



Minnesota Renewable Energy Society

connecting minnesotans with renewable energy resources

The Solar Flare

e-Bulletin from the Minnesota Renewable Energy Society

January 2009

January 2009 Highlights - (See details below)

- Monthly Member and Board Meeting – January 8, 2009
- Bringing Renewable Energy Home - January 9, 2009
- 11th Annual Midwest Value-Added Agriculture Conference - January 22-23, 2009
- Introduction to Renewable Energy Options & Opportunities - February 7, 2009
- CERTs 2009: Harnessing Resources & Teamwork for Minnesota's Energy Future - Feb. 10-11th
- Small Wind Turbine Installation Workshop - February 11–13, 2009
- Energy Design Conference, Duluth - March 9-11, 2009
- Solar Energy: Everything You Always Wanted to Know About Photovoltaics - April 4, 2009
- Solar Energy: Everything You Always Wanted to Know About Solar Water Heating - April 18, 2009
- Small Footprint Living Fair - June 12 & 13, 2009

Upcoming Events

January 2009 Member & Board Meeting

Thursday, January 9, 2009

6:00 PM – Guest Speaker

7:00 PM – Board Meeting

Location: Flannery Construction

[1375 St. Anthony Avenue, St. Paul, MN](#)



Center for Energy and Environment

Join us for the next MRES Member and Board Meeting on January 8 at Flannery Construction. Our guest speaker will be Sheldon Strom from the Center for Energy and Environment. He will give us an overview of the Center for Energy and Environment and the work that they do on energy efficiency. He will also give examples of how the economics of solar programs can be improved by coupling solar projects with energy efficiency. Mr. Strom will also speak about [Solar Cities](#).

Sheldon Strom is the President of the [Center for Energy and Environment](#), a nonprofit organization that promotes the responsible use of natural and economic resources. Under Sheldon's leadership, CEE's programs have served more than 60,000 homes and businesses with energy efficiency programs and completed over 100 research projects. Sheldon has also been actively involved in the development of utility policies and has a keen grasp of state regulatory procedures. He played a major role in the comprehensive energy and global warming legislation that was passed this year. Sheldon is a life-long resident of south Minneapolis and has a Master of Architecture degree from the University of Wisconsin/ Milwaukee and a Bachelor of Mechanical Engineering degree from the University of Minnesota.

BRINGING RENEWABLE ENERGY HOME:

Energy Policies To Maximize Energy Security
And Economic Development

Hosted by the Institute for Local Self-Reliance

January 9, 2009

St. Olaf College, Northfield, MN

8:30 a.m. Breakfast & Registration

9:00 a.m. to 5 p.m Conference

Only \$85 to register!



How can renewable energy help boost a sagging economy? When state policy helps cities and counties develop homegrown renewable energy! Register now for this timely conference on renewable energy payments, an innovative policy designed to give a level playing field to community-based energy projects.

- Learn how cities, counties, non-profits and more individuals can become owners of irenewable energy projects
- See how renewable energy can promote more economic development
- Discover how developing renewable energy can be made more simple
- Renewable energy payment (feed-in tariff) guru Paul Gipe gives the policy overview
- National policy expert Wilson Rickerson illustrates the spreading wave of renewable energy payment legislation
- Willi Voigt shares his experience with implementing renewable energy payments in Germany and their stunning success

Register: <http://www.newrules.org/de/fitconference.html>

11th Annual Midwest Value-Added Agriculture Conference

January 22-23, 2009

Rochester, MN - Mayo Civic Center

The 11th Annual Midwest Value-Added Agriculture Conference has targeted small- to medium-scale agricultural producers who want to create a unique market for their products, farm sustainably, and sell directly to the public.

The theme for this year's conference is "Farm and Home Added Value:

Profiting from Renewable Energy and Regional Food." The conference is an opportunity for farmers and local food advocates to make connections with each other and learn or improve business management and direct marketing skills. They will also have the opportunity to learn about a variety of alternative energy sources like cellulosic ethanol, methane digesters, and small-scale solar and wind electrical generation that can be harnessed to power their farms.



Participants can choose from 25 breakout sessions covering topics such as growing fresh market produce, direct marketing strategies, solar and wind energy, cellulosic ethanol production, profitability of managed grazing, and federal financial assistance programs. General session speakers will address maximizing value-added food products, the consequences of climate change, emerging carbon technology, developing your niche market, and safe food production.

Contact Diana Strain at Hiawatha Valley Resource Conservation and Development Council in Rochester at 507-281-1959, extension 4 for registration details. Or visit the conference website at:

www.rivercountryrcd.org.

Introduction to Renewable Energy Options & Opportunities

Saturday, February 7, 2009, 8:30 AM to 5:00 PM

Location: Flannery Construction, 1375 St. Anthony Avenue, St. Paul, MN

MRES offers Introduction to Renewable Energy (RE) Options & Opportunities: the course includes technology alternatives and options, including Solar PV (solar electric), Solar Hot Water & Space Heating, Passive Solar Hot Air Heating, Wind Energy, Energy Efficiency, RE environmental issues, RE costs, rebates & incentives, finance options, and RE career opportunities.

[Course registration](#) and details are on the MRES website.



- Learn about energy efficiency and why it is important.
- Learn how RE impacts the environment.
- Learn basics about RE technologies and options, including solar PV (electric), solar hot water and space heating, passive solar and active solar hot air heating, and wind energy systems.
- Learn about RE costs; environmental issues; rebates, incentives, and financing options; and RE resources.
- Learn about RE installations in Minnesota: lessons learned and success stories.

This MRES class is intended for homeowners, community leaders, business owners, green and RE career seekers, people interested in RE, and the general public (intended for age 18 and over).

Small Wind Turbine Installation Workshop—Professional Development

at Great River Energy Headquarters, 12300 Elm Creek Boulevard, Maple Grove, MN

February 11–13, 2009

Day 1: 10:00 a.m.–5:00 p.m.

Day 2: 9:00 a.m.–5:00 p.m.

Day 3: 9:00 a.m.–3:00 p.m.

Designed for New and Existing Small Wind Installers, MN Small Wind Manufacturers, Electricians, Consultants, PV Installers Interested in Wind, and Minnesota Renewable Energy Society Members.



Due to increasing interest in renewable energy and residential-sized wind turbines, this three-day workshop is being offered to provide an opportunity to learn the ins and outs of small wind project development. The timeliness of this workshop complements the growing demand and interest in renewable energy.

This three-day course will lead participants through all the necessary background information required to site and install a small wind turbine (up to 40 kW in capacity). The course will cover in detail all the steps for a successful project including timelines, initial planning stages, siting considerations, wind resource assessments and energy production estimates, tower considerations, zoning requirements, interconnection, insurance, used equipment, permitting, equipment assembly, decommissioning, plus much more. The workshop will be lead by Roy Butler of Four Wind Renewable Energy. He's an expert with more than 12 years of design and installation experience with wind electric systems.

Registration is \$125 and includes lunches and the resource manual Renewable Energy for Home, Farm and Business by Paul Gipe. Space is limited and is on a first come, first serve basis. Course registration is on the [MRES website](#). For questions on the workshop, contact the Minnesota Renewable Energy Society at www.mnRenewables.org or (612) 308-4757.

CERTs 2009: Harnessing Resources & Teamwork for Minnesota's Energy Future

Third Clean Energy Resource Teams (CERTs) Conference, February 10-11, 2009

CERTs 2009 will bring together over 500 Minnesotans who are blazing the paths to a clean energy future by working on energy efficiency and clean energy projects in their communities, thus accelerating our learning process together.

This conference could not come at a more important time. Our economy is hurting, energy prices are on the rise, and the impacts of global warming are becoming increasingly clear. Minnesotans of all stripes want to know what they can do. It just so happens that many of the solutions to our global climate crisis are also the ones that are going to help our economy and our communities thrive.

You can be a part of Minnesota's clean energy future, and you can get energy efficiency and clean energy projects on the ground in your community!

Whether you're a farmer, utility representative, school staff, local official, student, business owner—or member of any community—there is a role for you to play. Learn what people are doing across the state, connect, and share resources.

Participant, sponsor, and exhibitor registration is now available!

To learn more and register, visit: www.CleanEnergyResourceTeams.org

Submit a digital short for a chance to win fabulous cash and clean energy prizes! Make a 30 second to 3 minute video on your clean energy project, and enter it to win!

Videos must be received by **January 9th**. There will have a two-week public voting period in January, and finalists will be screened at the 2009 CERTs Conference Reception on the evening of February 10th.



The Clean Energy Resource Teams present:

Clean + Green

Video Shorts Contest and Film Festival

Submit a digital short for a chance to win fabulous cash and clean energy prizes! Finalists will be screened at the 2009 CERTs Conference Reception on February 10th!

Submissions should promote community energy efficiency or clean energy projects and CERTs, and be between 30 seconds and 3 minutes long. Videos must be received by January 9, 2009. For more information and complete contest rules, visit: www.CleanEnergyResourceTeams.org/Events/CleanGreenFilmFest

More Info: <http://www.cleanenergyresourceteams.org/events/cleangreenfilmfest>



Solar Energy: Everything You Always Wanted to Know About Photovoltaics

Saturday: April 4, 2009

Course Location:

Century College

3300 Century Avenue N.

White Bear Lake, MN

Phone: (651) 779-3341

9 a.m. to 3:45 p.m.

Room: Century East Campus 2313



Century College and the Minnesota Renewable Energy Society have co-developed, this one-day introductory course for homeowners and people interested in learning the basics of how to design a solar photovoltaic (PV) system for residential applications.

The essentials of creating electricity from sun light are covered. You will learn to evaluate solar site resource, when solar PV is the right solution, the economics and incentives for solar PV, and system design principles. System components, system sizing, PV panels, inverters, grid connected vs. non-grid connected systems, electrical connections, will be all explored.

Mario Monesterio, a 20+ year veteran of solar system installations, is the instructor in this course. Mario is a RE designer, industrial energy engineer, solar installer, Energy 10 instructor, certified Industrial/commercial energy auditor, and consultant. He is active in national efforts to set standards in the renewable energy industry and owner of [Best Power Intl. LLC](#).

People interested in taking the solar PV course may register on the [Century College website](#).

Course ID: 001826

Solar Energy: Everything You Always Wanted to Know About Solar Water Heating

Saturday: April 18, 2009

Course Location:

Century College

3300 Century Avenue N.

White Bear Lake, MN

Phone: (651) 779-3341



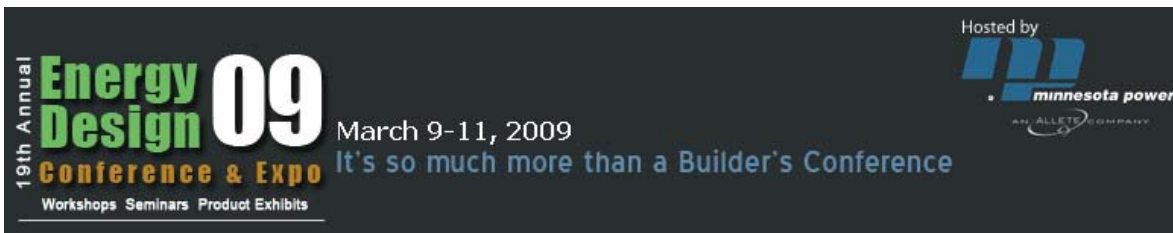
Century College and the Minnesota Renewable Energy Society have co-developed, this one-day introductory course for homeowners and people interested in learning the basics of how to design a solar hot water heating system for residential applications.

The essentials of creating domestic hot water from the solar radiation are covered. You will learn to evaluate solar site resource, when solar hot water is the right solution, the economics and incentives for solar hot water, and system design principles. System components, system sizing, solar thermal panels, storage tanks, heat exchangers, and plumbing connections, will be all explored.

Ralph Jacobson, a 25 year veteran of solar system installations, is the course instructor. He is a materials engineer, NABCEP certified in both solar PV and solar thermal installation. Ralph is currently involved developing a strategy for growing the solar industry in Minnesota and developing training programs for the building trades. He is also on the Board of Directors of the Minnesota Renewable Energy Society and the owner of [Innovative Power Systems](#).

People interested in taking the solar thermal course may register on the [Century College website](#).

Course ID: 001827



The annual Energy Design Conference and Expo started nearly twenty years ago as a one-day builder's conference with just 45 attendees. It has grown to become a regionally recognized event that attracts over 1,300 people and more than 75 exhibitors.

This event delivers a diverse selection of quality seminars and workshops to a variety of building, housing, and environmental professionals along with educators, students, homeowners, and others.

Attendees enjoy a unique opportunity to meet and network with individuals, companies, and organizations while learning more about the wise use of energy and resources.

For more information go to: www.duluthenergydesign.com

SMALL FOOTPRINT LIVING FAIR

Grand Marais, Minnesota

Fri., June 12, & Sat., June 13, 2009

9:00 a.m. – 5:00 p.m.



DATES HAVE BEEN CHANGED to June 12 and 13 for the 2009 SMALL FOOTPRINT LIVING FAIR. Individuals or businesses interested in exhibiting products or services relating to Sustainability and Green Living issues are invited to apply for exhibit space in the Small Footprint Living Fair.

All exhibitors must work directly with issues relating to "Small Footprint Living." Any crafts or goods sold should be made by the exhibitor from raw materials.

The 2009 Fair will emphasize (but is not limited to) four main areas: Green Business Practices, Alternative Energy, Green Building Construction, and Sustainable Foods. Product and service information and expertise is in any or all aspects of sustainability, or "living green."

Workshops for the fair will include:

- HANDS ON building of a permanent GREEN ROOF on a Community Center structure using the latest technology
- PRACTICAL STEPS for businesses large and small to become greener, including how to form partnerships with other businesses
- CHICKENS 101, and a FREE walking tour of vegetable gardens employing sustainable practices such as drip irrigation systems
- HANDS ON construction of a permanent rain garden
- And MUCH MORE!

Join the second Small Footprint Living Fair in Grand Marais:

Contact: Diane at the Cook County Extension Office: phone (218) 387-3015,

Cook County Extension, 317 W. 5th Street,

Grand Marais, MN 55604

E-mail: diane.booth@co.cook.mn.us

News

MRES Annual Meeting & 30th Anniversary Celebration

Minnesota Renewable Energy Society (MRES) celebrated its 30th Anniversary year, at its Annual Meeting on Thursday, December 11, 2008. More than 100 people attended the event.



Elections for members of the MRES Board of Directors were held and Michael Gallagher was elected as a new Board member, and David Boyce and Jan Hubbard were reelected as Board members.

[Michael Monroe](#) provided musical entertainment, and architects Loren Abraham, Doug Pierce, Tim Jordan, and Paul Mellbloom presented *Saving the Planet through Sustainable Architecture: An architects' panel on solar energy and sustainable architecture*.



Loren Abraham, Doug Pierce, Tim Jordan, and Paul Mellbloom presenting *Saving the Planet through Sustainable Architecture: An architects' panel on solar energy and sustainable architecture*



Musical Entertainment at the MRES Annual Meeting by Michael Monroe



Stacy Miller (MN Office of Energy Security) and Brian Ross (CR Planning, Inc.)
at the MRES Annual Meeting

Doug Shoemaker Awarded *Solar Star* Award

For his outstanding volunteer service to MRES, Doug Shoemaker was presented with the first *Solar Star* award by David Boyce.



David Boyce presenting Doug Shoemaker with *Solar Star* Award

Doug has served as an [MRES Board member](#) since 2005 and an MRES volunteer since 2004. In 2008, as he has in past years, Doug served essentially as a full-time volunteer. As the Co-Chair of the MRES Board of Directors, Chair of the Events Committee, an active member of the Executive, Advocacy, Training, and Outreach committees, he is responsible for raising well over half of the funds to cover expenses of the organization.

As the Events Committee Co-Chair, he traveled to and represented MRES at more than 20 table-top exhibit events in 2008. In addition, he coordinated, set-up, staffed and tore-down 4 major events: Living Green Expo (attendance ~25,000), Solar Boat Regatta (attendance ~150), Eco-Experience (attendance ~350,000), and the MRES Solar Tour (attendance ~2,000).

Doug is involved in several organizations representing sustainability in our environment, including but not limited to MRES, the [Minnesota Electric Auto Association](#), [Bioneers](#), and he has served on several community sustainability advisory committees. Moreover, he represented MRES at numerous community organizational meetings, conducted daily MRES business, telephone and email communication, and he has done more than any other person to help the organization succeed and grow.

Renewable Energy Careers



Roland Mann is an interim and executive search firm with a developed practice in renewable energy.

Their retained practice works with both growing U.S. firms, and established global energy companies and investors, wanting to start alternative energy operations in America.

The firm specializes in conducting national searches and providing hard to find executives that will fit with the corporate culture: sales and marketing, business development, and general management.

Roland Mann launched their www.WindEnergyCareers.com site to reflect the work they were doing in wind and other alternative energy fields. They offer companies a chance to post jobs for free on its site without retaining us for that specific assignment.

Roland Mann
AND ASSOCIATES, INC.

The Best People Proven For The Job.

Roland Mann encourages members of The Minnesota Renewable Energy Society and affiliated companies to promote their jobs for free on its website as a service to the efforts of The State of Minnesota and the Green Jobs Task Force.

Solar, renewable energy, energy efficiency, and related fields employers, if you want to list your renewable energy job opening in the Solar Flare, please send inquiries to: info@mnRenewables.org

Rent Solar PathFinder



Rent Solar Cart



Rent Solar Trailer

IPS Solar and the MRES have joined efforts to build the most versatile power supply in the state. The Solar Power Trailer is both an educational tool and a fully functioning power source that can provide quiet, clean, renewable power to any site. Use it for remote power at family reunions, picnics, church, or school events. Best Power donated the labor for the recent upgrade of the PV panels to 1.664 Kw.

Examples of What the Trailer Can Power:

- A concert for 5,000 people
- A small carnival
- Up to 25 trade show booths
- Temporary telecom sites
- About 5 concession stands
- About 200 laptop computers

Trailer Specifications:

- PV array rating 1664 watts (newly upgraded)
- 2 Trace SW4024 inverters (4 Kw at 48 volts)
- Battery bank rating 440 amp-hours = 21,120 Kwh
- 40 amp max at 110 vAC capacity
- Usable total battery capacity: 16,896 Kwh
- 10-volt 30-amp circuit breaker for larger concert equipment
- Approximate trailer weight: 3,000 pounds



To rent the solar trailer, solar cart, or solar pathfinder by contact David Boyce (651) 324-1642.

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www.mnRenewables.org

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