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## Energy Use in Buildings Enabling Technologies

### Title

A Major Step Forward for Implementation of Demand Response Programs in California

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***A Major Step Forward for Implementation of Demand Response Programs in California***

Sacramento, CA –August 11, 2006- A state-funded research and development project designed to facilitate wide-scale implementation of demand response (DR) programs in California reached a major milestone today. During a field demonstration workshop held at the California Energy Commission, the Demand Response Business Network (DRBizNet) project's capabilities and potential were demonstrated. The project has designed an integrated infrastructure for DR that could dramatically enhance the security of California's electrical infrastructure.

DR is a powerful strategy to help mitigate heat storms, control peak load, and keep adequate safety margins on the electric grid. But DR is different from energy efficiency in that it is "time dependent," meaning that it is called on when needed. An effective DR program would allow California's grid operator to reduce electricity load from a number of participating customers instead of resorting to cutting power to entire neighborhoods. Millions of California customers are willing to respond to an emergency episode by voluntarily reducing their electrical demand if offered financial incentives. Currently, the processes to manage DR programs – from upfront customer enrollment to real-time communications, to the final financial settlements – have been cumbersome. Additionally, the signal from the grid operator currently must go through multiple channels and multiple hands – some automated – some not. All these processes have hindered the potential effectiveness of demand response programs statewide.

This demonstration proved the feasibility of the DRBizNet project, an enabling technology that allows efficient real-time collaboration among DR stakeholders (i.e., electric utilities, grid operator). Signals from the grid operator to curtail load could be transmitted flawlessly and instantaneously to millions of participating customers and the grid operator could receive confirmation of load reduction in real-time via DRBizNet. In addition, the DRBizNet project provides a reference design and framework for California utilities to better manage and optimize their internal business processes, such as customer enrollment, meter management, and settlement processing. The project has an ambitious goal to reduce the costs and increase the capabilities of DR business transactions a hundred times – reducing costs by an order of magnitude and increasing speed and functionality by similar magnitude. Through these improvements, the Energy Commission hopes to provide more demand response in California to help mitigate future power emergency events, and to automate customer response through enabling technology and interoperable secure systems.

The workshop held in Sacramento today provided a live demonstration of several DR stakeholders collaborating in real-time through DRBizNet to implement

DR. The stakeholders that participated in the demonstration included California Independent System Operator (CAISO), Pacific Gas & Electric Company (PG&E), Southern California Edison Company (SCE), San Diego Gas & Electric Company (SDG&E), DR service provider Infotility, and a few representative commercial and residential customers.

DRBizNet is a Demand Response Enabling Technology Development (DR ETD) project managed by the California Institute for Energy & Environment (CIEE) on behalf of the Energy Commission through funding from the Public Interest Energy Research (PIER) program. The project is conducted by a team of consultants led by Utility Integration Solutions, Inc. (UISOL) including Dynamic Networks, Menlo Energy Economics, Michigan Group, Nexant, Savvion, and TIBCO.

Gaymond Yee, the DR ETD project manager at CIEE said, "The DRBizNet research project was started two years ago with the goal of designing and developing an integrated infrastructure for DR in California that is 10 times more functional at one-tenth the cost of what can be achieved from currently available DR systems. The three California independent operating utilities (IOUs) have actively participated in the DRBizNet project, including today's field demonstration. Their participation has been encouraging and indicates the ambitious efficiency and cost-effectiveness goals of DRBizNet is tangible and if widely adopted, it can be of great benefit to the people of California"

Ali Vojdani, the CEO of UISOL, who is leading a consortium of companies engaged in the project said, "DRBizNet is a solution for managing the demand-side of electricity far better than it has been possible up to now. And that is important given the increasing demand for electricity, increasing fuel prices, and environmental concerns such as global warming. "

Jim McIntosh, Director of Grid Operations at CA ISO said, "Demand response programs are needed now and in the future to manage our summer peak loads. We need a larger safety margin to protect the economy, safety of our citizens, and to manage the grid reliably. This summer has produced record loads and we have used the DR programs to avoid rotating outages. We need a larger DR program to effectively manage the contingency events that affect the California Grid."

Steve De Backer, Senior Program Manager, of PG&E said, "The most innovative aspect of DRBizNet is its communications model. This model allows parties like the CAISO, utilities, and customers to communicate demand response information in near real-time using advanced computer technologies."

Mark Martinez, project manager at SCE said, "Demand response is an important resource along with our other demand and supply side options – we see enabling technologies as a means of providing our customers with the ability to make informed program choices and to help reduce their energy costs."

For further information about DRBizNet project visit [www.DRBizNet.org](http://www.DRBizNet.org) or contact Ali Vojdani of UISOL at 925-939-0449 or at [avojdani@uisol.com](mailto:avojdani@uisol.com).

### **About CIEE**

The California Institute for Energy & Environment is an innovative [University of California](#) partnership of energy agencies, utilities, building industry, non-profits, and research entities designed to advance energy efficiency science and technology for the benefit of California and other energy consumers and the environment. CIEE is a branch of the [University of California Energy Institute](#).

### **About UISOL**

Utility Integration Solutions, Inc. (UISOL) is a boutique systems integration consultancy focused on the improvement of utility industry business processes and performance. UISOL helps utilities improve their business processes and workflow by implementing integration solutions, including business process management, workflow, enterprise applications integration, business-to-business integration, and the utility industry common information model. UISOL can be found at [www.uisol.com](http://www.uisol.com).