



CRES NEWS

Newsletter of the Colorado Renewable Energy Society

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A Chapter of the American Solar Energy Society

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Solar Water Heating - September Meeting Topic

2005 Tours of Solar Homes

Sorry—electronic photo unavailable.

*Shown here is the **Zero Energy/Habitat Home** that will be shown on the Denver Tour. It is located in Wheatridge and was built for a low income family by volunteers as part of the National Habitat for Humanities program.. It includes grid-tied PV, solar hot water, passive solar architecture, low-e windows, and daylighting.*

Once again the Colorado Renewable Energy Society will present the Metro Denver Tour of Solar Homes. The tour will take place on **Saturday October 1 from 10am - 4pm**, with registration beginning at 9am at the NREL Visitors Center in Golden (see article in adjoining column for directions to the NREL Visitor's Center).

The tour is part of the American Solar Energy Society's **National Tour of Solar Homes**. The regular tour is self-driven; i.e., you drive your own car to each home shown on a map furnished by CRES when you register. The fee for the self-driven tours is \$15 per carload. In addition, for a fee of \$35, CRES is offering a guided bus tour of the homes in the Denver tour. Included in the fee is a box lunch. Advance reservations are required (call 303-806-5317 in advance). The homes on the tour will encompass a variety of solar and energy efficiency technologies and architectural styles. From new construction to remodels, from PV panels to passive solar design, there will be ample displays of new and novel solar features to interest all.

Once again, the Colorado Energy Science Center (CESC) will offer seminars on several days coinciding with the Denver tour providing a wide variety of information on solar and energy efficiency home building techniques for the homebuilder. Refer to the CESC information flyer included with this mailing for detailed information. Admission to the seminars is free to everyone purchasing a ticket to the tour.

On Saturday October 1, the day of the Denver Tour, there will be an exhibition at the NREL Visitor Center at the site of the tour registration. Approximately 15 to 20 exhibitors will have displays and will be available to answer questions on many solar and energy efficient products in the marketplace today. For further details on the Tours or exhibit, visit the CRES website, cres-energy.org, or call 303-806-5317.

(See page 4 for a listing of other Solar Tours in Colorado)

The next meeting of the Colorado Renewable Energy Society will take place at **5:30pm** on Wednesday, **September 28**. 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 located midway between Simms and Indiana.)

Our guest speaker will be Jay Burch, Senior Physicist, National Renewable Energy Laboratory. The full topic of his address will be **Solar Water Heating: Perspectives and Prospects**. In the early 80's, solar hot water systems became very popular and hundreds of thousands were installed in every area of the United States. This was due largely to the tax incentives offered to solar system buyers by the state and federal government.

However, when the incentives were discontinued in the late 80's, interest dropped off and few new systems were installed. Without the incentives, solar systems could just not compete with gas hot water heaters, particularly with the low natural gas prices that prevailed at the time. In the last few years, however, as gas prices have escalated, interest in solar water heating systems has increased dramatically. Dr. Burch will present his perspectives on residential, commercial and industrial solar water heating systems, noting present trends and potential future developments.

Dr. Burch received his PhD in physics from the University of Colorado in 1977 and has worked at NREL since 1981. His work has been in the buildings area focusing on polymer-based solar water heating technology.

Colorado Snap Shots

This column will feature meeting dates, short news items, personality profiles and other energy matters relevant to Coloradans.

CALENDAR OF LOCAL EVENTS

September 27... Retrofitting for Energy Efficiency. This seminar will offer methods and tools that a company or organization can use to become more energy efficient. *Host:* Pike's Peak Sustainable Business Network. *Venue:* Warehouse Restaurant, 25 W. Climarron St., Colorado Springs. *Info Sources:* Kim McIntyre, 719-471-0910, X105 or www.catamountinstitute.org/ppsbns.

September 27... Colorado CleanTech Initiative. *Host:* Colorado Clean Technology Business Alliance. *Venue:* Denver Metro Chamber of Commerce, 1445 Market St., Denver. *Info Source:* Jeffrey Nathanson, 303-870-4975.

September 30... Cocktails for the Climate: Wind Power 500 Challenge Workshop. The workshop will kick off a campaign that seeks to sign up 500 additional wind power commercial and residential customers in the Boulder area. *Hosts:* City of Boulder and Western Resource Advocates. *Venue:* Redfish Restaurant, 2027 13th St., Boulder. *Info Source:* Western Resource Advocates, 303-444-1188, X221 or www.cogreenpower.org.

October 11... Reality Check: Lessons for the Leading Edge in Building Design. Lessons on high-performance building design derived from six buildings designed to be low energy users by Paul Torcellini of the National Renewable Energy Laboratory. *Venue:* Community Room, 215 N. Mason St., Ft. Collins. *Time:* 9:00-11:00am. *Info Sources:* 970-222-0227 or www.fcgov.com/utilities/business-eps.php.

October 19... Meeting Expectations? An Overview of Renewable Energy Portfolio Standard (RPS) Programs Implementation Experiences. This program will explore what is happening with RPS initiatives throughout the country and look at some of the key issues, such as renewable energy credits, that have yet to be resolved. *Host:* Colorado Alliance of Sustainable Business Associations. *Info Source and Registration:* www.store.mountainmedia.com/ceepinc/calendar.cfm?do=detail&d=3191&c=4943&p=31066.

Gulf Coast Hurricane Creates Energy Havoc

A Commentary by CRES NEWS Editor, Paul Notari

With heavy heart I view the massive destruction caused by hurricane Katrina and wonder if this country will ever be the same. To my knowledge, short of the nuclear bombing of Hiroshima and Nagasaki in 1945, there never has been such complete devastation of a populated area of this size in modern history. It is horrible, and I weep for all the people who have suffered personal loss in this terrible catastrophe.

But there is another loss due to this violent storm that will likely affect us all. It is the great loss of many oil refineries, offshore oil rigs, underwater pipelines, and many gulf coast ports where oil tankers moor and dispatch their cargo. These losses underscore the frailty of our oil infrastructure and its vital importance to the flow of the liquid energy needed to fuel our society. For years now we have worried and sweated about our dependence on foreign oil and the instability of the middle east where most of it is obtained. It is sadly ironic that the final straw that is threatening to push our oil-consuming nation beyond the breaking point is not the disruption of middle east oil by terrorists or boycott, but a wind storm of enormous proportions that has hit us unexpectedly from the Caribbean.

The effects of this massive hurricane have only begun to be felt. Gasoline prices at the pump of \$3.00 per gallon is only the beginning. In the next few months, there is no telling how high they will rise. This, of course, will not only effect the gasoline consumer but will reverberate throughout our entire economy, maybe even throwing our country into a depression. And what can we do? What should we do? The answer is that it is almost too late to do what would be most effective; i.e., reduce our domestic oil consumption dramatically and vastly increase our support for research and development of alternative fuels.

Mpg (CAFE) standards for all vehicles, especially SUVs, minivans, and light trucks, should have been lowered dramatically years ago. Our domestic auto manufacturers should have been given incentives to design, build and market more fuel efficient cars, such as the electric/gasoline hybrids currently being produced by Japanese car manufacturers. Many more research dollars should have been appropriated for development and deployment of new techniques to produce ethanol from cellulosic materials such as "energy crops" and farm waste, and biodiesel from soybeans and waste greases. These things should have been done long ago.

Perhaps now though, our politicians will take note and begin to take positive action. Sen. Pete Domenici of New Mexico, Chairman of the Senate Energy and Natural Resources Committee, said recently: "Our hearings on global energy supplies will have a different tone since Katrina. They may lead to discussions about alternate sources of supply, and the need to ensure that our capacity is spread over a larger geographic area so that a catastrophic event such as this one will not have such a negative impact." While Domenici did not address energy efficiency in his statements, others on the committee, such as Sen. Bill Nelson of Florida, did indicate that they will bring up the subject in meetings to come. Maybe there is hope!

CALL FOR PAPERS & PARTICIPATION

In 2006 the Colorado Renewable Energy Society will co-host **Denver Solar 2006** with the American Solar Energy Society. The meeting will take place July 8 - 13, 2006 at the Adam's Mark Hotel in downtown Denver. CRES is seeking papers for technical sessions and suggestions for special invited sessions, forums, and workshops. For full details please request a copy of the *Call for Papers and Participation* by phone at 303-806-5317 or e-mail to info@cres-energy.org.

CRES CORNER

Greetings from Your President,

I hope that you have enjoyed your summer in green shady spots in sun-drenched Colorado. The changing season reminds us that it is time to rededicate ourselves to the big job ahead of us; i.e., moving our beautiful state several giant steps closer to the renewable energy economy that we want so dearly. Of course, a positive pathway to arriving at that bright future was set when Colorado citizens passed Amendment 37 last fall. The renewable energy community worked hard this spring and summer to craft solid draft rules. We have worked to ensure that the Colorado Public Utilities Commission has heard our voice loud and clear, urging them to enact the A37 rules in September. If the PUC acts as anticipated, we expect the utilities to offer rebates in the winter or spring.

It is too early to know whether the PUC's rules will be everything that we would like, but we have early indications that Xcel and the renewable energy community have agreed that rebates for PV should be about \$4/watt or more, compared to the typical \$8/watt it costs to install a PV system.

Although the National Energy Policy Act recently enacted contains many features that keeps us on a treadmill of more drilling, digging, and polluting, there are some provisions in the Act that directly and positively help our community. Of particular interest, the Act provides for an income tax credit of \$2000, or up to the 30% of the value (whichever is less) towards the installation of either a PV or a domestic solar hot water system.

When you couple the expected A37 rebate with the federal tax credit, a typical residential 2 kilowatt system that normally costs \$16,000 to install, will only cost the homeowner \$6,000. We will partner with the solar industry and utilities to take this good news into the community to build the solar marketplace in Colorado. **I invite you to join us.**

And the most immediate way to join us in this effort is to volunteer to help, or participate in, the Tour of Solar Homes. Please go to cres-energy.org and click on "Tour of Solar Homes" to see what has been planned for **Solar Week 2005**. On your calendar, circle Saturday October 1 for a tour of Denver area homes, and Sunday, October 2 for a tour of Boulder area homes. And don't forget to register for the great educational workshops planned during that time (see insert).

It's September and it is time to gear up! I look forward to meeting you at these events and future CRES meetings in the upcoming months.

Sincerely,

Renee Azerbegi

CRES ONLINE

cres-energy.org - New and Improved

The CRES website has recently been redesigned and now offers a multitude of new features including a **Member's Only** section that provides an exclusive section intended for CRES members only. Members may access the new section by entering the user name: **member** and the password: **cres2005**.

New CRES Merchandise Shop

CRES is now offering a wide assortment of CRES logo items for very reasonable prices. These include T-shirts, jumpers, track suits, hoodies, mugs, calendars, clocks, mousepads, aprons, caps and more. You can access the shop via the CRES website or by going directly to the store at www.cafepress.com/CRES. Credit card purchases are accommodated.

CRES NEWS

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The CRES address is:

P.O. Box 933

Golden, CO 80402

The address of the editorial office is:

7877 E. Mississippi Ave. #1504

Denver, CO 80247

Phone or Fax: 303-377-0711

e-m: paulnotari@cs.com

Editor: Paul Notari

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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.

Sept 28 - General Meeting. The guest speaker will be Jay Burch of NREL. See Page 1 for more details.

Oct 19 - General Meeting. The guest speaker will be Dave Bowden, president, DA Vision Media and former president of CRES

CRES "HOTLINE"

303-806-5317

CRES INTERNET NOS.

e-mail: info@cres-energy.org

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

CRES MERCHANDISE SHOP

www.cafepress.com/CRES

RENEWABLE ENERGY BRIEFS

International

Renewable Energy a Major Contributor in Germany's Electric Power Production... Wind, hydro, and other renewable energy plants produced a total of 56 terawatt hours of electricity or 9.3 percent of all power consumed in Germany in 2004. Wind power contributed 44 percent of the total amount, outranking hydro for the first time. In addition, Germany installed more solar (PV) plants than any other country worldwide increasing its installed capacity to 700 MW.

China Establishes Fuel-Efficiency Standards for Cars... To relieve its growing dependence on oil, China is establishing fuel-efficiency standards for cars, SUVs and minivans despite strenuous objections from U.S. auto manufacturers. In the first phase, beginning next year, mpg requirements for SUVs and vans will be lowered significantly from current levels. In 2008 the standards will be lowered substantially further.

Canada to Consider Resurrection of its Tar Sands Oil Production Capability... With conventional oil reserves declining worldwide, Canadian interests are seriously eyeing the resurrection of tar sands oil production. The key is the price of oil on the world market. If the price of a barrel continues to escalate, tar-sand oil could well become competitive despite high environmental protection costs. Estimates are that there are 175 billion barrels of oil in Canadian tar sands.

National

DOE's Second Solar Decathlon Set for Next Month... Eighteen teams from colleges and universities will participate in the second Solar Decathlon scheduled to take place on the Washington DC mall from October 7th through the 16th. The competition requires that each team build and operate an energy-efficient solar-powered home on the mall. The houses will be judged on the basis of architectural soundness, livability, comfort and power generation effectiveness. The University of Colorado, which won the event in 2003, again will have an entry.

Chevron Head Warns of World Oil Depletion... In an ad published in leading magazines last month, David J. O'Reilly, Chairman and CEO of the Chevron Company says "the era of easy oil is over." The ad states that is likely that in 20 years the world will consume 40% more oil than it does today. And at the same time many of the world's oil and gas fields are maturing while new discoveries are mainly occurring in places where resources are difficult to extract.

O'Reilly says "we can't wait until the crises forces us to do something." How can we meet our energy needs of the future? What role will renewables and alternative energies play? How do we accelerate our conservation efforts? We call upon scientists and educators, politicians and policy-makers, environmentalists and leaders of industry to provide us answers.

Other Solar Home Tours in Colorado

Boulder

Sponsor: Center for ReSource Conservation (CRC)
Sunday, October 2...Register at 1702 Walnut St, Boulder...Call 303-441-3278 for further details

Manitou Springs, Colorado Springs, Calhan, and Monument

Sponsor: South East Colorado Renewable Energy Society (SECRES)... Saturday, October 1...Register at the Tutt Science Center on the Colorado College campus. Call 800-642-2567 for further details.

Ft Collins

Sponsor: Northern Colorado Renewable Energy Society (NCRES)...Saturday, October 1...Contact: Traci McMillan at tra_ctn@yahoo.com for further details.

Durango and Bayfield

Sponsor: South West Colorado Renewable Energy Society (SWCRES)...Saturday, October 1...Contact Paul Senecal at psnecal@compuserve.com for further details