

**Presentation of Dr. Eric Woychik
To the
FEDERAL ENERGY REGULATORY COMMISSION
Demand Response in Wholesale Markets
Docket No. AD07-11-000**

23 April 2007

Chairman Kelliher and Commissioners thank you for the opportunity to appear before you today. I have 30 years of experience in the industry and represent Comverge, Inc., which has over 6,000 MWs of DR equipment in place and holds over 350 MW of long-term dispatchable, fully outsourced DR contracts. I will address the 5 questions presented to this panel.

First, current transmission planning processes generally do not consider DR as an alternative or compliment to transmission upgrades. Though transmission planning by utilities and ISOs has improved, DR has obvious applications, based on the business case, to address specific locational constraints and to reduce the need for costly *must-run* generation. This is just starting to be done in some places in the U.S, such as California. But in the main, current transmission planning processes are not sufficient.

Second, the resource planning process should consider all options – DR, energy efficiency, generation, including distributed generation, and transmission – and fully address locational resource adequacy. Planning and cost-effectiveness should, thus, include the following:

- The avoided costs of generation, transmission, redispatch, and distribution when DR is added;
- The market price reduction and market power mitigation benefits of DR;
- The reduced emissions (NO_x, SO_x, and CO₂) and the use of environmental dispatch with DR (such as during temperature inversions).

In the planning process, the most straightforward metric is to use costs per kW-year, to represent the capacity costs of each alternative, which enables apples-to-apples comparisons. This recognizes the option value of DR.

Regarding the third question, major advantages with DR are that it can be installed and made operational very quickly, much faster than comparable transmission capacity, provides incremental benefits immediately, and it has no siting impacts or negative environmental impacts. Certainly DR avoids not-in-my-backyard or NIMBY concerns. DR provides for direct transmission deferral, which Comverge provides for Rocky Mountain Power (at the Wasatch Front) and ISO New England (in Western Connecticut). In addition, dispatchable DR can be used flexibly, to address congestion, as each customer enrolled can be separately addressed and activated. Moreover, DR provides more MWs at the times when transmission delivery capacity is less, during peak demands. Thus, when DR is used with transmission it can reduce the risks of outages or

congestion, such as when unanticipated loads or generation shortfalls materialize, which planning cannot anticipate. DR is unique in providing multiple benefit streams. That is, DR can displace the need for generation + transmission + distribution + provide environmental mitigation, and hedging for reliability, for fuel risk (as it uses no fuel), and for market price spikes.

Fourth, wholesale market design and ratemaking can encourage DR, especially through use of Real-Time-Pricing and Time-of-Use pricing. Real-Time-Pricing can use wholesale ISO market prices that are passed through to customers, such as in the ComEd WattSpot program. To distinguish from most current TOU programs, we emphasize that for Time-of-Use pricing to be effective it must use large price differentials like those in the Gulf Power Time of Use DR program. Comverge is very involved in both the ComEd and Gulf Power initiatives. We also suggest that Time-of-Use and innovative time-based demand charges should be applied to transmission, based on marginal cost principles, to enhance the economics of transmission use and of DR.

And fifth, it seems appropriate to use an incentive rate-of-return to encourage long-term DR contracts, and to allow DR equipment and installation to be rate-based, as is done for transmission. Long-term DR contracts provide for certainty of load relief. Fully outsourced DR contracts shift all of the risks of customer acquisition, operations, implementation, and equipment warranty away from customers. Fully outsourced DR contracts, thus, should be encouraged through use of incentive ratemaking, not unlike the Commission's current incentive rate-of-return now used to encourage participation in RTOs and ISOs.

I look forward to any questions and to the dialog on this topic.