



# CRES NEWS

Newsletter of the Colorado Renewable Energy Society

VOL. 12 • NO. 4

A Chapter of the American Solar Energy Society

APRIL 2007

## Towards a Sustainable Transportation System Featured Topic for April Meeting

### Clean Energy Investment Booming

Sorry—photo unavailable for this document.

#### *Ethanol Production Plant in York, Nebraska*

Venture capital and private equity investment in clean energy companies increased a whopping 167 percent in 2006, according to investment analysts at New Energy Finance Limited. In dollar terms, these investments rose from \$2.7 billion in 2005 to \$7.1 billion in 2006. Investments in biofuel plants in the United States, such as the one shown above, more than quadrupled. In addition, investments in solar energy more than tripled, while wind power investments more than doubled. Investments in other clean energy technologies, including energy efficiency, fuel cells, hydrogen, smart power distribution, and carbon sequestration, grew 74 percent.

Institutional investment in private clean energy companies in North America and Europe are rising quickly, from \$500 million in 2004 to \$1.3 billion in 2005 to \$2.5 billion in 2006 according to Venture Business Research. And even private top energy companies are beginning to invest significant amounts in wind, solar and biofuels. For instance, Royal Dutch Shell has invested \$1 billion over the last five years in clean energy like biofuels for transportation, solar and wind for electricity and hydrogen for both. Chevron decided last year to develop the next generation of ethanol and renewable plant-based diesel fuels from trees and agricultural waste and is now working in partnership with scientists at NREL to pursue these aims. Dupont, Cargill and the National Corn Growers Association are also working with NREL to explore methods of producing ethanol from cellulosic matter.

Further, British business mogul, Sir Richard Branson of the Virgin Group, is investing \$3 billion in renewable energy projects, and private investors are rushing to participate in the "Million Solar Roofs" program enacted into law in California in last August. Without question renewable energy has entered the "big leagues" in U.S. investing circles.

The next meeting of the Colorado Renewable Energy Society will take place at 5:30pm on Wednesday April 25, 2007. It will be held at the NREL Visitor Center located a couple of blocks past the Marriott Hotel in the Denver West office complex. (Take exit 263 from I-70, or turn north at the Marriott sign on Colfax between Simms and Indiana.)

Our featured speaker will be Dr. Frank Kreith, Professor Emeritus, University of Colorado. His topic will be *Towards a Sustainable Transportation System: Technology and Politics*. In his address he will provide insights as to the many problems we are facing in transportation today and in the future, and practical ways to circumvent them. He will also give his views on the technical and political obstacles that must be overcome to provide us with a sustainable transportation system.

Dr. Kreith currently teaches part time in the Department of Mechanical Engineering at the University of Colorado. He was the ASME legislative fellow at the National Conference of State Legislators in Denver for the past 13 years where he provided technical information on energy management, waste disposal, and transportation to legislators in all 50 states.

Before that, Dr. Kreith served for ten years as Chief of Thermal Research and senior research fellow at the Solar Energy Research Institute (now NREL). He has published more than 100 peer-reviewed papers, and authored/edited 15 books on heat transfer, solar energy, bioengineering, transportation, and waste management. He was the founding editor of the ASME Journal of Solar Energy Engineering and is currently editor of the CRC Mechanical Engineering Series.

## COLORADO SNAP SHOTS

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

### CALENDAR OF LOCAL EVENTS

#### April 19 - 20...*Climate Action Days*.

A two-day event being conducted by the Colorado School of Mines (CSM) aimed at educating students and the community about the severity of the climate crisis and to demonstrate technical solutions available today. *Location:* CSM auditorium, 1500 Illinois St, Golden. For further information contact Prof. Thomas McKinnon at 303-273-3098 or visit [www.climateactiondays.mines.edu](http://www.climateactiondays.mines.edu).

#### April 23 - 24...*Renewable Portfolio Standards*.

Presented by Electric Utility Consultants, Inc. Aimed at wholesale and retail electric suppliers. Covers options for RPS compliance and renewable energy certificates (RECs). *Location:* Westin Westminster Hotel, Westminster, CO. For further details call 303-770-8800 or visit [www.euci.com](http://www.euci.com).

#### April 28...*Photovoltaic Installation Training Course*.

Presented by the Colorado Solar Energy Industries Association (CoSEIA). Will emphasize off-grid stand alone and hybrid PV systems. *Instructor:* Larry LeDue, Sustainable Solutions, Inc. *Location:* American Mountaineering Center, 710 10th Ave, Golden. *Fee:* \$125, CoSEIA member; \$150, non-member - before April 25. \$25 additional after April 25. For further details call 303-333-7342 or visit [www.coseia.org](http://www.coseia.org).

**COMING SOON**  
**Mark Your Calendar**

**CREC 2007**  
CREC Annual Conference

**June 7 - 10**

**Steamboat Springs**  
**Grand Resort**

[www.cres-energy.org/  
events/about\\_crec.html](http://www.cres-energy.org/events/about_crec.html)

### CRES TO CELEBRATE *EARTH DAY*

CRES is joining in the celebration of EARTH DAY with two different Colorado institutions. On **April 20**, CRES will host a booth and provide speakers for the Colorado School of Mines' *Earth Day* celebration from 4pm-8pm (1500 Illinois St., Golden). Then on **April 21 and 22**, from 9am-5pm, CRES will host a booth and provide speakers for the *Earth Day* celebration at the Denver Museum of Nature and Science. Join in at either location and help us celebrate *Earth day!*

### Salazar's Introduce RE Legislation

Colorado's own U.S. Senator Ken Salazar and his brother U.S. Representative John Salazar have introduced major bills in the Senate and House respectively to advance renewable energy. Ken teamed with Senator Gordon Smith (R-Oregon) in February to sponsor legislation in the Senate to extend solar energy tax credits through 2016. The bill, which is titled *The America's Energy Independence Act*, would expand the limit of tax credits for homeowners and businesses that invest in solar energy systems. The current tax credits, which are 30% of the investment and which were established under the Energy Policy Act of 2005, are set to expire at the end of 2008.

The second Salazar brother, John, in early March introduced the *Cellulosic Ethanol Development and Implementation Act*. The bill, a companion to legislation in the U.S. Senate sponsored by Barbara Boxer (D-California), has two parts. The first establishes research and development grants worth \$1 billion for producing cellulosic ethanol for motor vehicles. The recipients would provide 20% of the funding for grants. The second part of the bill would set up a pilot program for installing E85 pumps at gasoline stations throughout the country.

For further information on the Senate bill visit [www.seia.org/solarnews.php?id=135](http://www.seia.org/solarnews.php?id=135). For details regarding the House bill visit [www.house.gov/apps/list/press/co03\\_salazar/PR\\_030607.html](http://www.house.gov/apps/list/press/co03_salazar/PR_030607.html).

### Net Metering Bill Passes House

House Bill HB-1169 passed the Colorado House of Representatives on March 22 and was sent on to the Senate which was scheduled to take it up in early April. A **CREC Action Alert** was issued on March 26 urging members to call or write their state senators to support the bill. At press time it is yet unknown whether the bill has come to the floor and has been voted upon.

The bill, which is very important to the adoption and growth of PV systems throughout the state, will establish net metering statewide, and for the first time, include rural electric cooperatives in the requirement. Net metering allows households and other institutions employing PV or other renewable energy systems (such as small wind) to install and interconnect their systems to the grid through existing meters. When the sun shines or the wind blows and the output is greater than consumption on-site, the meter runs backwards and the system owner is credited for the electricity supplied at regular rates.

HB-1169 was sponsored by Judy Solano (D-Brighton) and increases the size of net-metered systems from 25 kilowatts to 2 megawatts. It allows renewable energy electricity generators to carry credits from one month to the next, which greatly increases their value. It also eliminates the ability of cooperatives to opt out of net metering requirements.

Passage of this legislation would be of monumental importance to the adoption of renewable energy systems throughout the state.

**SETTING THE STAGE.. Doug Seiter**

The Month of March brought us springboard events from the local to the federal level. On March 24, more than 1,100 folks convened on a cold, rainy Saturday at the Colorado Convention Center for a full day of legislative and industry updates on the future of renewables in Colorado. Senator Ken Salazar moderated the 2007 Colorado New Energy Summit (cosponsored by CRES), significant not only in its attendance numbers, but also in the broad representation of cosponsors which included United States Senator Wayne Allard; U.S. Representatives Diana DeGette, Mark Udall, Marilyn Musgrave, John Salazar and Ed Perlmutter; Governor Bill Ritter; Denver Mayor John Hickenlooper; Colorado Senate President Joan Fitz-Gerald; Colorado Speaker of the House Andrew Romanoff; and a host of Colorado business and nonprofit organizations. Keynote speaker Robert McFarlane, National Security Advisor to President Ronald Reagan, gave an impassioned speech on the urgency of adopting a national renewable energy strategy. His message: *The solution is within our reach. We have to get busy.*

The recent activities by our new Governor, State Legislature and city government have given us a stage to play out the scenarios much of us have envisioned for decades, putting Colorado in the forefront of progressive energy development. In the last week of March, Governor Ritter signed two milestone bills, HB1281 doubling the renewables goal to 20% by 2020, and SB100 setting in motion the availability of transmission lines to accommodate renewable energy generation. These bills, along with the spirit of hope from our membership and the partnerships of like-minded organizations, are propelling Colorado to center stage in a clean energy future. Check out the details of these bills and thank their sponsors!

Be sure and look for Earth Day events in your neighborhood this month, and join us for the April monthly public meeting that will feature a talk by Dr. Frank Kreith, professor emeritus at the University of Colorado, titled *Towards a Sustainable Transportation System: Technology and Politics*. **See you there!**

**Call for Volunteers and Award Nominations**

CRES has received invitations to exhibit at several events. As always, we depend on volunteers to carry out this task. In addition, the CRES Outreach Committee also needs people to coordinate events, network with other Colorado renewable energy trade organizations at these events, help with the CRES Speakers Bureau, and more. If you are interested, please call CRES Executive Director Sheila Townsend on the CRES phone at 303-806-5317, or send her an email at: [director@cres-energy.org](mailto:director@cres-energy.org)

If you know of a building project that deserves recognition, please consider nominating it for the CRES 2007 Renewable Energy in Buildings Awards. The deadline for submission is May 1. Entry requirements and nomination form are at: [http://cres-energy.org/reba\\_2006.html](http://cres-energy.org/reba_2006.html)

Finally, we need you to nominate your peers for the 2007 Larson-Notari Award to be given at the CRES 2007 Conference this summer in Steamboat Springs. The award recognizes individuals who have made significant contributions to the field of renewable energy, energy efficiency, and sustainable buildings. You may download the nomination form at [http://cres-energy.org/documents/LarsonNotariAwardForm\\_07.pdf](http://cres-energy.org/documents/LarsonNotariAwardForm_07.pdf)

**CRES NEWS**

*CRES NEWS is the official publication of the Colorado Renewable Energy Society. The CRES address is:*

**P.O. Box 933**

**Golden, CO 80402**

The address of the editorial office is:  
**7877 E. Mississippi Ave. Ste 1504**  
**Denver, CO 80247**

**Phone or Fax: 303-377-0711**

**e-m: paulnotari@cs.com**

**Editor:** Paul Notari

**Officers/Directors:**

*President:* Doug Seiter

*Vice President:* Jeff Scott

*Secretary:* Steve Sargent

*Treasurer:* Tom Konrad

*2006 President:* Tim Olsen

**Directors at Large:**

Nate Blair, Lynn Greene, Susan Innis,

Walt Kaesler, Jeff Lyng, Pamm

McFadden, Mona Newton, Charlie

Stevens, Carol Tombari

**Regional Board Reprs.**

*NCRES:* Rick Coen

*SECRES:* Tim Oliver

*SWCRES:* Jeff Berman

**Honorary Director:**

Harold (Hub) Hubbard

**Staff:**

*Executive Director:* Sheila Townsend

*Member Records:* Pat Grossman

*Accountant:* Terry Brennan, CPA

*Media Relations:* Phil VonHake

*Development Director:* Madalyn Snyder

**CRES MEETINGS**

*Unless otherwise specified, CRES meetings will begin at 5:30pm and be held at the NREL Visitor Center located off the Denver West exit of I-70, just past the Marriott hotel.*

**Wednesday, April 25 - Monthly Meeting.** Our featured speaker will be Dr. Frank Kreith, who will address the subject of "Sustainable Transportation" - See page 1 for details.

**Wednesday, May 23 - Monthly Meeting.** Our featured speaker will be Larry Sherwood, former Executive Director of ASES. who will speak on solar and wind market trends.

**CRES****"HOTLINE"****303-806-5317****CRES****INTERNET****NOS.**

e-mail: [info@cres-energy.org](mailto:info@cres-energy.org)

Web: <http://cres-energy.org>

## Colorado Renewable Energy Society

P.O. Box 933

Golden, CO 80402

Non-Profit Organization  
U.S. Postage  
PAID  
Denver, Colorado  
Permit No. 4856

## Call for 2008 CREC Site Proposals

CREC is seeking proposals for the 2008 Colorado Renewable Energy Conference. Please specify the exact location and facility for the site being proposed. It also is recommended that the proposal include the name of a local organization that would be willing to sponsor the event. Please submit your proposal to Sheila Townsend at [info@cres-energy.org](mailto:info@cres-energy.org).

### CREC CLASSIFIEDS

**Job Opening...** Toltec Energy is seeking -1099 and LLC subcontractors specializing in wind power, solar power, biodiesel process engineering and ethanol process engineering. Toltec Energy is a new division of an established engineering consulting company in the area. In addition, the firm is searching for an exceptional individual to lead this new division. For further information contact: Byron Larson, Toltec Energy at 303-302-0150 or visit [www.toltecenenergy.com](http://www.toltecenenergy.com).

**Job Opening...** The Colorado Environmental Coalition is seeking candidates for their Front Range Field Organizer position working on growth and transportation issues. The party chosen will play a lead role in managing campaigns and organizing citizens and partners on regional and state transportation and growth issues. To view a comprehensive job announcement with detailed applicant requirements, visit the website, [www.ourcolorado.org/resources/jobs.htm](http://www.ourcolorado.org/resources/jobs.htm).

### NEWS BRIEFS

**Colorado Biofuels Center Formed...** The Colorado Center for Biorefining and Biofuels, or **C2B2**, was introduced on March 19 as a new research venture between universities, industry and the government. The Center aims to combine the biofuels and biorefining work being done by various private companies with the expertise of the recently formed Colorado Renewable Energy Collaboratory (see March issue of CRES NEWS). The aim of C2B2 is to develop new biofuels and biorefining techniques and to move these advances into the private sector as soon as possible. For further details visit [colorado.edu/che/C2B2/index.html](http://colorado.edu/che/C2B2/index.html).

**Past CRES President Forms New Company...** Dave Bowden, 2004 CRES President, has partnered with Richard Eidlin to form a new company, the Sustainable Media Network. The firm specializes in using the power of the video and digital media to promote renewable energy. Visit [www.sustainablemedia.net](http://www.sustainablemedia.net).

### ROSTER OF CRES BUSINESS MEMBERS

We thank the following organizations for their continuing support

Astralux Environmental Solutions  
Aztec Radiant Heating, Inc.  
Balanced Construction  
Bergey Windpower Company  
Burdick Technologies Unlimited, LLC  
CH2M Hill  
City of Ft. Collins-Climate Wise  
Colorado Energy Science Center  
Colorado Springs Utilities  
Community Office for Resource Efficiency

Delta Montrose Rural Electric Assoc.  
Ecofutures Building Inc.  
EMC Engineers  
Enermodal Engineering  
Fish Builders of Colorado  
GRVP, LLC  
Hart Project Design  
Independent Power Systems  
Innovative Energy

Jim Logan Architects P.C.  
Kurowski Development Company  
Metro Solar Inc.  
Mountain Muse Communications  
Powur of Citizenre-Rocky Mtn Region  
PrimeStar Solar, Inc.  
Shumei International Institute  
Western Resource Advocates  
Wonderland Hill Development Co.