

**NEWS RELEASE**

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Contact: Stephanie McCorkle  
Director of Communications  
1 (888) 516-NEWS

## **eGrid Technologies Help Achieve Environmental Goals** *California ISO Releases Renewables Report, Opens Demand Response Laboratory*

(Folsom, CA) There is a new gold rush in California, only it's green. New environmental regulations are spurring innovative technologies including renewable power and "people powered" changes in electricity usage. These new resources are not without their challenges. How they are integrated into the California power grid is key to "keeping the lights on." As part of its efforts to prepare for the new paradigm, the California Independent System Operator Corporation (California ISO) released its Final Integration of Renewable Resources Report today on the same day it opened the doors of its new demand response lab.

The report, available at [www.caiso.com](http://www.caiso.com), examines some of the challenges associated with integrating the wave of renewable power expected to come on line in the next few years. New requirements mean utilities will soon buy 20 percent of the power to serve their customers from green resources. The ISO report spells out the feasibility of blending some 4,000 megawatts of new wind and solar power into the resource mix that feeds into the California power grid, bringing the total renewable resources in California to more than 13,000 megawatts. The report provides recommendations that call for advanced wind turbines, better wind forecasting tools, more energy storage capabilities and additional standby power.

"The American Wind Energy Association (AWEA) applauds the ISO's efforts in advancing an understanding of wind integration issues. The ISO has a long history of studying wind integration issues and adapting power system operating practices to assure reliability, while gaining the benefits of increased wind power at a minimal cost," said AWEA's Policy Director Rob Gramlich.

The report also finds that pairing electricity-reducing programs, known as "demand resources," with renewable power helps offset the swings in output produced by green, clean resources that are

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dependant on Mother Nature. Dips in electricity production can occur when there is little wind or cloud cover appears.

Pairing another environmentally friendly resource—demand response (taking megawatts off the grid)—with renewable power will help the ISO maintain grid reliability. Demand reduction is just as effective, and often less expensive, than adding megawatts onto the grid and it doesn't add a single pollutant. Additionally, demand response can be triggered quickly to compensate for the variable output of renewable resources. When dispatched by the California ISO, new eGrid technologies will allow the utilities and other companies to signal customers and/or their equipment directly to respond to supply and demand on the grid.

“Demand response will be a powerful tool for meeting the environmental challenges ahead,” said California ISO President and CEO Yakout Mansour. “It is not necessarily about using less electricity, but rather using it in a smart way. The demand response laboratory demonstrates ‘set and forget’ automation technology that helps consumers, large and small, make predefined changes to their electricity usage that will reduce the strain on the grid, while reducing the strain on costs.”

The lab is called **DR365** because the ISO's vision is that demand response programs will be viable year-round, not just during peak periods.

“We are showcasing technologies that will allow aggregated blocks of what we call ‘negawatts’ to bid into electricity markets just like conventional power plants,” said California ISO CIO Steve Berberich. “People are paid for power they don't use and this includes commercial as well as residential customers. It is good for the grid, good for lowering costs and good for the environment.”

Advanced metering and data retrieval systems are needed by the utilities to tap resources such as home appliances and office equipment—turning them on and off to reduce demand. Radio frequencies are one of the ways to “talk” with electronic devices such as programmable communicating thermostats. This technology and more is on display inside the ISO's new demand response lab.

The California ISO is a not-for-profit public benefit corporation charged with managing the flow of electricity along California's open-market wholesale power grid. The mission of the California ISO is to safeguard the reliable delivery of electricity, and ensure equal access to 25,000 circuit miles of “electron highway.” As the impartial operator of the wholesale power grid in the state, the California ISO conducts a small portion of the bulk power markets. These markets are used to allocate space on the transmission lines, maintain operating reserves and match supply with demand in real time.

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