ENERGYCONNECT, INC.
TURNING ENERGY INTO CASH

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What is Demand?

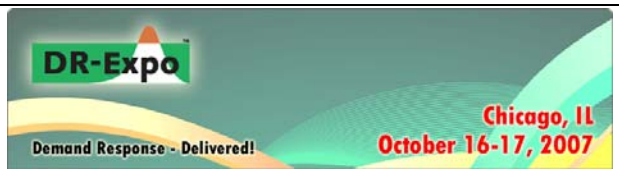
The concept of electricity demand has changed dramatically with restructuring of the electricity markets, which leads to confusion among industry professionals. Demand, in the older definition, referred to monthly peak customer energy use and the associated monthly "demand charge". In the context of the newer demand response products, demand refers to customer energy use at a particular time independent of the old monthly demand charges.

For decades, integrated electric utilities billed both energy and demand charges for commercial and industrial facilities. Electrical energy, both in the past as well as today, refer to the amount of energy consumption measured in kilowatt hours (kWh). In the older world, demand refers to the rate of energy consumption measured in kilowatts (kW). A common analogy is with transportation, where we distinguish between miles per hour or the rate of travel, and miles driven or the amount of travel. Thus, the rate of demand of 100 kW for a period of 8 hours is an amount of energy consumption of 800 kWh.

Demand is measured in intervals, typically over 15 minutes. However, demand intervals may be five minutes, 30 minutes and 60 minutes. For billing purposes, the highest or maximum demand for any such period over the month becomes the basis for calculating the demand charges.

In the older regulated utility environment the demand charge was designed to assess a customer for its share of a utility's fixed investment in production, transmission and distribution equipment. The more electricity consumed during any given time, the large the utility's investment must be in capacity. A problem with the older demand charges was that there was no direct incentive for the customer to reduce energy use at the time of the utility peak, as the customer was generally charged for their monthly peak, as opposed to their contribution to the utility's annual system peak.

Competitive retail commodity pricing plans generally no longer include a monthly customer demand charge, as capital generation costs are embedded in the energy charge.



Save the Date: Demand Response Expo

Plan on attending the first event focused on how building automation systems facilitate implementation of demand response. EnergyConnect is a sponsor.

- Business topics include: baselines, performance, settlement, billing
- Technology topics include: demand response standards, solutions, best practices
- For more details visit: www.dr-expo.com

Modern demand response products provide economic incentives to businesses to reduce energy use when electric market prices are high and/or to increase the reliability of the electric grid. This is a very different concept than reducing the monthly customer demand charges.

Hourly electric market prices are extremely volatile on a daily basis, and electric commodity suppliers add this price risk into fixed price commodity contracts. Through demand response participation, businesses have a means to recover the embedded price risk cost which are embedded in their power contracts, as well as assist in achieving corporate sustainability objectives.

Additionally, electricity commodity prices include costs for the electric grid to provide a safety, or reserve margin, in order to reliably provide electricity in the event of unforeseen circumstances. Through select demand response products, businesses can be paid to provide reliability services to the electric grid.

Demand response solutions of EnergyConnect focus both on assisting businesses recover the price risk and reliability costs embedded in fixed price electricity contracts. Feel free to further explore these concepts and opportunities with your EnergyConnect account representative.

Facts Connect

Region	Peak Day Ahead Wholesale Electricity Prices ($/MWh)		
	August	July	June
Mid-Atlantic	$289	$209	$185
Metro Chicago	$161	$142	$114

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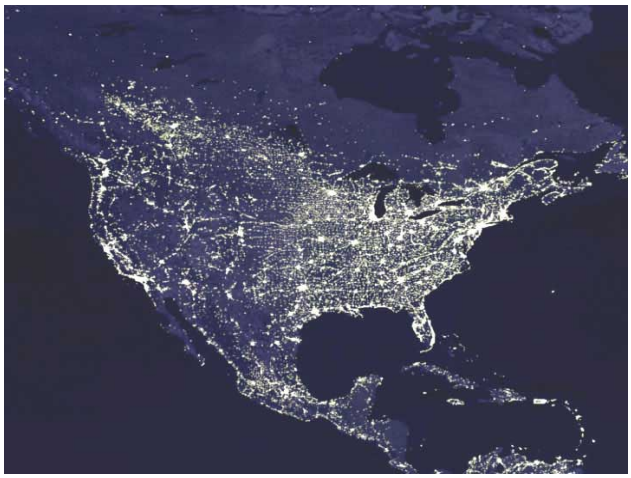
Demand Response Holds Great Market Potential

Significant market potential remains to be captured nationally through demand response. An estimated 47,000 megawatts (MW) of peaking capacity could be avoided nationally through demand response, according to a May 2007 study by the Brattle Group.

The estimate of 47,000 MW is based on reduction on several assumptions, including:

- 5% reduction in peak demand in the U.S. or about 38,000 MW
- Another 5,600 MW in reduced reserve margins for generators on the power grid
- Another 3,400 MW in reduced line losses from the generators to the end-use customer facilities

The benefit of demand response is that it is based on the fact that electric system peak loads typically occur for only about 80 to 100 hours per year. This is about 1% of all the hours in the year, when peak generators must be on line. Thus load reductions for peak hours are only needed a few hours per day for a few days per year.



Yet load reductions for 1% of the hours in a year can account for 8 to 12 percent of maximum or peak demand. In California, it is 11%. In the Midwest and Northeast states that form the PJM power grid, load reductions during the top 1% of the hours can reduce peak demand by 16%.

The prospects for demand response are promising and in fact necessary. According to the North American Electric Reliability Council (NERC), peak demand for electricity will grow by 19% over the next decade. However, current capacity commitments are expected to increase by only 6%. (See EnergyConnect News of November 2006). Thus, demand response may be a key to closing the gap.

The study focused on dynamic pricing as primary strategy for demand response. Under dynamic pricing, participants are rewarded for reducing peak demands based on prices in the electricity markets.

Various techniques can be deployed to reduce peak loads. The study suggests that a 5% reduction can be made by commercial facilities with no extra investment in control technologies. By applying easy-to-use enabling, the reduction can double to 10% reduction in peak loads under demand response pricing programs. If the enabling technologies are automatically tied to price signals, there can be a 13% reduction in peak demand.

Similarly for industrial facilities, the range of low to higher technologies can result in peak demand reductions of from 7% to 13%.

However, not all facilities will choose to participate. It is estimated that commercial facilities will on average achieve a 3% savings in peak demand and industrial facilities a 4% reduction. Nationally, an average reduction of 5% is achieved when residential customers are included that have even greater potential. The study calculates the savings at about $3 billion per year.

To learn more about the study, go to www.brattle.com.

Demand Response Sets New Record for PJM

PJM reports that 1,945 megawatts (MW) of consumer use of electricity were voluntarily reduced on Wednesday, August 8. It was the same day PJM ordered voltage reductions in its Mid-Atlantic Region. According to Andrew L. Ott, PJM Vice President: "Participating customers responded to price signals in the wholesale electricity markets and to system needs. We continue working with state regulators and stakeholders to make demand response a larger resource to draw on."

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