Extension Clean Energy Outreach

By Leigh Fortson, Extension Regional Communications Coordinator and REA (Renewable Energy Advocate)

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CESIT Team Plugs into Renewable Knowledge

The newly created Clean Energy Strategic Initiative Team (CESIT) met in Glenwood Springs for our first annual retreat and we're ready to roll up our sleeves and get to work.

The purpose of CESIT is to educate ourselves on clean energy issues so we can educate agents around the state. They, in turn, will then be able to field questions about renewables and energy efficiency that come from community members. Once our team members get educated, they will create web pages, fact sheets and other user-friendly deliverables that agents and clients across the state can go to for solutions.

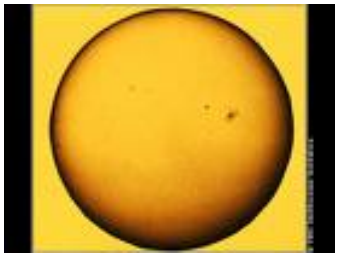
Leigh Fortson (Grand Junction), Irene Shonle (Black Hawk) and two campus representatives, Mike Kostrzewa and Wade Troxell make up the steering committee. Other members of CESIT include:

- **Wind**: Irene Shonle, lead; Dennis Kaan (Akron); Rebecca Cantwell of the Clean Harvesting Energy Network or CHEN (Denver)
- **Biofuels/Bioenergy**: Dan Fernandez, lead (Dove Creek); Jerry Johnson (campus); Morgan Williams of Flux Farms (Carbondale)
- **Solar**: Kurt Jones, lead (Salida); Karen Crumbaker (Westcliffe); Jonathan Moore of CHEN (Denver)
- **Geothermal/Hydropower**: Mark Platten, lead (Cripple Creek); Luann Boyer (Fort Morgan); Joy Akey (Wray)
- **Homes/Community**: Shelley Kawamura, lead (campus) and Eric McPhail (Gunnison); Lois Illick (Pueblo); Karen Massey (Steamboat Springs); Wendy Rice (Durango); Jean Justice (Rocky Ford)
- **4-H & Youth**: Holli Campbell, lead (Broomfield); Janice Dixon (Fort Morgan)
- **Grants & Funding**: Rusty Collins, lead (Golden); Patti O'Neal (Golden)

Feel free to call the appropriate team leader if you are currently getting questions that elude you. If the team leader doesn't have the answer yet, s/he can add it to the bank of questions and will hopefully be able to provide you with information very soon.

Our goal is that within several months, we will be the acting *information brokers* for each topic area.

We'll keep you posted of our progress as we go along. Meanwhile, if you learn about something in the energy world that just blows your socks off, please contact the team leader that you think could benefit from knowing about it. The clean energy economy is such a huge and rapidly growing industry and we can use all the help we can get! Thanks.



Governor's Energy Office Hosts Meeting for Extension Agents

Joani Metranga, the Western Regional representative for the GEO agrees that there is a good fit between the energy programs they're rolling out and Extension.

Consequently, the GEO is hosting a five hour meeting on Tuesday, April 7th starting at noon at the GEO office in Denver, 1580 Logan Street, Ste 100.The purpose of the meeting is to teach Extension agents about their programs so we can help deliver the news to communities throughout the state.

If you would like to attend, call me at 970-241-3346 and I'll give you the scoop. If you'd like to attend but can't find your way to Denver that day, you can attend via teleconference. As of the writing of this newsletter, there is no conference number yet, but I'll get it to you as soon as I receive it.

This is a great way to learn how we can support residents and businesses in our communities to tap into state tax incentives, rebates and overall energy efficiency and renewable opportunities offered by the State.

The Benefits of Tax Season

For people who are taking advantage of the myriad energy-related tax incentives being offered this year, tax season is actually a time of good news.

To learn about the 2008 Emergency Economic Stabilization Act and the 2008 Farm Bill that includes a number of energy efficiency and renewable energy tax incentives, go to www.colorado.gov/energy/resources/energy-federal.asp.

Or, to find out about federal tax credits go to: http://www.energystar.gov/index.cfm?c=products.pr_tax_credits

Online Newspaper Reports on Energy

Writers from the defunct Rocky Mountain News have launched Denver's first online paper: InDenverTimes.com. Here's a story that may be of interest…

New solar energy factory to employ up to 200
Posted By Hank Schultz On March 24, 2009 (4:29 pm) In Business

Ascent Solar Technologies' new headquarters in Thornton.

Ascent Solar Technologies, a manufacturer of thin-film solar energy units, marked the opening of a new headquarters and manufacturing facility Tuesday in Thornton. The facility will generate up to 200 new jobs in the next two years.

"The New Energy Economy is leading Colorado forward and will be one of the keys to bringing us out of this recession. Colorado and Ascent Solar's success are a model for how America can and must re-tool our entire economy," said Gov. Bill Ritter in a **statement** released by the company.

Ascent Solar has been developing its thin-film flexible solar panel technology in Colorado over the past 15 years and operates a smaller manufacturing facility in Jefferson County.

GEO Update:

Colorado and the American Recovery and Reinvestment Act

The American Recovery and Reinvestment Act (ARRA) presents an extraordinary opportunity to strengthen Colorado's New Energy Economy and will create new green jobs across the state. While many of the details are still being developed by the U.S. Department of Energy, the GEO will be pursuing the following programs:

- **Weatherization:** Colorado will receive an anticipated $80 million over 3 years to expand the delivery of weatherization services to the homes of Colorado's low-income residents through the existing weatherization program. This funding will also aim to strengthen the network of service delivery providers, improve the energy efficiency of far more low-income homes, and cut energy costs for homeowners at a critical time while generating efficiency service jobs throughout the state.

- **State Energy Program:** The GEO will receive an anticipated $50 million to reduce barriers to energy efficiency and renewable energy. The GEO will use this funding to improve access to information, access to capital, and access to services for home and business owners that want to improve the efficiency of their homes and workplaces.

- **Energy Efficiency and Conservation Block Grants (EECBG):** Colorado will receive funding to be distributed to Colorado's cities, counties, and to the GEO to provide energy efficiency services and incentives to local communities.

- **Research and Development Grants:** As a hub for renewable energy research, Colorado will be competitive in securing a number of grants of undetermined amounts for the research, development and demonstration of emerging technologies in Colorado.

- **Loan Guarantees:** The government will provide loan guarantees to Colorado for transmission financing which will help loosen credit markets and aid Colorado in expanding utility transmission infrastructure within the state.

Learn more at www.colorado.gov/energy/recovery. For additional information and to monitor how recovery funds are being spent in Colorado, visit www.colorado.gov/recovery.

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Shovel-Ready Projects

The GEO will allocate a portion of the American Recovery and Reinvestment Act funds to "shovel-ready" energy efficiency and renewable energy projects.

The GEO loosely defines shovel-ready as an energy efficiency or renewable energy infrastructure project or program that has been extensively developed and for which there is a clear path to implementation inside of 90 days from the time of award.

Successful shovel-ready projects will be selected through a competitive solicitation that the GEO will release at the end of March or early April 2009, depending on the timing of guidance released from the U.S. Department of Energy. The GEO anticipates that it will be accepting applications through April 2009.

The GEO requires the following information in this solicitation:

- Project description
- Contact information
- Estimated number of jobs created or saved (directly and indirectly)
- Annual energy use and/or reduction (therms, kWh, etc.)
- Estimated annual carbon emission reductions (tons of CO2)
- Funds leveraged or matched
- Percent of project cost that would be funded by recovery funds
- Explanation of community support and partners involved
- Technical ability, qualifications and history of project developer(s)
- Barriers to success (status of local and state permits, for example)
- Timeline including date of construction start and finish

The GEO encourages parties interested in applying for shovel-ready project funding to begin preparing the above information in preparation for the competitive application process. It is not necessary to contact the GEO with shovel-ready project ideas at this time.

Please note that the inherent transparency of the American Recovery and Reinvestment Act allocation process precludes any information submitted from being protected through privacy or confidentiality agreements.

For updated information, go to. http://www.colorado.gov/energy/recovery/shovel-ready.asp

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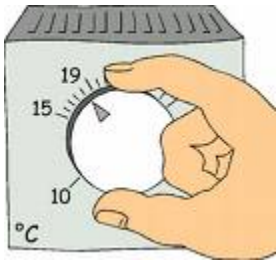
State Incentives Help Insulate Colorado Homes and Saves Money

The GEO has teamed with its community partners to help more than 1,200 Colorado homeowners save money and conserve energy in just the first eight months of its Insulate Colorado program.

The program provides homeowners with rebates to insulate and air-seal their homes to help reduce energy costs. The available rebate is equal to 20% of job cost, up to $300 per home. The insulation must be installed by an eligible Colorado contractor and homeowners must reside in a participating jurisdiction to receive the rebate.

The GEO partners with counties, cities, towns, utilities and non-profits to support the proper installation of insulation and air-sealing measures in single-family homes. The Insulate Colorado program also increases consumer awareness of residential energy efficiency options and promotes the installation of additional energy saving measures to advance Colorado's New Energy Economy.



The U.S. Environmental Protection Agency (EPA) estimates that homeowners typically save up to 20% of heating and cooling costs, or up to 10% of total energy costs, by air sealing their homes and adding insulation in attics, crawl spaces, and accessible basement rim joists, the area where the home foundation meets the frame.

Both the GEO and Xcel Energy's 2009 Insulate Colorado Programs are now open to Colorado homeowners. To learn more about the Insulate Colorado Program, and the Governor's Energy Office, visit www.colorado.gov/energy.

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Geothermal Workshop Boils Over with Knowledge

The GEO is holding a Geothermal Working Group Meeting on April 30th in Salida at the Steam Plant.

During the last six months, the Department of Energy sponsored a Colorado Trade Mission to Nevada. Coloradans including Senator Gail Schwartz, developers, utility representatives, Public Utilities Commission representatives, GEO staff, Colorado School of Mines educators, community members and Colorado government staff from the Department of Water Resources and Colorado Geological Survey attended the event. The mission built a relationship with the geothermal industry in Nevada and identified key issues for future growth of geothermal applications in Colorado.

In January 2009 an Icelandic Trade Mission visited Colorado and participated in two days of presentations on activities in Colorado. Nine communities attended the event and shared in their efforts to create and promote new uses of hot water for heating and for electricity generation.

The meeting in Salida on April 30 will highlight developments throughout the state. It will also provide technical education for communities, taught by developers and industry members.

For more information or to attend, email John Gitchell at John@SustainableBusinessSolutions.net.

For more information on the Geothermal Working Group activities check out the GEO website.

Refinancing Mortgages Affords Solar Installation

The time to invest in a solar photovoltaic (PV) system for your home has never been better. Mortgage interest rates are historically low. If you are thinking about refinancing, consider adding the cost of a solar PV system into your new mortgage. Use this calculator to estimate your new monthly payment with solar included. In many cases, your new payment will still be less than what you are paying now, even with a solar system included.

After you submit your information in the fields below, a chart will appear with an estimated breakdown of your new monthly payment for a range of PV system sizes.

http://www.colorado.gov/energy/renewables/solar-refinancing-calculator.asp

From the Desk of 25x25

New Blog Provides Live Energy Updates

Making the most of the role of 25x'25 as an impartial source of information on agricultural and forestry renewable energy and climate change solutions; the National Alliance has launched a new blog that will pro-actively bring news, commentary and the latest on 25x'25 developments to anybody across the country and around the world.

The blog will evolve into a daily post that will address any one of the 25x'25 key areas of focus, including:

- Progress towards the 25x'25 goal
- The role of agriculture and forestry in a reduced carbon economy
- Sustainable biofuels development
- Community scale wind development
- Woody biomass as a renewable energy feedstock

To subscribe to the 25x'25 Blog, merely go to the 25x'25 Blog site - http://blog.25x25.org/ and click on the "RSS" (Real Simple Syndication) function (indicated by the icon). You will be presented with a number of common newsreader options (Google, Yahoo).

Move your cursor over the newsreader option of choice, click on it and follow the instructions for completing your subscription.

Once subscribed, the RSS newsreader that you have chosen will automatically check the 25x'25 Blog page regularly for new content and automatically download that content to you in a readily readable format. For example, users who employ Google for their home page can choose the "Google home page" option and will begin seeing items from the 25x'25 Blog in a content box on their Google home page along with their other features (weather, calendar, TV listings, etc.). The other Google option provided, the "Google reader" option, opens up a list of subscribed blogs and the latest content from each on your Google home page only by clicking on the RSS icon in the Google toolbar. Either way provides the user immediately with any new blog content.

For additional information, contact Bill Eby, at 512-940-8990, or by e-mail at BEby@25x25.org; or Jeremy Rietmann, at 970-443-3419, or JRietmann@25x25.org.

Cell Phones Now Locate Alternative Fuel Stations

According to the National Renewable Energy Lab, consumers on-the-go can now access the U.S. Department of Energy's (DOE) Alternative Fueling Station Locator using their cell phone, BlackBerry, or other personal digital assistant (PDA).

The Mobile Alternative Fueling Station Locator allows drivers to find the five closest biodiesel, electricity, E85 (ethanol), hydrogen, natural gas, and propane fueling sites. This tool uses Google Maps to automatically generate maps to fueling sites and lists each station's contact information and business hours. Detailed driving directions and an instant phone connection to the station can all be accessed at www.afdc.energy.gov/stations/m/.

With almost 90 active coalitions and more than 5,400 stakeholders across the country, Clean Cities' mission is to reduce petroleum consumption in the transportation sector. The program promotes alternative fuels and advanced vehicles, fuel blends, fuel economy measures, hybrid vehicles, and idle reduction technologies.

NREL is the U.S. Department of Energy's primary national laboratory for renewable energy and energy efficiency research and development. NREL is operated for DOE by The Alliance for Sustainable Energy, LLC.

First Solar to Develop 30-MW Thin-film Project

According to Renewableenergy.com, First Solar has entered into a 25-year power purchase agreement with Tri-State Generation and Transmission Association Inc. The agreement, which represents the largest thin-film solar photovoltaic (PV) contract by an electric cooperative in the U.S., calls for First Solar to engineer, procure and construct (EPC) a 30-megawatt ground-mounted PV power plant in northeastern New Mexico. This news follows on First Solar's announcement that it has produced an aggregate total of 1 gigawatt of PV panels.

"This photovoltaic power plant is another demonstration of our ability to provide affordable, utility-scale solar solutions," said John Carrington, First Solar executive vice president of marketing and business development. "In addition to being cost-effective, the plant will create 120 to 140 construction jobs, significantly reduce green house gas emissions and provide enough power to serve the equivalent of approximately 9,000 homes."

Tri-State said that the project will be the first utility-scale solar power plant in the region and is expected to be complete by the end of 2010. Upon completion of construction on the project, First Solar will provide monitoring and maintenance services for the PV power plant over the course of its lifetime. The company expects that by the time the project is finished it will have transferred all or substantially all of its equity interest to Tri-State.

US Installs 342-MW of Solar PV In 2008

The Solar Energy Industries Association (SEIA) has released its 2008 U.S. Solar Industry Year in Review, highlighting a third year of record growth for the solar industry. According to the report 1,265 megawatts (MW) of all varieties of solar power were installed in 2008, bringing total U.S. solar power capacity up 17 percent to 8,775 MW.

> California was the leader among state grid-tied PV installations with 178.6 MW, New Jersey followed with 22.5 MW installed, **Colorado was next at 21.6 MW**, Nevada installed 13.9 MW and Hawaii with 11.3 MW.

The 2008 figure included 342 MW of solar photovoltaic (PV) installations, 139 MWTh (thermal equivalent) of solar water heating, 762 MWTh of pool heating and an estimated 21 MW of solar space heating and cooling.

"Despite severe economic pressures in the United States, demand for solar energy grew tremendously in 2008," said Rhone Resch, president and CEO of SEIA. "Increasingly, solar energy has proven to be an economic engine for this country, creating thousands of jobs, unleashing billions in investment dollars and building new factories from New Hampshire to Michigan to Oregon."

The grid-tied PV market led the overall PV market with 292 MW installed in 2008, a growth rate of 81 percent from the 161 MW installed in 2007. Solar water heating installation grew 139 MWTh last year, a 50 percent increase from the 93 MWTh installed in 2007. Pool heating growth slowed by 3 percent in 2008 to 762 MWTh installed, down from 785 MWTh installed in 2007.

California was the leader among state grid-tied PV installations with 178.6 MW, New Jersey followed with 22.5 MW installed, Colorado was next at 21.6 MW, Nevada installed 13.9 MW and Hawaii with 11.3 MW. For solar water heating systems, Hawaii led states, installing 37 percent of the total U.S. systems in 2008, followed by Florida at 20 percent, California with 7 percent and both Colorado and Arizona with 5 percent. The Mid-Atlantic States, an important emerging region for solar, installed 7 percent of solar water heating systems.

Solar PV manufacturing capacity in the U.S. increased by 65 percent in 2008, creating much needed jobs in states such as California, Michigan, Ohio, Oregon and Tennessee. Total production capacity in those states now stands at approximately 685 MW.

“The growth of solar manufacturing jobs in the U.S. was a breath of fresh air for communities hit hard by the recession. The recently enacted manufacturing tax credit will give further incentive to manufacturers, such as my company Suntech America, to invest in new operations in the U.S.” said Roger Efird, chairman of SEIA and president of Suntech America Inc. “With the right policies, solar deployment will continue robust growth and thousands of new green-collar jobs in manufacturing will be created in states where jobs are needed most.”

No new concentrating solar power plants came online in the United States this past year, but projects now in the pipeline add up to more than 6 gigawatts (6,000 MW). Among these are projects planned for California’s Mojave Desert, Arizona and Florida.

Clcik here to download the full 2008 U.S. Solar Industry Year in Review.

Hot Video

Check out Solar Energy Industries Association, video on the state of solar in this economy.
http://www.seia.org/

Factoid

In the American Recovery and Reinvestment ACT (ARRA), $67 billion will be spent for renewable energy and energy efficiency programs and incentives, while $20 billion of which is likely to directly help put projects on the ground.

FYI
Upcoming Events

Denver's First Annual Green Festival
May 2-3,

Colorado Convention Center
700 14th Street
Denver, CO 80202

Denver's first Green Festival is a joint project between Global Exchange (www.globalexchange.org) and Green Americas. The festival celebrates what's working in our communities—for people, business and the environment. At the festival individuals along with business and community leaders come together to discuss critical issues that impact us at home and abroad. Organizations and businesses showcase programs and products that restore the planet and all that inhabit it. The festival includes more than 125 renowned authors, leaders and educators; great how-to workshops; cutting-edge films; fun activities for kids; organic beer and wine; delicious vegetarian cuisine and diverse live music. World renowned speakers include SEI instructor and workshop Coordinator Matthew Harris who will discuss the fundamental principles behind choosing a renewable energy. For more info, to go: http://www.greenfestivals.org/

Wind Electric Maintenance and Repair & Home-Build Wind Generators
April 6-11 and 13-19
Solar Energy International, Carbondale

SEI is offering a new workshop this April on Wind Electric Maintenance and Repair. Wind-electric systems require the most maintenance and have the most problems of any renewable electricity system. This workshop will include a brief review of basic wind-electric system design principles and practice, and then focus on maintenance, troubleshooting, and repair of these systems. This is followed by our always popular Home-Build Wind Generators which will guide students through the process of building a small wind turbine from scratch. Both of these workshops take place on beautiful Guemes Island in the Pacific Northwest.

Other upcoming workshops include:
Build it with Bales
Carbondale, CO · May 8 - 9
Building for the Future
Carbondale, CO · May 11 – 15

To learn more about all of these workshops go to: www.solarenergy.org

Renewable Energy for Educators (4-H Agents Take Note!!)
June 22 – 25, Carbondale, CO
Sponsored by Solar Energy International, educators attending this seminar will learn about the impacts that our energy use has on the planet and how to best teach youth about solutions: energy conservation, energy efficiency, and renewable energy technologies.

Each day will include a hands-on element that can be employed in the classroom. In addition, participants will walk away with practical knowledge that they can apply in their own lives. Integrating renewable energy education into youth development can provide an element of excitement for science education and hope for the future.

Teachers who teach any age group will benefit greatly from this special workshop. This workshop has been designed to meet the 5th-9th grade Colorado Science Standards.
Receive Two Extended Studies Credits through Mesa State College!!
The cost of the credits is included in the tuition for this workshop.
Each participant will receive:

- Access to SEI's renewable energy kits for use in the classroom
- Curriculum and lesson plans on renewable energy and energy issues
- A variety of teaching tools and materials to help engage students
- Experience creating hands-on projects that can be implemented in the classroom

To register for this course please call SEI - 970-963-8855. There is currently no on-line registration.

CSU Energy Website
To learn more about wind, solar, geothermal, and biofuels, visit our energy website at: http://www.ext.colostate.edu/energy**.**

Furthermore
Go to http://hes.lbl.gov/hes/db/zip.shtml and you can do an online calculation of your own energy use and carbon footprint. It's easy to use. Tell your communities about it.

Send me anything that's newsworthy that you're doing in the world of clean energy and renewables. We need to keep our colleagues up to date on what's going on in Extension and the value of our role!