curtail** their operations and power usage for a period of time, often quickly and upon short notice.

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

### ***Demand Response Opportunities***

Now when it comes to effective integration of Demand Response, there has been a diversity of experiences across the U.S. As such, there are three themes I would like to briefly touch upon:

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

In various geographies, Demand Response may be allowed to provide one but not the other. Demand Response is an accessible, efficient, reliable and environmentally friendly resource. It should be encouraged, not discouraged or ignored. In some regulated jurisdictions, utilities decline to even consider Demand Response, despite the benefits it would bring. In other areas, development of Demand Response has been hindered by the objections of generators who wish to restrict competition and maximize their own revenues and by marketers who wish to serve as intermediaries in facilitating end-use activities..

In many of the organized markets and RTO regions, **further development of Demand Response has generally been given lower priority** than the establishment of new markets and new constructs that favor supply-side interests. For example, proposals to modify or replace capacity structures preceded filings to bring Demand Response up to par with generation in the provision of ancillary services. In another RTO, further development of Demand Response has not been able to get any priority of late, notwithstanding the directions of the stakeholder process.

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

Encouragement can come in a variety of ways. **Guaranteed minimum prices and event durations can be helpful** in increasing Demand Response participation, particularly as these minimums are constituted in certain demand or emergency procedures. For example, Demand Response may be subject to the same limitations on equipment cycling that pertain to larger generation resources, thus warranting a minimum downtime when an interruption is called.

**There should be no generation or transmission offsets** for Demand Response participation in energy markets, and further, Demand Response integration into energy markets ought to be developed where it does not yet exist.

Another form of encouragement 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, in some cases even demanding that customers prepare and render invoices.

**Establishing permanency to Demand Response opportunities –by incorporating Demand Response provisions into the same tariff provisions that apply to generation** - would remove a layer of uncertainty that would enhance long-term participation.

Meanwhile, **existing interruptible arrangements and opportunities should not be discontinued**, compromised, or sunset – as some would like to see. These existing opportunities should be part of an overall portfolio of Demand Response capabilities available to bring reliability and economic benefits to the power system.

In all instances, **the full value of Demand Response generated by load should go to load**, with value not unduly hijacked by monopoly suppliers or intermediaries.

### **3) All qualified load should be eligible to participate.**

Inappropriate barriers to entry should be eliminated. Last year, certain customer interests had to fight against claims that their participation in PJM Demand Response activities was prohibited by state rules. This particular instance was effectively resolved without the need for a Commission order, but such **uncertainty around potential federal/state regulatory conflicts ought to be removed in all regions.**

Those utilities in non-RTO / non-ISO regions that decline to offer Demand Response opportunities to customers that otherwise do not have any ought to be encouraged to tap the Demand Response resource.

Further, **just because a load is already interruptible due to some other arrangement should not disqualify it from further participation** in other appropriate Demand Response venues.

### ***Some Progress***

Finally, we would like to recognize that – notwithstanding the current challenges and opportunities – the positive demand response strides which have been made in some of the RTOs / ISOs. Industrial consumers appreciate that. For instance, ISO-New England provides reliability and energy market opportunities for Demand Response as well as overall ease of use. For ancillary services, ERCOT effectively enables the Demand Response capabilities of many electricity users to qualify and participate as LAAR, or Load acting as a Resource. And PJM has made strides in its recent filing to further institutionalize Demand Response opportunities as part of their tariff and enable load to participate in the Synchronized Reserve market.

Given such positive, small steps, we would hope for continued and accelerated progress so that the substantial reliability and economic benefits of Demand Response may be realized – regardless of the state of restructuring in any given area.