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**INDUSTRIAL SEGMENT EDITION** 



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# New Renewable Energy Projects Help SCE Meet Power Demands

ontinuing its support for California's aggressive environmental policies, Southern California Edison (SCE) is completing construction of a solargeneration project that will add clean, renewable energy into the electric system, helping to build a smarter, cleaner, more efficient grid for the future.

Consisting of 33,000 solar panels on a commercial rooftop in Fontana, the project is the first phase of a massive installation that will be constructed atop 150 roofs throughout Southern California. Power generated from the rooftops will feed directly into the nearest SCE distribution circuits, also strengthening grid reliability in the Inland Empire and meeting the energy needs of the nation's fastest-growing urban area.

When completed, this will rank as the largest solar-generation project in the world, capable of generating under peak conditions 2 megawatts (MW) of power, and providing a critical boost to the summer peak power needs of Southern California.

### Renewable Energy Procurement

In August, SCE signed a 20-year contract to provide up to 909 MW of wind power from North-Central Oregon and will commence operations between 2011 and 2012. This project will require no additional or upgraded transmission lines, enhancing its benefits.

SCE leads the nation in renewable power delivery, procuring about 12.5 billion kilowatt-hours of renewables in 2007, more than any U.S. utility. Currently, SCE serves nearly 16% of its customers' needs with renewable power, and continues to work toward meeting the California renewable portfolio standard requiring that it produce at least 20% of its electricity supply from renewable sources by 2010. SCE's focus on cost-effective renewables and cutting-edge upgrades will contribute to a grid that operates smarter, cleaner and more efficiently.

To learn more about SCE's renewable energy initiatives, log onto **www.sce.com/PowerandEnvironment/Renewables**.

#### CONTINUED FROM FRONT

# Supply-Demand: Looking Back

As SCE looks ahead to procuring more renewable energy to meet customers' energy needs as cleanly and efficiently as possible, it looks back on a relatively mild summer in which it reached its peak demand (22,020 MW) in June. (SCE's all-time system peak of 23,303 MW occurred on Aug. 31, 2007.)

Despite a summer that did not see major heat storms, SCE still tapped into some of its demand response interruptible programs to meet power needs when transmission or distribution issues occurred that impacted the power delivery grid.

Even though this summer provided some temperature relief, that does not mean next summer will do the same. Contact your account representative to discuss 2009 energy efficiency and demand response programs that can enable you to help keep the electrical system "whole" and save energy and money, especially given anticipated rate increases in the first quarter of 2009. For more information on all of SCE's programs to assist you in improving your bottom line, visit **www.sce.com/RebatesandSavings/LargeBusiness/**.

## Put Your Energy Into Holiday Savings

Here are some simple tips to help you celebrate the holiday season more efficiently and safely:

#### **Efficiency Tips:**

- Select more efficient LED (light-emitting diode) or miniature lights, or use lower-watt bulbs as replacements for standard strings.
- Set holiday lights on a timer so they do not stay on longer than needed.
- Replace standard lighting with compact fluorescent bulbs, halogen lamps and high-intensity discharge lights (HIDs) for year-round savings.

#### Safety Tips:

- Only use UL (Underwriters Laboratories Inc.)-approved lighting and cords.
- Do not insert nails or tacks through any electrical cords, and replace damaged, brittle or frayed cords.
- Keep electrical connectors off the ground and away from moisture.
- Never use lighted candles on trees or decorations.
- Keep holiday lights away from carpeting, furniture, drapes or other combustible materials.

For more information on energy efficiency and safety, visit **www.sce.com**.

#### Express Efficiency Program Update for 2009

Thinking of participating in the Express Efficiency Program in 2009? Once you have decided which qualified energyefficient equipment you wish to purchase and you are ready to participate, you must begin by reserving your rebate. Ask your account representative for details, and visit **www.sce.com/express** for updates.

# INDUSTRIAL SEGMENT FOCUS

# JPL Explores the Universe and Pioneers Energy Management at Home

**Note to readers:** SCE's energy efficiency programs continue to be among the most successful in the nation. As SCE reaches the close of the current three-year funding cycle, many rebate programs are now fully subscribed and funds have been exhausted. Please talk to your account representative about planning for program participation in 2009.

For most companies, "launch window" is a figure of speech about timing a product release or starting a service. For Pasadena's legendary Jet Propulsion Laboratory, which builds and operates robotic spacecraft for the National Aeronautics and Space Administration, it's as real as physics. When an opportunity to make a great leap emerges, JPL seizes the moment.

That same approach works as well on the ground at JPL as it does in space. JPL's energy team members are proving that even with extraordinary energy applications, constantly changing program needs and no second chances, they can seize the moment and achieve dramatic energy savings right now



Matthew W. Berbée, energy manager at the California Institute of Technology, which manages the Jet Propulsion Laboratory, said of JPL's highly successful initiatives to save energy, "Energy management awareness, industry partnerships and proactive utility involvement are key to success in this arena."

in day-to-day operations. To their roster of historic achievements – *Explorer, Mariner, Voyager, Galileo and the Mars Rovers* – add the Best Overall Winner in California's annual Flex Your Power Awards, accomplished with JPL's launch of energy management programs and incentives from SCE.

#### Aggressive Steps to Savings

Matthew W. Berbée, energy manager at the California Institute of Technology, which manages JPL, helps oversee energy programs for JPL's 172-acre, 5,000-person campus. Federal law requires government facilities to achieve annual energy reductions of 3% per year, totaling 30% by 2015, and meet stringent goals for environmental stewardship.

JPL participates in SCE's Industrial Energy Efficiency Program (IEEP), which helps industrial customers find process/system-based ways to save energy. IEEP assisted JPL with a comprehensive analysis of compressed air systems and process HVAC systems, all of which have turned into actual energy-saving measures. "We're aggressively using every energy management measure offered by SCE," Berbée said, "from new building design to retrofitting and re-equipping."

He continued, "We won the Flex Your Power Award for completing a range of IEEP measures, including installing variable speed drives on air handlers and cooling tower fans, variable speed turbo core chillers and water pumping equipment, premium efficiency motors, T5 high-bay and third-generation 25-watt T8 lighting... the list goes on, because we're committing to new initiatives all the time. And the hardware and equipment upgrades we make permit us to save even more with demand response programs such as SCE's Demand Bidding Program."

# A Pioneering Partnership to Save

"Many of these projects were extremely complex, and they were undertaken as we had some ambitious research initiatives underway," Berbée said. "JPL has worked closely with SCE, its engineering staff and third-party vendors to integrate these changes smoothly into our ongoing work. All these complicated efforts can run in parallel without interference."

And the efforts have paid off. In fiscal year 2007, JPL's completed energy projects from SCE programs resulted in 3.14 million kilowatt-hours (kWh) in savings. In fiscal year 2008, that number rose to more than 7.5 million kWh. In fiscal year 2007, JPL also participated in SCE's Technical Assistance and Technology Incentive Program to identify additional connected demand response-capable hardware, and increased its biddable load curtailment by .5 megawatts (MW), up to 2 MW.

Berbée said that JPL's successful energy program techniques, processes and applications are readily applicable for other NASA centers across the country and local facilities alike.

He explained, "JPL will continue to pioneer energy management at home and strive for success of even larger magnitudes. It will take a team effort to accomplish the aggressive goals the agency is faced with regarding energy management and sustainability. Energy management awareness, industry partnerships and proactive utility involvement are keys to success in this arena. JPL will continue to show how 'Conservation is Everyone's Business' by way of the projects it conducts, its support to mission and the examples it sets to the community."