



CRES NEWS

Newsletter of the Colorado Renewable Energy Society

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A Chapter of the American Solar Energy Society

MAR./APR. 2010

March Meeting -Topic: Colorado Transmission Update April Meeting - Topic: Colorado Legislative Status

New Cellulosic Ethanol Facilities Near Ready



Poet's pilot plant in Scotland, South Dakota, is able to convert corn cobs into cellulosic ethanol at a rate of 20,000 gallons per year.

A shift in biofuel production to cellulosic biofuels is underway as both demonstration and commercial-scale power plants are opening or moving closer to completion. In the commercial arena, Poet, the largest U.S. producer of ethanol, is planning construction this year of Project Liberty, a cellulosic ethanol plant in Emmetsburg, Iowa, that will use corn cobs from local farms to produce 20 million gallons per year of ethanol. Meanwhile, Abengoa Bioenergy is planning to develop the nation's first commercial-scale hybrid cellulosic ethanol and power plant in Stevens County, Kansas. The \$550 million facility is expected to produce 15 million gallons of ethanol annually using corn stover, wheat straw, and switchgrass as feedstock.

In addition, two demonstration-scale plants have recently started up. Last October, Coskata Inc., a developer of biofuels, announced the launch of their semi-commercial cellulosic ethanol facility located in Madison, Pennsylvania. Coskata's facility will be producing ethanol from numerous feedstocks, including wood biomass, agricultural waste, sustainable energy crops, and construction waste. And on January 29, DuPont Danisco Cellulosic Ethanol LLC (DDCE) and the University of Tennessee/Genera Energy LLC celebrated the grand opening of their first cellulosic ethanol demonstration plant, which converts both agricultural residue and bioenergy crops into ethanol. The facility, located in Vonore, Tennessee, was producing ethanol in mid-January and has the capacity to produce 250,000 gallons of ethanol per year from corn cobs and switchgrass. The company intends to achieve commercial production by 2012.

The March and April meetings of the Colorado Renewable Energy Society will take place at the **Jefferson Unitarian Church** at 14350 W. 32nd Ave. in Golden. (On 32nd Ave. about 1 mile west of the I-70 interchange). **The meetings will begin at 7:00pm** and there will be a reception to follow.

The March meeting will be held on **Thursday, March 25**. The featured speaker will be Morey Wolfson, Transmission Program Manager at the Colorado Governor's Energy Office (GEO). He will summarize the GEO's REDI Report-*Renewable Energy Development Infrastructure: Connecting Colorado's Renewable Resources to the Markets in a Carbon-Constrained Electricity Sector*. Morey has been an active CRES member for several years and a two-term Board member. He has been a renewable energy advocate since organizing Denver's Earth Day in 1970.

The April meeting will be held on **Thursday, April 29**. The featured speaker will be Alice Madden, Climate Change Coordinator for the Colorado Governor, Bill Ritter. She will give us an update on legislative actions relating to renewable energy advancement in Colorado. Alice was a practicing lawyer for nine years before joining the Governor's office. In 2000 she was elected as a State Representative where she was a leader in promoting the Governor's *New Energy Economy*.

CRES Monthly Meeting Accessible via WEBCAST

To access the CRES webcast go to www.cres-energy.org and follow the "webcast instructions" posted there.

Colorado Calendar

This column features dates for meetings and other events relevant to Coloradans interested in renewable energy.

March 25.... Sustainable Industries Economic Forum 2010. Presentations and panel discussions by top professionals in the energy field. *Location:* Westin Tabor Center, 1672 Lawrence St., Denver. For further details visit www.sustainableindustries.com/forums/denver.

March 26... RE Tool: Opportunities in the New Energy Economy - Renewable Transportation Energy. Presented by RASEI, the Renewable and Sustainable Energy Institute. Discussing the rapid growth of renewable energy as a bright spot in our troubled economy. *Location:* University of Colorado, Leeds School of Business, Boulder. *Fee:* \$295. For further details visit www.rasei.colorado.edu.

April 16-18... CAEE's "Teaching Outside the Box" Conference. Presented by the Colorado Alliance for Environmental Education. Offering a friendly and professional environment to share the latest in environmental education. *Location:* Ramada Hotel and Northglenn Recreation Center, Northglenn. For further details visit www.cae.org.

April 21-22... USGBC Rocky Mountain Green Conference. Provides study tracks in LEED & Sustainable Design, Community Collaborations & Innovative Partnerships and more. *Location:* Colorado Convention Center, 700 14th St., Denver. For further detail visit www.usgbccolorado.com.

April 24-25... Aspen Eco Fest. Earth Day event aimed at inspiring people to make their homes, businesses and communities more ecologically advanced and environmentally sound. Features eco-marketplace and eco-swap, roundtable discussions and green tie ball. *Location:* Inn at Aspen, Aspen. For further details visit www.aspenecofest.com.

U.S. OIL DEMAND TAKES MAJOR PLUNGE

U.S. crude oil imports in December fell 13.7%, or 1.286 million barrels a day, from a year earlier, to 8.133 million barrels a day, the lowest level for any month since January 2000, the latest government data show. For all of 2009, import demand averaged 9.06 million barrels a day, down 7.4%, or 723,000 barrels a day, from a year earlier, and the lowest in any year since 1999, the Energy Information Administration said Thursday.

Canada, the U.S.'s largest crude oil supplier since March 2006, supplied 25.2% of crude imports in December, the nation's biggest share of U.S. crude supply since April 1974 and the biggest share of any single supplier since December 1992, when Saudi Arabia accounted for 29% of monthly crude imports. Saudi Arabia, the world's largest oil exporter, accounted for just 10.9% of U.S. crude imports in December 2009. Saudi Arabia's full-year crude flow to the U.S., of 989,000 barrels a day, was the lowest since 1988.

Weak demand for crude oil in December and for all of 2009 came as U.S. oil consumption averaged 19.163 million barrels a day in the last month of 2009. For the full year 2009, revised demand averaged **18.686 million barrels a day**, down 4.2%, or 812,000 barrels a day, below a year ago. Demand was the weakest since 1997 and the drop was the fourth straight, the longest skid since 1979-83, the EIA said. At its peak in 2007, U.S. consumption of crude oil reached **21 million barrels a day**.

Amid weak demand, U.S. crude oil inputs to refineries in December averaged 13.979 million barrels a day, the lowest for the month since 1994, and were 2.6% below a year earlier. For all of 2009, crude runs averaged 14.313 million barrels a day, the lowest level since 1996 and 2.3%, below a year earlier.

This is all good news. The principal reason for the decline is attributed to the drop in miles traveled as a consequence of sky rocketing gasoline prices, a growing trend replacing gas guzzling vehicles with more fuel efficient automobiles, and the advent of hybrid vehicles. If U.S. oil consumption continues to drop at this rate, U.S. dependence on oil will diminish appreciably over the next decade aiding our economy and financial status in the world immensely. In the long run this will be to our great benefit.

Solar Growth To Lead Renewables 2010-2011

Solar will register the greatest increase in usage of all renewable energy technologies from 2010 into 2011, according to the latest US government forecast. It is expected that the use of solar energy in the electric power sector of the United States will grow by 50% from this year into next, according to the latest Short Term Energy Outlook by the Energy Information Administration of the Department of Energy.

Overall, solar energy levels will grow from 0.012 quadrillion Btu (quads) in 2010, to 0.018 quad in 2011. Wind power will grow by 31% by next year in the utility sector, from 0.909 to 1.189 quad. In 1991, that level was 0.031 quads, representing a two-decade increase of 2,830% for wind power.

Utilities will increase their use of hydroelectric power by 4.4% (to 2.589 quads), geothermal by 2.7% (to 0.343), wood by 2.2% (to 0.182) and other renewable energy by 4.2% (to 0.273 quad). The industrial sector will increase its renewable energy level by 1.3% (to 1.453 quads) while the commercial sector will increase by 0.8%.

The residential sector will stay at 0.602 quads of renewable energy consumption, although the transportation sector will increase by 7% due to a significant increase in the consumption of biodiesel.

CRES CORNER

Report on CRES Annual Party & Auction

CRES' Annual Party and Silent Auction took place at the Colorado History Museum on Friday, February 26. It was attended by more than 100 CRES members and their guests. It was a wonderful evening of fun, refreshments and just plain socializing with fellow CRES members and others attending including several leaders of Colorado's New Energy Economy. The silent auction was a huge success netting CRES some \$8,100 in revenue. Thanks to our many donors and volunteers who made this event such a success.

Call for Nominations for CRES Awards- Deadline April 2

These awards will be presented at the 2010 CREC on June 18-20 in Montrose Colorado:

● **Renewable Energy in Buildings...** CRES has presented the Colorado Renewable Energy in Buildings Award since 1999. The winning entries of the buildings awards represent some of the best architecture and low-energy design in Colorado. Below are examples of past year winning entries in the categories of *Institutional and Commercial Buildings*:

- Colorado School of Mines Center for Technology and Learning Media in Golden
- Fossil Ridge High School in Fort Collins
- North Boulder Recreation Center in Boulder
- Snowmass Golf Clubhouse in Snowmass
- Xylinx, Inc. Headquarters in Longmont

Below are examples of *Residential Buildings* that CRES has recognized with the Colorado Renewable Energy in Buildings Award:

- Lister/Shaw Residence in Montrose
- McStain High Plains Environmental Center near Loveland
- Missouri Heights Residence in Carbondale

● **The Larson-Notari Award for Distinguished Service...** Recognizing individuals for distinguished service and exemplary contributions to the field of renewable energy.

● **Volunteer of the Year Award...** Awarded to a CRES member who has volunteered extraordinary amounts of time and effort and made significant contributions to the betterment of CRES and its causes.

For further details visit www.cres-energy.org/about_awards.html.

APRIL 22 Earth Day Special Fundraiser

We urge you to do your shopping on April 22 at the following stores in the Denver West Shopping Center at 14347 West Colfax in Lakewood: **Barnes & Noble, Jamba Juice** (other stores may join as well - see CRES website) A percentage of all sales for the day will be donated to CRES in support of renewable energy. In addition, CRES will receive a percentage of the income received for all purchases made from Barnes & Noble online between April 23 and April 28th.

Special Guest Appearance

Nationally renowned photographer, publisher, teacher, preservationist **John Fielder** will be at Barnes & Noble from 12 noon to 1:00pm.

CRES NEWS

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RENEWABLE ENERGY BRIEFS

New Solar Power System Installed at DIA... A second large-scale solar power system at Denver International Airport (DIA) recently became operational. This new 1.6 MW Sharp solar array powers the airport's fuel-storage and distribution facility.

The photovoltaic system was financed and developed by MP2 Partners and Oak Leaf Partners, constructed by Quanta, and is comprised of approximately 7,400 Sharp solar panels. Now that it is operational, the new solar system provides approximately 100 percent of the fuel farm's electricity consumption.

This newest solar array at Denver International Airport was commissioned following the success of the 2MW Sharp solar power array that was inaugurated in August of 2008. "Sharp is delighted to have once again provided the solar modules for one of the most forward-thinking cities and airports in the country," said Ron Kenedi, vice president of Sharp Solar Energy Solutions Group.

New CSP Initiative Underway... Solar Trust of America is targeting the southwestern U.S. for development and construction of utility-size solar thermal power plants that employ proven, highly efficient and commercially viable solar thermal technology to each generate about 250 megawatts (MW) of electricity. Solar Trust's global business partners include Solar Millennium AG and Ferrostaal AG. Both companies will contribute assets and technical expertise and will become shareholders in the new company.

The company currently has multiple solar thermal power plants in advanced stages of development in the southwestern region of the United States. Solar Trust was created to deliver clean, renewable energy to power America's future and reduce its dependence on fossil fuels and imported energy. Solar Trust embraces U.S. federal and state government policies and initiatives to provide significant infrastructure investments, job creation and supplier opportunities in renewable energy.

ROSTER OF CRES BUSINESS MEMBERS

We thank the following organizations for their continuing support

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| Adobe Solar | Eco Direct | Red Rocks Community College |
| Advanced Energy Systems, LLC | EMC Engineers | Resolution Energy, Inc. |
| All American Rolling Shutters | Energy Environmental Corp. | Sherwood Associates |
| Apex Risk Solutions | Enermodal Engineering | Silvertip Integrated Eng. Consultants |
| Arapahoe Community College | GCG Financial, Inc. | Simple Solar |
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| Denver Museum of Nature & Science | Poudre Valley REA | Western Culture Resource Mgmt., Inc. |
| DMA Engineering | Real Goods Solar | Western Resource Advocates |
| Double D Diversified | | Yes! Solar Inc. |