



CREs NEWS

Newsletter of the Colorado Renewable Energy Society

VOL. 14 • NO. 2

A Chapter of the American Solar Energy Society

MAR./APR. 2009

Topic for March Meeting - **Financing Renewable Energy Today**

Topic for April Meeting - **Update on Concentrated Solar Power**

NREL TESTS BREAKTHROUGH CSP SYSTEM



The big new dish atop South Table Mountain could be a renewable energy breakthrough that helps make concentrated solar power more affordable and appealing to utilities and their customers.

For the next several months, National Renewable Energy Lab (NREL) engineers will be testing the performance of SkyTrough, an innovative parabolic trough that is coated with a gleaming reflective skin instead of mirrored glass. NREL offers testing and performance analysis for advanced solar technologies and other renewable energy designs. The SkyTrough was developed by SkyFuel, an Albuquerque, NM-based manufacturer with a research facility near NREL in Arvada, CO. The technology was unveiled at Solar Power International in October 2008. The unit's lightweight glass-free mirrors are made of sheet metal beneath ReflecTech mirror film.

This highly-reflective, silver-metalized film is lighter and less expensive than the breakable glass mirrors that are traditionally used. The film is a joint invention of NREL and ReflecTech and exclusively licensed from NREL. The glossy laminate is comprised of multiple layers of polymer films with an inner layer of pure silver to provide for a highly reflective surface that also protects the silver layer from oxidation. In commercial use, a SkyTrough could measure as large as 375 feet long and 20 feet high. The test model is smaller, but uses the same technologies.

"It's unlike any parabolic trough design used so far," said NREL senior engineer Keith Gawlik. "Our new facility is designed to test the optical efficiency of the unit, which they can't do on their own at SkyFuel."

Parabolic-trough systems concentrate the sun's energy through long U-shaped mirrors. The mirrors are tilted toward the sun, focusing sunlight on a vacuum pipe that runs down the center of the trough. The tube contains heat-transfer oil that absorbs the focused sunlight and reaches temperatures of 400°C. The hot oil then is used to boil water in a conventional steam generator to produce electricity.

Come to our April Meeting and learn more about CSP

Both 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.**

MARCH MEETING - March 26.

The guest speaker will be Lee White, Executive Vice President for George K Blum & Company. His topic is *Financing Renewable Energy in Today's Capital Markets*. He will explain that finding the right financing for renewable energy projects has always been a challenge. Today's combination of tight financial markets and the need for more utility-scale RE projects, makes the challenge even more significant.

APRIL MEETING - April 23.

The guest speaker will be Dr. Chuck Kutscher, Principal Engineer and Manager of the Thermal Systems Group at NREL, and winner of the Governor's Excellence in Renewable Energy for 2008. His topic is *The Important Role of Concentrating Solar Power (CSP) in Tackling Climate Change*. He will explain how CSP will become a major player in reducing carbon emissions as the technology, policies, and economics improve.

CREs Monthly Meeting Now Accessible via WEBCAST

To attend a meeting via webcast go to www.instantlyglobal.com/cresmeeting1. Please log on in this order prior to start of the meeting:

1. CREs Chapters - **30 minutes**
2. 3+ CREs Membs - **20 min** or later
3. All others - **10 min** or later (until all connections are exhausted-15 max)

Colorado Calendar

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

March 17-19...CORE's 2009 Sustainable Opportunities Summit. Featured speakers: Gov. Bill Ritter and Denver Mayor John Hickenlooper. *Location:* Colorado Convention Center, 700 14th St., Denver. For details visit www.sosummit.org.

March 25-28...Aspen Environment Forum: Powering the Planet - Energy for the Long Run. Topics include climate change, energy extraction and use, energy efficiency, conservation and more. *Location:* Aspen Institute, 1000 N. 3rd Street, Aspen. For details visit www.aspenenvironment.org.

April 3-5... Wine Tasting and Play Fundraiser for CRES - Walden: The Ballad of Thoreau. Times: April 3 & 4, 7:00pm; April 5, 1:00pm. *Location:* Festival Playhouse, 5665 Old Wadsworth Blvd., Arvada. For details visit www.home.comcast.net/~nobleharttheater.

Special CRES Fundraiser* April 22 - 9am - 10pm

Barnes & Noble

14347 W, Colfax Ave., Lakewood

Earth Day Art: Blair Leisure (artist)

Solar Cooking Demo: Patty Roberts and Mary Broberg

Energy Saving Tips: John Avenson

Book Signings: Carol Tombari and Dan Chiras (authors)

Poetry Reading - Steve Stevens

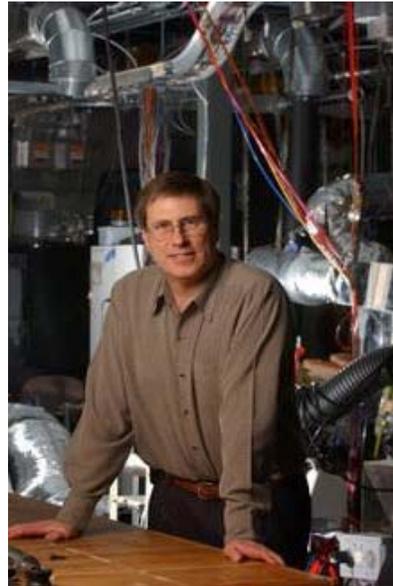
Visit cres-energy.org for more details

Seeding Trees will be given away from 4pm - 6pm - courtesy of Golden Earth Days Council

*A portion of the day's sales will go to CRES

Governor Announces Excellence in RE Awards

Chuck Kutscher, CRES Life member and former Chair of the American Solar Energy Society, has won the Governor's Excellence in Renewable Energy Award for 2008 in the "Individual" category. The West-



ern Resource Advocates in Boulder won the same award in the "Institution" Category.

Kutscher has also been a principal engineer at the National Renewable Energy Laboratory in Golden for 30 years. In the renewable energy field, he has worked on solar cooling technologies, solar industrial process heat, geothermal energy and concentrating solar power.

Western Resource Advocates was recognized for helping Xcel Energy shift away from using coal and focus instead on renewable energy. In 2008, the organization played a major role in convincing the Public Utilities Commission to approve the Xcel's innovative resource plan.

China Firm Introduces Plug-in Hybrid at NAIAS

This year at the 2009 North American International Auto Show in Detroit, BYD, (*Build Your Dreams*) an auto company from China, debuted the F6DM; a dual-mode electric vehicle. Showing off a champagne, four-door DM car, BYD fused electricity and gasoline powered engines. The F6DM is one of the first vehicles that BYD is using with the dual-mode concept. The dual-mode concept is the power for a vehicle to operate with a battery and engine. Having a car that is powered with a DM engine allows the driver to use electricity in short distances and gasoline for long ranges.

Since the F6DM is a cross between a hybrid and an electric automobile, it can become a mainstream vehicle. Although the car is currently being produced and sold in China, it not yet available for purchase outside of the country. However, it is expected to be introduced in the United States in 2010 and retail around \$22,000.

MARK YOUR CALENDAR
Evening, May 2, 2009, 7:00pm



CRES Annual Meeting with Party & Silent Auction

(auction includes solar hot water system)

The Fort Restaurant

19192 Colorado State Hwy 8 - Morrison

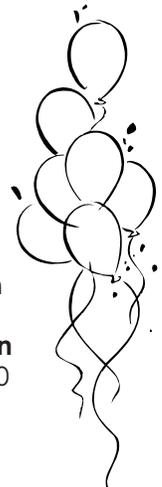
Register by April 20 for \$60 per person

Register any time thereafter for \$75.00

(Includes buffet dinner & auction)



For details and to register visit
www.cres-energy.org



PRESIDENT'S CORNER

The Obama Stimulus Package - An Opportunity for Colorado's Renewable Energy Industries

According to the Washington Post, the recently-passed \$787B Stimulus Package includes \$45.9B under the Energy and Water appropriation. Of this \$18.5B goes for "energy efficiency and renewable energy programs;" \$8B is for "Federal loan guarantees for renewable energy systems and electricity transmission," and \$17.4B for "Other, including modernizing the nation's electricity grid."

Included implicitly within this overall breakdown is funding for renewable energy tax credits and a tax credit for research and development on energy-related work; a multiyear extension of the renewable energy production tax credit; and funding (approximately \$6B) to weatherize modest-income homes. In addition, there is \$9.3B to "expand passenger rail capacity and make grants for high-speed rail projects, including Amtrak." Some of these funds could (and should) be used to develop passenger rail systems that can run on renewably-generated electricity.

Colorado is well-positioned to receive a sizeable portion of these funds, thanks to the New Energy Economy championed by Gov. Bill Ritter and the state legislature. A quick look at our CRES website and that of the Colorado Solar Energy Industries Association will reveal that there are hundreds of renewable energy companies operating in the state. In addition, there are several large international companies with operations here, including Abengoa Solar of Spain, and Vestas Wind Turbines of Denmark.

By the time you read this we will have heard more details about the Obama Administration's energy policy from Senator Gary Hart at our February 26 monthly general meeting. In addition, the CRES Policy Committee has the responsibility of tracking the progress of funding through the Federal system down to the state and local level. Look for additional information on the renewable energy funding through the Stimulus Package in future issues of CRES NEWS and CRES Clips.

Further, it was gratifying to see one of CRES's Business Members, **Namaste Solar**, featured at the stimulus package signing ceremony on February 17. How wonderful it was to see one of our own, company CEO, **Blake Jones**, introduce President Obama to the national television audience. Blake has also written about his experience for the CRES blog.

And if you are not already a CRES member, now would be an opportune time to join up. You can do that at our website (www.cres-energy.org) or at the next membership meeting.

I look forward to seeing you at our future meetings.

Steve Sargent President

Solar Pioneer and Long-time CRES Member Passes On

CRES mourns the passing of CSU Professor, Peace Corps founder, and NCRES member, Maurice Albertson on January 11. Over the six decades that he taught at CSU he was instrumental in developing the university's research, graduate, and international programs. His interest in international affairs led him to be the founder of the CSU International Center. In 1958 he was appointed to be the director of CSURF (Colorado State University Research Foundation) and in that capacity he was a major force in bringing substantial research grant money to the university. In 1961, he directed the feasibility study for the Peace Corps for the U.S. Congress. Donations in his memory can be made to Maurice Alberson Scholarship Fund, c/o CRES, P.O. Box 933, Golden, CO. 80402.

CRES NEWS

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Member Assistance Needed

1. **Barnes and Noble Fundraiser** - April 22 in Lakewood. (*seeking members to assist with the event*) Contact stownsend@wildblue.net.
2. **Silent Auction at Annual Meeting** - May 2 in Morrison. (*seeking help to solicit auction item donations and assist with the auction*). Contact shirleyandpete@estreet.com.
3. **CRES 2009 Building Awards**. (*seeking entries - deadline May 29*). Contact wduecker@chamberlinarchitects.com or visit www.cres-energy.org.
4. **2009 CRES Annual Conference-Clean Energy: Pathways to a Low-Carbon Footprint** - Aug 28-30 in Golden. (**issuing Call for Papers**) For details visit www.cres-energy.org/conference.
5. **2009 Solar Home Tour** - Oct. 3. (*seeking homes for exhibition and committee volunteers*). Contact info@cres-energy.org.

Position Openings

Solar Energy International

Would you like to teach for the Solar Energy International (SEI)? To meet the growing demand for their workshops, SEI is looking for experienced PV installers and designers to join their team of in-person and online PV instructors. Be a part of an 18-year teaching legacy and teach with other experts in the field. As an online instructor, you can work from anywhere with a high-speed internet connection. As an in-person instructor, you get to travel the country and the world with interesting PV experts. Please e-mail your resume and cover letter to Kris Sutton at sei@solarenergy.org.

The Brendle Group, Inc.

The Brendle Group, Inc. seeks a mid-level green building engineer for projects related to sustainable design assistance for commercial and residential customers. The position would include design assistance, energy modeling, and LEED services to new construction and existing buildings. Customer service experience, including strong client communication, project management, and execution on project deliverables, is required. For further details, e-mail your request to info@brendlegroup.com.

ROSTER OF CRES BUSINESS MEMBERS

We thank the following organizations for their continuing support

Adobe Solar	Ecostream USA.	REC Solar
Arapahoe Community College	EMC Engineers	Rocky Mountain GeoExploration
Astralux Environmental Solutions	Enermodal Engineering	SELA - Smart Energy Living Alliance
Balanced Construction	Golden Solar	Shumei International Institute
Black Hills Energy	ICAST	Simply Efficient
Blue Sun Biodiesel	Innovative Energy	Smart Wheels, Inc.
Bright Idea Energy Solutions, LLC	Jefferson Unitarian Church	SolSource, LLC.
Burdick Technologies Unlimited, LLC	Jim Logan Architects P.C.	Solar Energy Quest
CH2M Hill	Kurowski Development Company	Solar TEK Energy of Denver, Inc
Challenge International, Inc.	Kyocera Solar, Inc.	Standard Renewable Energy.
CO Homefinder.com	Low Energy Systems	Starfire Energy, LLC
Colorado Springs Utilities	Metro Solar Inc.	Sustainable Solutions, Inc.
Community Office for Resource Efficiency	Mi Cocina Mexican Restaurant	The Neenan Company
Conundrum Energy	Mountain Muse Communications	Western Cultural Resource Mgmt.
Cool Energy, Inc.	Namaste Solar	Western Resource Advocates
Delta Montrose Rural Electric Assn.		Yes! Solar Inc.