



Minnesota Renewable Energy Society

connecting minnesotans with renewable energy resources

The Solar Flare

e-Bulletin from the Minnesota Renewable Energy Society

November 2009

Highlights - (See details in following pages)

- Introduction to Renewable Energy Options and Opportunities, Nov. 14, p. 2
- E3: The Midwest's Premier Energy, Economic and Environmental Conference - Nov. 17, p. 2
- MRES Hosts Green Drinks - Nov. 11, Dec. 9, and Jan. 13, p. 11
- MREA Solar Thermal '09 Conference - Dec. 3rd - 4th, p. 3
- MRES Board Member Elections - Dec. 10, 2009, p. 4

Upcoming Events

November 2009 Member & Board Meeting

Thursday, November 12, 2009

5:30 PM – Networking and Pizza - Note new Time!

6:00 PM – Expert Guest Speaker

7:00 PM – Board Meeting

Location: Flannery Construction

[1375 St. Anthony Avenue, St. Paul, MN](http://www.flanneryconstruction.com)



[Representative David Bly](#) (District 25B, Minnesota) will honor MRES with his visit and presentation about feed-in tariffs (FITs). The idea of FIT/REP is to incentivize renewable energy investments by setting a fixed price over a specified contract period (e.g, 20 years) for selling energy back to the grid. A standard contract with utilities would make it possible for investors to calculate an accurate payback period. This would give banks the needed confidence to finance small scale distributed renewable energy projects such as residential solar, wind, and anaerobic digesters. The idea of FIT is based on models that have put Germany - in theory a country that has fewer renewable energy resources than Minnesota - in the forefront of renewable energy development. Similar legislation has been adopted or is being considered in other states.

Born and raised in Northfield and a St. Olaf graduate, Rep. David Bly is currently serving his second term in the Minnesota House of Representatives. He serves on the Higher Education and Workforce Development Finance and Policy Division, the Early Childhood Finance and Policy Division, the Energy Finance and Policy Division, and the Housing Finance and Policy and Public Health Finance Division. Bly is the chief author of the Renewable Energy Payments bill (Feed-in Tariff), which would spur growth in distributed energy generation, create jobs and help meet Minnesota's renewable energy standard.

Introduction to Renewable Energy Options & Opportunities

Saturday, Nov. 14, 2009, 8:30 AM to 5:00 PM (8:00 a.m. check-in)

New Location: Midwest Mountaineering, 309 Cedar Ave South, Minneapolis, MN 55454

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.



- 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). Don't wait too long to register; this class has been very popular and has filled well before it begins.

Class information on the [MRES classes and workshops](#) webpage.

\$55 MRES members; \$80 non-members

E3: The Midwest's Premier Energy, Economic and Environmental Conference

Tuesday, November 17 at the St. Paul River Centre



How do we provide sustainable fuel, food, fiber and fresh water to a global population of 9 billion people in our lifetime? That's one of the critical issues we'll explore during E3 2009. New this year, the conference features a lunchtime panel discussion with national experts, track sessions focused on the big questions of the 21st century, and a series of "Green on the Ground" workshops.

Hosted annually by the University of Minnesota's Initiative for Renewable Energy and the Environment (IREE), a signature program of the Institute on the Environment, the E3 conference showcases current technologies, environmental benefits and market opportunities in renewable energy. Each November, scientists, movers and shakers, and policymakers from across the Midwest and beyond join together to share knowledge and discoveries.

Regular registration prices available October 17 - November 13, 2009: UMN Faculty and Staff: \$80; External: \$100; Student Registration \$20. Onsite registration on November 17, 2009: UMN Faculty and Staff: \$90, External: \$110. More information and online registration: www.iree.umn.edu/e3

You might also want to check out "[Putting Minnesota on the Map: Next Steps for Building a Smart Grid Coalition](#)" on November 18, 2009 at the UMN St. Paul Student Center, Northstar Ballroom, St. Paul campus. Cost: \$25 and/ \$20 for E3 attendee.

SOLAR THERMAL '09

National Solar Heating & Cooling Conference
DECEMBER 3rd & 4th, 2009
Madison, Wisconsin
Monona Terrace



SOLAR THERMAL '09 is a national conference and expo for the solar thermal professional. The Midwest Renewable Energy Association (MREA) invites you to the only professional level conference devoted to solar heating and cooling. It is the only professional level Solar Thermal Conference of it's kind in the nation.

Installers, manufacturers, site assessors, dealers, distributors, state agency representatives, and policy makers will not want to miss this one-of-a-kind conference.

The MREA is currently calling for presenters, exhibitors and sponsors for the conference. Please visit <http://www.the-mrea.org/shwconference.php> for more information and to register for the conference. If you have any questions, please contact Kirsten at 715-592-6595.

CONFERENCE TOPICS INCLUDE:

- Solar hot water, solar hot air, and solar space heating sessions
- Manufacturer and dealer updates
- Best practices on residential and commercial applications
- New control and balance of system options
- Structural considerations
- State policy and incentive updates

REGISTRATION EXHIBITOR & SPONSORSHIP DETAILS

Register online, Paypal, Visa, and Mastercard accepted. If you cannot register online, contact the MREA at 715-592-6595 or www.the-mrea.org. You can also register at the REI here in Custer.

Whether you are new to the solar thermal industry or an experienced veteran, this conference will show you how to tap into the growing demand for solar water heating systems - and greatly expand the success of your business.

Supporting the Solar Thermal Conference

Interested in supporting the 2009 Solar Thermal Conference? Click [HERE](#) for a list of sponsorship opportunities. We are not limited to these opportunities so if you are interested in discussing other unique opportunities please contact Kirsten at kirsten@the-mrea.org.

Show off your company and connect with professionals from around the country. A limited number of exhibit spaces are available for the conference \$500 for 10 x 10. All exhibitors must also register for the conference. Contact Kirsten Olson at 715-592-6595 or kirsten@the-mrea.org with exhibitor questions.

Consider being an MRES Board Member!

The Minnesota Renewable Energy Society is seeking Board members. At the December Board Meeting, on December 10, 2009, annual elections will be held. And we are seeking three new board members! Learn great team-building & event-planning skills, network with many amazing people in the environmental field, boost your resume, or simply give back to the environmental community, by being a board member for the Minnesota Renewable Energy Society!

Our Mission

To advance a sustainable society and a renewable energy economy through education, leadership, and example.

Our Vision

To be a key catalyst in advancing solar energy and in transforming Minnesota's energy landscape to embrace efficiency and sustainability.



Our Values

Above all else, we believe in:

- Planning for the long term in order to preserve the commons for future generations;
- Equitable access to renewable energy for all;
- Effecting change through education and example;
- Embodying excellence and positivity;
- Honesty, science, and truth;
- And...perseverance.

The Minnesota Renewable Energy Society (MRES) is a member-run, 501(c)(3) non-profit organization founded in Minneapolis in 1978 and incorporated in Minnesota in 1979 to promote the use of, and to engage in advocacy for, renewable energies in Minnesota through education and through the demonstration of practical applications. MRES is involved in education, awareness, and advocacy efforts for all forms of renewable energy, with a particular emphasis on solar technologies.

Board members are elected annually by members of MRES for three-year terms on a rotating basis. The Board meets twelve times per year and hosts numerous events throughout the year that may require Board Member participation. Board members are required to attend the Board meetings. In addition, each Board member is responsible for participating in at least one of our Standing Committees throughout the year, and Board members must be a current MRES and ASES member.

Board members gain practical experience in planning and implementing programs, learn to value each other, and grow from what it takes to maintain a valuable non-profit organization. There are also many opportunities to network and get involved in whatever your area of interest may be.

To apply to the Board, please submit a short biography. This should be no longer than one-third of a page in 12 point font and should include:

- 1) Your organization affiliation.
- 2) What you can offer the Board and the MRES (experience, strengths, etc.).
- 3) Please submit your short biography to: Laura Cina, Interim Managing Director, by email: LauraC@mnrenewables.org Call Laura with questions: 612-267-5893

These biographies will be listed in the December issue of the Solar Flare and the elections will be held on December 10th at the Board Meeting. Board Member candidates do not need to be present at this event. Please forward this opportunity to others interested in environmental networking!

ISES Recommends 100% Renewable Energy via Worldwide Feed-In Tariffs

JOHANNESBURG, South Africa – October 14, 2009 – At the ISES Solar World Congress 2009, the International Solar Energy Society (ISES) released a resolution stating that 100% renewable energy is both necessary and attainable by the middle of this century, on grounds of ecological, economic and social sustainability.

In the resolution, ISES said, “On the international level, the introduction of a global feed-in tariff system is recommended as a primary instrument to foster international technology transfer and finance scaling up of renewables, especially in the third world. Such a global feed-in tariff has the unique potential of overcoming the blockage in the current climate change negotiations.”



ISES called upon the world’s governments to implement policies without delay that have been proven internationally to be the most effective and efficient in the rapid transition to a renewable energy world and avoid any kind of caps that may slow down renewable energy deployment.

“As a guiding principle, local and rural communities and people should be actively involved and benefit directly from renewable energies. Governments should especially encourage and support community power projects and distributed generation as well as investment in renewable energy manufacturing facilities in order to foster the local creation of jobs,” said ISES in the resolution.

ISES strongly recommended the introduction of a national Green Energy Act as crucial to providing an overarching and comprehensive framework for renewable energy so that in the near future

the necessary steps will be taken to attract local as well as international investors.

Founded in 1954, ISES today is one of the largest organizations in the field of research, utilisation and promotion of Renewable Energy Technology. With National Sections in more than 50 countries and 4 regional offices, ISES forms a global renewable energy community of members in over 100 countries worldwide. ISES is a multi-faceted, global membership organization. With its long history and extensive technical and scientific expertise provided by its members, the Society is a modern, future-oriented non-governmental organization (NGO). Clearly defined goals, extensive communication networks and practical, real-world projects are the hallmarks of ISES. ISES Headquarters is located in Freiburg, Germany: www.ises.org

The American Solar Energy Society (ASES) is the American National Section of ISES. Established in 1954, the nonprofit ASES is the nation’s leading association of solar professionals & advocates. ASES’ mission is to inspire an era of energy innovation and speed the transition to a sustainable energy economy. ASES advances education, research and policy. ASES leads national efforts to increase the use of solar energy, energy efficiency and other sustainable technologies in the U.S. ASES publishes the award-winning SOLAR TODAY magazine, organize and present the ASES National Solar Conference and lead the ASES National Solar Tour – the largest grassroots solar event in the world. ASES is located in Boulder, Colorado: www.ases.org

The Minnesota Renewable Energy Society (MRES) is the Minnesota Chapter of ASES. Throughout the year, MRES presents renewable energy classes and workshops and events such as the Solar Boat Regatta, Minnesota Solar Tour, and The Eco Experience solar exhibit at the Minnesota State Fair. MRES is located in Minneapolis, MN: www.mnRenewables.org

MnSEIA meets MRES

SAINT PAUL, Minn. – Nov. 8, 2009 – Lynn Hinkle, the new Minnesota Solar Energy Industry Association ([MnSEIA](#)) Director of Policy Development, discussed how the new MnSEIA group. MnSEIA will help grow the Minnesota solar industry in a process that already includes various organizational members, such as installers, manufacturers, utilities, contractors, labor, and public entities. Ralph Jacobson, Rebecca Lundberg, Doug Shoemaker, and Jan Hubbard also said a few words about MnSEIA.



Lynn Hinkle addressed MRES members

MRES Exhibits at the Midwest Facilities Expo

MINNEAPOLIS – Oct. 28, 2009 – Doug Shoemaker and Tim Bethke spent two days at the Minneapolis Convention Center speaking with visitors at the Midwest Facilities Expo. The Midwest Facilities Expo is a two day trade show floor full of cutting edge products and services and free educational sessions. This year, Facilities Expo featured Managing Green Buildings.



Tim Bethke speaking to a visitor at the Midwest Facilities Expo

MRES at Northland Bioneers Conference

MINNEAPOLIS – Oct. 24, 2009 – Tim Bethke and Doug Shoemaker worked the exhibit at the Northland Bioneers Conference.



Tim Bethke interviewed for local TV channel

District Energy Gets \$1 million DOE Grant

SAINT PAUL – Oct. 23, 2009 – Anders Rydaker, President of District Energy, joined Mayor Chris Coleman of St. Paul, Mayor, R.T. Rybak of Minneapolis, Charlie Hemmeline, Director of Market Transformation for the U.S. Department of Energy Solar Program, and other Twin Cities solar dignitaries to announce solar thermal or hybrid solar thermal/photovoltaic systems to be installed on the Xcel Energy Center in St. Paul using the \$1 million grant administered through the U.S. Department of Energy and its own matching funds.



The project with District Energy is one of 40 projects that were selected nationwide to help speed adoption of solar energy while supporting development of a skilled workforce and continuing to pursue new scientific breakthroughs to increase the efficiency and lower the cost of solar technologies. U.S. Secretary of Energy Steven Chu announced the grant in early October as part of \$87 million awarded to universities, electric power utilities, the DOE's national laboratories, and local governments to support use of solar technologies in U.S. cities. This project was selected to receive \$1 million of the \$10 million in grants dedicated to Solar America Cities' Special Projects.

In recent years, mayors and cities have taken the lead to improve our environment and find innovative solutions to our energy challenges. Now with a partner in the White House who understands the significant role cities play in our nation's economy, we can move forward with projects that create jobs and solutions to our energy needs," Saint Paul Mayor Chris Coleman said.

"Finding solutions to our energy needs will lead to job growth and lift our economy. Innovation has driven our state and national economy in the past, and the challenges of today demand we reignite that innovative spirit," Minneapolis Mayor R.T. Rybak said.

"Meeting the energy needs of our cities requires the integration of multiple, sustainable energy sources, and solar will play a key role," said District Energy CEO Anders Rydaker. "District Energy is committed to integrating solar into our energy generation portfolio and demonstrating how solar can be used to transform the future of cities throughout the United States."

District Energy St. Paul, a 501(c)(3) non-profit utility, now heats and cools more than 80 percent of the buildings in downtown Saint Paul as well as 300 single-family homes: www.districtenergy.com

MRES Hosts Green Drinks

Saint Paul, Minn. – October 14, 2009 – At O’Gara’s Bar & Grill, Rebecca Lundberg, MRES Board Member and CEO of Powerfully Green discussed residential solar electricity applications.



Rebecca Lundberg speaking about Solar Energy at Green Drinks

The next Green Drinks event will be on Nov. 11 at Trotters Cafe at 232 Cleveland N. Ave, St. Paul. Ralph Jacobson, MRES Board member and CEO for Innovative Power Systems will discuss how now, more than ever, Minnesota needs a comprehensive planning process for energy conservation and renewable energy, to engage all of the stakeholders to do their part in moving clean energy to the mainstream. Check the TC Green Drinks website weekly for venue changes.

TC Green Drinks: <http://greendrinks.org/index.php?region=USA&city=Minneapolis/St.%20Paul>

Renewable Energy Careers and Networking

GREEN JOBS at CERTS

SLAYTON, Minn. – Nov. 9, 2009 – The Southwest and West Central Clean Energy Resource Teams (CERTs) seek temporary appointment of Southwest and West Central CERT Regional Coordinator(s).

The Coordinator will be instrumental in working with various organizations and individuals to move community-scale projects forward within the region by connecting people with the technical resources they need to identify and implement local energy efficiency and clean energy projects.

Position will be paid by contract with CERTs \$16.00 - \$20.00 an hour for either a 40-hour/week apt or two 20 hours/ week appointments from December 2009 – June 2010 (no benefits) and with the potential for renewal through June 2011. Southwest and West Central CERT Coordinator(s) will be supervised by and report to the CERT Coordinator for the UM Regional Sustainable Development Partnerships. Position may office out of a home office or may be provided space with one or more of the Project Partners. BA or BS, technical background in energy research and data analysis desired but not required. Travel is required to perform the responsibilities of this position, personal vehicle is required, reimbursement of travel will be made according to State policies.

Position general responsibilities, qualifications and additional information can be accessed at <http://www.cleanenergyresourceteams.org>. Send resume to Annette Bair, Southwest Regional Development Commission and Southwest CERT coordinator by 11/20/09 4:30 pm at either phydev@swrdc.org or 2401 Broadway Ave, Slayton, MN 56172. Position to be filled by January 2010. Phone: 507.836.1631 Fax: 507.836.8866

The Clean Energy Resource Teams are a joint program of the University of Minnesota Regional Sustainable Development Partnerships, the Southwest Regional Development Commission, the Minnesota Project, Minnesota Department of Commerce, and the Green Institute. The CERTs program brings together team members from diverse backgrounds including farmers, utility representatives, state and federal government staff, educators and academics, small business owners, members of non-profit and environmental groups as well as individuals interested in energy issues. Together they work to identify and implement community-scale energy efficiency and renewable energy projects across the state. Major funding is provided by Minnesota Department of Commerce, The Blandin Foundation, Minnesota Pollution Control Agency, University of Minnesota Institute for Renewable Energy and the Environment, University of Minnesota Regional Sustainable Development Partnerships, and U.S. Department of Energy.

MRES Host Green Drinks

MRES hosts Green Drinks at:

Trotters Cafe

www.trotterscafe.com

232 Cleveland N. Ave, St. Paul MN 55104

Cleveland and Marshall, parking behind Midway Cleaners, or consider TAKING THE BUS!



Host Group:

Minnesota Renewable Energy Society (MRES)

Contact: Laura Cina <LauraC@mnRenewables.org>

www.mnRenewables.org

Dates:

November 11 / 6-7:30-ish

Ralph Jacobson from [Innovative Power Systems](#) will discuss how now, more than ever, Minnesota needs a comprehensive planning process for energy conservation and renewable energy, to engage all of the stakeholders to do their part in moving clean energy to the mainstream. There are even now turf battles brewing, and structural conflicts being inadvertently built into the system, which will set the conservation folks at odds with the renewable energy folks for years to come, if we're not careful. And almost completely avoidable!! Ralph Jacobson will talk about what we can learn from other states which have programs in place, and how we can start putting a program together here.

December 9 / 6-7:30ish

Solar in the Third World! We will discuss Solar Energy possibilities in Third World countries, how it's a benefit and what we can do to help. Linda Cullen Weiley will be there to discuss her non-profit, Fifty Lanterns. Fifty Lanterns distributes solar flashlights and lanterns to women and children in countries such as Afghanistan and Rwanda. Mike Port will be there to discuss the non profit, The Solar Oven Society who makes and helps distribute solar ovens all over the world to help reduce the use of firewood for cooking which helps reduce detrimental health and environmental effects.

www.solarovens.org www.50lanterns.org

January 13, 2010 / 6-7:30-ish

Loren Abraham of Abraham + Associates Architects will discuss the basics of passive solar and how it can be implemented in a home in order to use less energy and Joe Gransee Bowman will discuss the Passive House design approach that is being used in Europe to create ultra efficient homes.

TC Green Drinks: <http://greendrinks.org/index.php?region=USA&city=Minneapolis/St.%20Paul>

The Twin Cities Green Drinks (TCGD) is part of a global non-movement to charge your eco spirit, make some new connections, and learn a thing or two. All of our haunts offer a variety of organic food and beverages for ALL ages. Green-Drinkers from other cities are always welcome!

Network with MRES on Facebook and LinkedIn



Just click on these buttons to be our Facebook Friend and join our LinkedIn Group.

www.mnRenewables.org

Rent Solar Cart



Rent portable solar power @ \$50

Rent Solar PathFinder



Solar PathFinder - \$25 rental to MRES members

Rent Solar Trailer

[IPS Solar](#) and 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 solar power to any site. Use it for remote power at family reunions, picnics, church, or school events. [Minnesota MPCA](#) donated the PV panels to upgrade the Solar Trailer to 1.664 Kw, and [Mario Monesterio of Westwood Renewables](#) donated the labor to install the recent upgrade with the new PV panels.

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



Solar Trailer

To [rent the solar trailer](#), solar cart, or solar pathfinder - contact David Boyce at (651) 324-1642 or DavidB@mnRenewables.org

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