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California Air Resources Board

Clean Energy Newsletter

www.arb.ca.gov/climatechange

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California is Bringing Clean Solar Power Online

There's new gold in California and this time the rush is to convert the sun's rays into clean energy. Drawing on the sun's energy will help California meet its goal of one third of its energy from renewable sources, and position the Golden State as a world leader in solar power and clean technology.

The California Energy Commission (CEC) and Public Utilities Commission (PUC) are moving quickly to support this goal, too. In September, the CEC approved a 1,000 megawatt project in Blythe, Riverside County, following its approval in August of the Beacon Solar Energy Project in Kern County, the first solar thermal power plant permitted in California in 20 years. CEC is also slated to review seven other large thermal solar projects – using the sun's energy to heat water or other substances to create energy – before the end of the year. If all are approved, more than 4,300 megawatts of solar power will be brought online, replacing the need to build natural gas power plants to supply this electricity.

Included are some of the largest solar thermal projects in the country: an 850 megawatt project in San Bernardino, and a 709 megawatt project in the Imperial Valley. CEC estimates that all these large solar projects will provide 8,000 construction jobs, and another 1,000 long-term jobs to run them once they're built.

The PUC recently adopted the Solar Energy Program, authorizing the San Diego Gas and Electric Company to build 26 megawatts of utility-owned generation and enter into contracts for 74 megawatts of power with independent producers. In early September, the PUC also approved nine grants totaling $14.6 million to fund proposals submitted to the California Solar Initiative's Research, Development and Demonstration Program. That program focuses on improving photovoltaic technologies and solar-industry business practices. Grant recipients have matching funds of over $13 million.

Besides providing new green jobs, these large solar projects are also increasing the state's energy independence and helping to insulate California's economy from the shock of volatile fossil fuel prices. Over the past decade prices of natural gas used to generate electricity has reached levels double or even triple that of current gas costs on three separate occasions.

Catering to a Sustainable Crowd

In this caterer's kitchen, creating a feast does not have to be environmentally messy. Savory & Sweet's President, Leanne Pomellitto, has been working to make her company 'green' while also helping clients become more environmentally-friendly. Since the business opened in 1993, Savory & Sweet Catering has implemented a few key strategies to help reduce their carbon footprint.

Savory & Sweet makes it a point to drive less, conserve energy, save water, recycle, use environmentally preferable products, reduce food waste, reduce paper usage and encourage climate-friendly practices. In 2008, Savory & Sweet underwent energy, pollution prevention, water conservation and waste audits.

See Catering, page 3

Sustainable Cork from Bark to Bottle

Lafitte Cork & Capsule, Napa, CA

"We understand that sustainability is an attitude and ever evolving. Every employee at Lafitte USA has contributed to our green initiative and as a team we will continue to improve," said Ali Capanksy, Quality Assurance Coordinator.

SMALL BUSINESS award CoolCalifornia.org

Lafitte Cork & Capsule received a 2009 Small Business Award

Lafitte Cork & Capsule in Napa is committed to improving the sustainability of their products as well as their operations. Over the last several years, Lafitte has taken steps to incorporate sustainability into every aspect of the family company through their Green Business Initiative. They installed a 52.4 kilowatt photovoltaic (PV) solar array providing 100% of their electrical needs, replaced all disposable kitchen ware in the staff break room with reusable plates and utensils, and worked with other green businesses and suppliers to create an environmentally preferred purchasing policy.

Aside from installing a PV solar system, Lafitte tinted 2,300 square feet of their windows which cut down on cooling demands, replaced fluorescent lights with T8 lamps, installed low flow toilets and faucets in all restrooms to reduce water usage and implemented a paperless filing system (saving approximately 100,000 pieces of office paper each year). All cork closures produced by Lafitte are 100% natural and biodegradable, generate zero waste during productions, and emit 75% less carbon dioxide (CO2) than synthetic closures or screw caps. Lafitte also encourages employees to bring in their own cell phones, computers, printer cartridges and batteries for recycling.

Lafitte purchases recycled content office supplies from paper to pens. For office documents that require a shredding service, Lafitte chose a company that drives an eco-friendly trucks, provides 100% recycled wood consoles and has a paper recycling program. Lafitte shares their eco-vision with customers and encourages them to become green as well.

Their efforts have paid off. They have reduced their GHG emissions by 107.5 and 2.67 metric tons of CO2 from the solar PV system and paperless electronic filing, respectively. Lafitte is now a certified Bay Area Green Business and was awarded a Cool California Small Business Excellence Award.

For more information, visit:
www.coolcalifornia.org/case-study/lafitte-cork

Bay Area Air District will Provide $5 Million for Electric Vehicle Infrastructure

Electric vehicle charging stations will be installed across the Bay Area region with the assistance of $5 million dollars in grant money offered by the Bay Area Air Quality Management District. Bay Area consumers mentioned that a lack of charging stations hindered the selection of electric vehicles because owners were fearful of being stranded without access to a charging station.

More information:
www.baaqmd.gov

ARB Studies Link between Air Pollution and Climate Change

This spring the Air Resources Board took to the sea, the sky and the ground to collect air samples in a unique partnership with the National Oceanic and Atmospheric Administration (NOAA). The study, called CalNex, was commissioned to further research the link between air pollution and climate change.

"Combining resources with NOAA will give California new data to link our clean air and global warming protection efforts," said ARB Chairman Mary D. Nichols. "The scale and sophistication of CalNex represents a milestone in ARB's 40-year history of ground-breaking air pollution research."

The $20 million project used a variety of vehicles to take air samples throughout California's diverse regions. Atmospheric samples were taken by two Twin Otter propeller-powered airplanes, NASA's King Air, and a massive 116-foot Orion WP-3D. The airplanes provided a unique platform for taking air samples that would be nearly impossible to gather without their assistance.

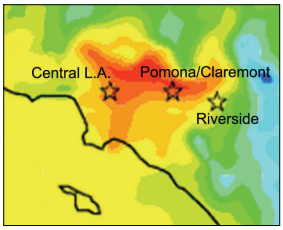
Samples from California's coast were gathered by NOAA's 274-foot research vessel Atlantis. Packed with a crew of 23 scientists, the Atlantis patrolled California's coastline to collect samples that were analyzed in its 3,500 square-foot laboratory. The data collected by Atlantis provided information on the impact of California's busy shipping industry on air quality.

The other samples came from collection sites at CalTech in Pasadena and in Kern County.

For more information, visit:
www.arb.ca.gov/research/calnex2010/calnex2010.htm

Global Climate Change is a Local Threat, Too

New research is revealing how climate change will affect California's smog problem. In a recent ARB-funded study, scientists from the University of California at Davis and Berkeley estimate that rising temperatures will increase the formation of ozone.



LA areas in red might reach ozone levels elevated to 18 parts per million

"We already know that climate change will bring us increased forest fires, shorter winters, hotter summers and impact our water supply," said ARB Chairman Mary Nichols. "Now we have scientific evidence that higher temperatures are hurting our lungs, too. To protect public health, we need to take cost-effective measures to slash greenhouse gases now and continue to ratchet down all sources of smog-forming emissions and harmful soot and particles."

The new study provides evidence of what is known as the 'climate penalty': rising temperatures in cities will multiply the already serious problems of ozone and particulate matter, despite the efforts by ARB and air districts to reduce emissions from cars, trucks and industrial sources.

Depending on the extent of increased temperatures, and assuming pollution in California remained at 1990-2004 levels - California may experience as many as six to 30 more days with ozone levels exceeding federal air standards.

Energy Efficiency Rebates for Customers in the Sacramento Area

The Sacramento Municipal Utility District (SMUD) obtained a $20 million grant that will provide energy efficiency retrofit rebates to more than 15,000 residential customers through March 2012. The grant enables SMUD to launch the Home Performance Program that encourages customers to sign up for energy audits and resulting home retrofits. This will include energy audits that measure the efficiency of insulation, tightness of windows and the efficiency of heating and air systems.

More information:
www.smud.org

CA Local Agencies Rank in the National Clean Energy Top 20

The City of San Diego, San Jose/Santa Clara Water Pollution Control Plant, Marin Energy Authority, Los Angeles World Airports, City of San Francisco, LA County Sanitation Districts all rank in the National Clean Energy Top 20. The National Top 20 list represents the largest green power purchasers among local governments. These purchases amount to more than 2.1 billion kilowatt-hours annually, which is equivalent to the electricity needed to power more than 185,000 average American homes annually.

Rank #9: The City of San Diego is becoming a model city by using renewable energy resources and energy conservation measures. The City has a commitment to produce 50 MW of renewable energy in San Diego within the next decade.

Catering to a Sustainable Crowd (continued from page 1)

Upon completion of these audits they became Sunnyvale's first Green Business certified caterer and recognized annual savings of approximately 12% on fuel costs and 10% on their electrical bills.

As caterers, Savory & Sweet delivers food and equipment to companies and party sites. Reducing their fuel consumption is accomplished by combining deliveries to limit the number of trucks on the road at any one time. To avoid being on the road during peak traffic times, they offer clients alternative pick up times at a reduced cost. When staff is required to work an event, the scheduling department organizes carpools to save on fuel and reduce greenhouse gas (GHG) emissions.

In their offices, Savory & Sweet reduces energy usage by using task lighting wherever possible. As for heating and cooling, they created a schedule of opening the windows and doors to keep the office cool in the summer - based on the position of the sun.

Savory & Sweet uses low flow water restrictors on their high powered kitchen faucets to save water. They also upgraded their hot water heater to a more energy efficient unit, use recycled and post-consumer content products (including compostable dining utensils when requested over reusable utensils), purchase products in bulk with minimal wrapping to reduce waste, recycle all paper and glass, and require vendors to ship using less packaging.

Savory & Sweet has taken catering to a whole new level by offering sustainable services to clients while reducing their own impact on the environment.

California Air Resources Board

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For questions on the information contained in this newsletter, contact: pio@arb.ca.gov

Researchers Use Stimulus Money to Go Green

As part of California and the nation's dedication to creating a state-of-the-art green energy economy, federal stimulus money has been awarded to various programs around the state with the goal of furthering clean energy.

In July the U.S. Department of Energy awarded $92 million for clean energy projects, with $22 million directed to California.

"History has shown that if you fund research and development the right way, it pays back 100 fold," Energy Secretary Steven Chu said. "The idea here is to create jobs and also prepare for America's future prosperity. We're looking at technologies that are shooting for the moon."

Research to improve the life and efficiency of batteries and energy storage is considered to be the "holy grail" of energy research, and four California projects were awarded funds to further this goal: the University of Southern California received $1.5 million, Lawrence Berkeley National Laboratory received $1.6 million, Primus Power in Alameda received $2 million and General Atomics in San Diego received $2 million.

The majority of the funds awarded to California went to smart grid projects designed to improve the efficiency of energy transmission between the grid and the object being powered. Four companies received grants for their smart grid research: Boeing in Huntington Beach received $2.3 million, HRL Laboratories in Malibu received $5 million, Teledyne Scientific & Imaging in Thousand Oaks received $3.4 million and Transphorm Inc. in Goleta received $3 million.

Other funded projects are focused on research into new technologies that will improve the heating and cooling of buildings. Three projects were awarded a total of $1.3 million.

The money comes from the department's ARPA-E program, or Advanced Research Projects Agency-Energy. The federal funding supports forward-thinking energy policy and technology advancements, continuing California's decades-long history of innovation and most energy efficient state in the nation.

More Information: www.energy.gov/9205.htm

The Ombudsman's Corner

Fast Forward

Not everyone knows that electric vehicles are nothing new. In 1910, Thomas Alva Edison, one of America's best-known entrepreneurs/inventors, made a prediction. "In 15 years, more electricity will be sold for electric vehicles than for light," he said. At the time, the electrochemical storage devices known as batteries seemed to represent the future of convenient, horseless transportation.

The discovery of crude oil in Texas and the means of refining it to produce gasoline, a new advance in production technology, the assembly line, and better roads all led to the near-demise of the electric car as a commercially viable vehicle. The internal combustion engine soon became the engine of choice not only for vehicles but for industry as well.

Now, 100 years later, the world-wide concern over finite petroleum resources, public health and climate change have generated efforts to identify more alternative sources of power and the means of using it. Modern entrepreneurs and inventors, governments and educational institutions are all working together to find sustainable and cleaner alternatives to petroleum power. The Air Resources Board, through its Research Division, is active in helping to develop some of these alternatives.

Edison might not recognize our modern streets, highways, and industries, but I imagine he would be at the forefront of our clean technologies. He might help design California's clean, smart transportation systems, our energy efficient buildings, and smart harbors and ports. By 2025, Edison might see a mix of vehicles powered by biofuels, fuel cells, clean diesel, natural gas, and hybrid technologies and the fueling infrastructure to support them. There might be zero-emission trains and smarter highways with built-in traffic control systems. High speed bullet trains might connect major cities and bike stations might offer commuters and visitors a healthy way to travel around compact, well-designed city centers. Traveling around town, Edison might be surprised to see the sun being used to generate electricity, but he would not be surprised by the perseverance of the far sighted and industrious people who made it all a reality. Edison is the one who said, "If we all did the things we are capable of doing, we would literally astound ourselves."

To get added to La Ronda Bowen's (ARB Ombudsman) e-mail list, send your contact information to: Ombudsman@arb.ca.gov

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