



CRES NEWS

VOL 9, NO 4

A Chapter of the American Solar Energy Society

APRIL 2004

ZERO ENERGY HOMES - Topic for Next CRES meeting

Renewable Energy in National Spotlight

Long a forgotten subject *Renewable Energy* has now reached the attention of presidential candidate John Kerry. In an article published in the April 6 edition of the Denver Post, Kerry was quoted as saying that he would emphasize renewable energy rather than oil and gas in an energy plan "that's better for the West and the rest of the Country." In a meeting with media representatives from Western states he said, "America has only 3 percent of the world's oil reserves - that's all that God gave us. What we need to think about is the future. I intend to set America on a course of energy independence." In his address he specifically cited the National Renewable Energy Laboratory for their work in the development of a new generation of wind turbines, new solar technologies, hydrogen generation, and biodiesel made from vegetable products.

Kerry's comments came as Senate Republicans, led by Senator Pete Domenici, R-N.M., announced that they have a new strategy for passing an energy bill that, while admittedly containing strong provisions for drilling more oil and gas, also includes incentives for renewable energy research and development. It is worth noting that the Bush administration 2005 budget would provide the U.S. DOE Office of Energy Efficiency and Renewable Energy with \$375 million for renewable energy programs and \$875 million for energy efficiency programs - about the same levels as the actual funding for 2004. While somewhat heartening that there will be no cuts, it does not meet the higher levels of funding promised by Senator Kerry.

The key here is that both parties are talking about renewable energy again. This is a welcome change from the last several years when the topic was all but forgotten by most politicians. This can't be bad for our industry and our future. Can better times be on the horizon?

Low-Cost Solar Cell Material Developed by IBM

On March 17 it was reported that IBM scientists have achieved a significant scientific milestone toward creating very low-cost electronic circuits with record high performance. A team of researchers at IBM's T.J. Watson Research Center has developed a simple, low-cost process to make extraordinarily thin films of semiconducting materials that allows electrical charges to move through them about 10 times more easily than had been reported for all other similar approaches. These types of easily processed semiconducting films could eventually be used to make circuitry for very-low-cost solar cells.

The findings from this research was reported in the March 18 issue of the technical journal, *Nature*. While advances in high-performance microelectronics are typically aimed at making ever-smaller features in intricate and precisely formed silicon crystals, researchers see this development as a low-cost method of making simple electronic devices for use in potential applications that are now impractical due to their cost, such as thin film solar cells. This may be the breakthrough that solar researchers have been waiting for.

All CRES members are invited to attend the monthly CRES meeting at **5:30pm** on Wednesday, **April 28** at the NREL Visitors Center which is located 2 blocks past the Marriott hotel in the Denver West Office complex (exit 263 from I-70, just north of Colfax between Simms and Indiana).

The principal speakers will be Jamie Sabin, President of Aspen Homes, Inc., and Craig Christensen, Research Scientist at the National Renewable Energy Laboratory (NREL), who has specialized in solar thermal building applications for over twenty years.

Jamie Sabin will tell us about Aspen's plan to build four different *Zero Energy* homes over this year and next, with the first to be started very soon. He will describe how his company has been working with Joe Bourg and Paul Kreischer, as part of the CRES *Million Solar Roofs* project.

Craig Christensen will describe NREL's technical support given to Aspen in the design of the *Zero Energy* homes, including much of the analysis and modeling involved.

LAST CALL Building Award Entries

CRES repeats its call for entries for the **2004 Colorado Renewable Energy in Buildings Awards**. Each year CRES recognizes teams of designers, contractors and builders for their innovation in the design of buildings featuring passive solar, PV, solar thermal water, geothermal heating and cooling, daylighting, natural ventilation or other renewable energy technologies. CRES will recognize one team in the category of commercial and institutional buildings and two teams in the category of residential buildings. Entries must be postmarked by **May 14, 2004**. For application forms and further details, refer to cres-energy.org.

Colorado Snap Shots

This column will feature meeting announcements, short news items, personality profiles, and other matters of interest to Coloradans.

CALENDAR OF EVENTS

April 23... *Zero Energy Homes Workshop for BUILDING PROFESSIONALS.*

Three morning sessions will be presented covering energy efficiency in new construction, solar energy technologies and modeling strategies to balance the energy demand with renewable supply. In the afternoon, tours will be conducted to some local examples of the technologies covered in the morning session. *Time:* 9:00am - 5:00pm. *Venue:* City of Fort Collins Office Building, 215 N. Mason St. *Fee:* \$25 in advance or \$35.00 at door. (lunch included) To register visit www.energy-science.org or call 303-216-2036

April 24... *Zero Energy Workshop for HOMEOWNERS and CONSUMERS.*

Same topics as proceeding workshop but aimed particularly at lay audiences. The time, venue and fees will also be the same as for the *PROFESSIONALS* workshop.

April 24... *Advanced Solar Thermal Workshop.*

Presented by the Colorado Solar Energy Industries Association (CoSEIA). *Time:* 9:00am - 4:00pm. *Venue:* Alice Schoolhouse, Idaho Springs just off of I-70 exit 238. *Fee:* \$70.00 CoSEIA members; \$200.00 nonmembers. For further information contact Samantha at 303-333-7342 or samantha@coseia.org.

May 24 - 28... *Renewable Fuels Workshop.*

Discussing the fundamentals of creating a renewable fuels economy. Covering subjects such as biodiesel, ethanol, hydrogen, biogas, bio motor oil, electric vehicles, compressed natural gas, gas/diesel electric hybrid vehicle and other related topics. Presented by Solar Energy International. *Venue:* SEI facility, Carbondale, Colorado. *Fee:* \$550.00. For further information visit www.solar-energy.org or call Lori Stone at 970-963-8855.

May 29... *Sustainable Suburbs Workshop.*

Presented by the U.S. Green Buildings Council and the Sustainable Futures Society. This is a follow-up to the Sustainable Suburbs Seminar presented by the USGBC in February. *Time:* 9:00am - 4:00pm. *Venue:* Harmony Village Common House, 1001 Cottonwood Circle, Golden, Colorado. For further information visit www.sustainablecolorado.org.

CRES' GREAT LOSS IS ASES' GREAT GAIN

a Commentary by Paul Notari

On March 27, the ASES Board of Directors elected Ron Larson as its Vice Chair - which effectively is the "Chair-Elect" for the post of Chair two years hence. In accepting this new role, Ron pledged that he would divest himself of all other obligations that might divert his efforts from the duties of this new post. Consequently, Ron has now resigned as Secretary and Board member of CRES. This is indeed unfortunate for CRES. Ron, who cofounded CRES some eight years ago, has been a Board member for all of those years and has been active in organizing and carrying out many of the programs now well underway and taken for granted by most of us. To mention a few: the CRES Annual Conference, the Legislative Action Committee, the Solar Home Tour, many of our monthly meetings, the CRES Annual Meeting, the Solar Decathlon, and several subcontracts carried out by CRES.

Personally, I have known Ron for 25 years. We met in 1979 when I joined the Solar Energy Research Institute (now the National Renewable Energy Laboratory). He was one of the original SERI staff members when the Institute was originally founded in 1977 by Dr. Paul Rappaport. As one of Paul's advisors, Ron was instrumental in setting up much of the original structure for the new organization. During our time together at SERI I worked with Ron on several occasions. Since then, I have been privileged to have remained a working colleague and friend for all these years.

In early 1996, Ron and I were asked by the then ASES Executive Director, Larry Sherwood, to form an ASES chapter in Colorado. We put our heads and energies together to do what we could do. Ron was a dynamo and the rest is history! We owe Ron a lot.

As an aside, Ron has asked me to convey to you his deep regret in leaving the CRES Board but he wants me to assure you that he will remain active. He also stresses that ASES is our parent organization and has done much to foster the adoption of renewable energy technologies in this country (see below). And it has plans to do much more. For this reason, Ron has asked me to urge you to become members of ASES and to take an active role in the activities of the organization. Specifically he would like you to contact him at his e-mail address, ronlarson@qwest.net to offer your assistance in any way you can.

ASES Who it is, What it Does

The American Solar Energy Society (ASES) has been in existence and active in promoting solar and renewable energies for over 30 years. It is the United States Section of the International Solar Energy Society, has thirty-two chapters throughout the country (including CRES), and has six specialty Divisions; i.e., *Solar Buildings, Solar Thermal, Solar Electric, Renewable Fuels and Transportation, Sustainability, and Resource Assessment.*

Over the years ASES has held many technical conferences, seminars, workshops, roundtables, forums and other events that have attracted national audiences. It also publishes *SOLAR TODAY* magazine, as well as numerous white papers, books, and educational materials for schools. It's "Solar Action Network" has lobbied for supportive renewable energy legislation at both state and local levels. Through its chapters it carries out the "National Tour of Solar Homes" each year. Visit www.ases.org for full details about ASES.

Sorry—no electronic photo available.

Shown is the published summary of a recent ASES Forum (available at \$15 per copy)

CRES CORNER

A MESSAGE FROM YOUR PRESIDENT - **Dave Bowden**

I write this with mixed feelings as this month finds CRES losing the services of cofounder and longtime Secretary, Ron Larson. It's hard to overstate the contributions Ron has made to CRES and our RE-EE community since our Society started in 1996 (see related commentary by Paul Notari on page 2 of this issue). Suffice it to say that as long as I've known him, Ron has been an omnipresent and indefatigable advocate for RE and sustainable causes. Through many years of networking Larson has connected CRES with numerous like-minded people and organizations in Colorado and nationwide. Thanks to his efforts our group has a broader reach and wider impact.

Congratulations to Ron on his election to the ASES Vice Presidency. As he takes on new challenges with our parent group, ASES will benefit enormously from his analytical skills, humor and wisdom. Although he plans to continue his involvement with CRES, please express your gratitude to our friend and wish him well.

Thanks to this kind of individual effort, CRES has a strong base and clear mission. We now move forward to an exciting phase of our group's advocacy. In November, as a result of our efforts and those of other concerned citizen organizations, an RE ballot measure will go directly to the people of Colorado for a vote. And why this step? Regrettably, for the third straight year, the Colorado Senate, despite a large favorable vote in the House, failed to enact modest guidelines calling for small percentages of RE to be phased into the state's power generation system.

Opinion polls clearly show that a majority of Coloradans favor renewable energy generation. In fact, the recently failed legislation was supported by a broad, bipartisan coalition of utilities, rural advocacy groups, and county commissioners. The measure's opponents, primarily the coal industry and rural electric co-ops, persuaded a majority of Senators to maintain the status quo and the bill eventually died from repeated attempts to substantially weaken its effectiveness. Since money and politics have repeatedly obstructed progress, this November we're determined that the will of the people shall prevail.

Now our allies, the Sierra Club, Environment Colorado, and Western Resource Advocates, have drafted a ballot initiative (based largely on the failed legislation) which is available for public review at http://www.state.co.us/gov_dir/leg_dir/lcsstaff/balpage.htm. Click on "2003-2004 Initiatives Filed" (our proposals are numbered 87, 124, & 125). I urge all CRES members to read these proposals and ask you to promote the initiative to friends and associates. And please volunteer to help us make clean energy generation for Colorado a reality this fall.

SUBCHAPTER NEWS

The Southeastern Subchapter of the Colorado Renewable Energy Society (SECRES) cosponsored the Pueblo Home and Garden Show on March 12-13. The public response to the SECRES booth was most enthusiastic. Also, at the SECRES bimonthly meeting of March 18, Justin Dawe of Environment Colorado and CRES cofounder, Ron Larson, led a spirited discussion on alternatives to the planned Xcel 750 MW coal-fired addition to the Pueblo Comanche power plant. Next meeting is scheduled for May 20. Call Judy Fosdick at 719-947-3040 for details.

The Northern Subchapter of the Colorado Renewable Energy Society (NCRES) is teaming up with the City of Fort Collins, the USDOE, and the Colorado Energy Science Center to put on two day-long workshops about Zero Energy Homes on April 23 and April 24 (see CALENDAR OF EVENTS on page 2).

CRES NEWS

CRES NEWS, the official publication of the Colorado Renewable Energy Society, is published monthly except once each in the summer and winter.

The official CRES address is:

P.O. Box 933

Golden, CO 80402

The address of the editorial office is:

1050 S. Monaco Pkwy. Ste 77

Denver, CO 80224

Editor: Paul Notari

Officer/Directors :

President: Dave Bowden

Vice President: Renee Azerbegi

Secretary: Ron Larson

Treasurer: Larry Sherwood

Past President: Thom Johnson

Directors at Large:

Susan Bilo, Craig Cox, Pamm

McFadden, Tim Olsen, Wendy

Parker, Kimberly Peterson,

Doug Seiter, Frank Stewart,

Phil von Hake

Honorary Director:

Harold (Hub) Hubbard

Staff:

Exec. Director: Sheila Townsend

Member Records: Pat Grossman

Accountant: Terry Brennan, CPA

CRES MEETINGS

Unless otherwise specified, CRES meetings will be held at 5:30pm in the NREL Visitor Center.

April 28... General Meeting -
See page 1

May 26... General Meeting -
Guest speakers will be Don Chiras and Dave Wann who will discuss their recent book, "Superbia! 31 Ways to Create Sustainable Neighborhoods."

June 25-27... Annual Conference. Workshops and sessions will focus on latest renewable energy and energy efficiency topics.

CRES "HOTLINE"

303-806-5317

CRES INTERNET NOS.

e-mail: info@cres-energy.org

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

RENEWABLE ENERGY BRIEFS

Canadian Council to Generate Hydrogen using Solar... The National Research Council of Canada has taken delivery of a patented new electrolyzer manufactured by the Hydrogenics Corporation that uses solar power to make hydrogen from water. The Council will test the system to determine its potential for economically producing hydrogen using solar power for fuel cell applications. Visit www.hydrogenics.com for details.

GE Acquires AstroPower... GE Energy has announced that it has completed its acquisition of substantially all of the U.S. business assets of AstroPower, Inc. AstorPower has been a major producer of photovoltaic cells and systems for many years. GE Energy president, John Rice, predicts that system costs will come down over the next few years and on-grid residential and commercial applications will flourish. Visit www.geopower.com/home/index.htm for details.

Mark Your Calendar
June 25-27, 2004

**Renewable Energy:
It Makes \$ense**



Plan now to attend the CRES 7th Annual Renewable Energy Conference. It is being held at the law school on the University of Denver campus. **Highlight:** former U.S. Senator **Tim Wirth** will be our keynote speaker.

For further information visit our website: cres-energy.org.

Colorado Renewable Energy Society

P.O. Box 933
Golden, CO 80401

CRES ORGANIZATION MEMBERS

As of January 1, 2004

The following firms are "Organization" members of the Colorado Renewable Energy Society and have supported our programs both financially and actively throughout the years. For this we owe them our sincerest gratitude.

| Company Name | Representative |
|------------------------------------|----------------------|
| Advanced Energy Systems | Tim Olsen |
| Altair Energy | Kirk Stokes |
| Alternative Choices Solar | Laurie Campbell |
| Aztec Radiant Heating | Elwin Mauer |
| Built Green Colorado | Traci D'Alessio |
| Burdick Technologies, LLC. | Joseph Burdick |
| Colorado Energy Science Ctr | Patrick Keegan |
| Colorado Springs Utilities | Deborah Heck |
| Comm. Office. for Res. Efficiency | Randy Udall |
| Delta Montrose Rural Elec. Assn. | Tom Polikalas |
| E-Star Colorado | Megan Edmunds |
| EcoBuild, LLC | David Adamson |
| EMC Engineers | Don davenport |
| Enermodal Engineers | Sue Reilly |
| FuelCellStore.com | Douglas Larson |
| GE Wind Energy | Hap Boyd |
| Innovative Energy | Eric Westerhoff |
| Jim Logan Architects P.C. | Jim Logan |
| Kurowski Devel. Co. | John Kurowski |
| Kyocera Solar, Inc | Thomas Dyer |
| Medicine Wheel Consultants | Carl Janicek |
| Millennium Energy | Joe Bourg |
| Mountain Muse Communications | Leslie Martel Baer |
| National Renewable Energy Lab | Kerry Masson |
| Pedro's Planet | Chuck Pass |
| Phillipson, Inc. | Donald E. Phillipson |
| Pioneer Conservation & Solar, Inc. | Rick Hubbard |
| RMS Electric | Mark McCray |
| The New Dream Weaver | Alethia Mystea |
| Western Area Power Association | Peggy Plate |
| Western Resource Advocates | Susan Innis |
| Wonderland Hills Development Co. | Shirley Thielen |
| Xcel Energy | Monique Lovato |

VOLUNTEERS NEEDED FOR NREL VISITOR CENTER

NREL has need for front desk receptionists/visitor greeters and education program assistants for volunteer service at its VISITOR CENTER.. Must be 18 years old and willing to make a 6-month commitment. For more information call Julie Baxes at 303-384-6566

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