

DAIRY ENERGY SYMPOSIUM

March 2, 2005

and

43RD ANNUAL RURAL ENERGY CONFERENCE

March 3-4, 2005

Holiday Inn St. Paul East
St. Paul, MN



Sponsored by

Midwest Rural Energy Council
University of WI, MN and Iowa State Extension
University of WI Biological Systems Engineering Dept.
University of MN Biosystems and Agricultural
Engineering Dept.
Iowa State University Agricultural and Biosystems
Engineering Dept.

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University of Wisconsin-Madison
College of Agricultural & Life Sciences

CALS Conference Services
620 Babcock Drive
Madison, WI 53706

Dairy Energy Symposium Agenda

Powering the Dairy Industry

A symposium for dairy producers and their energy service providers.

Wednesday, March 2

- 9:30 am Registration and Continental Breakfast
- 10:00 **Modernizing Your Dairy**
An overview of what the dairy farm of the 21st century will look like; cutting edge electrical and information technologies and the dairy farm as an electrical energy generator
Douglas J. Reinemann, Professor of Biological Systems Engineering, UW-Madison, Milking Research and Instruction Laboratory
- 10:30 **Building Energy Efficient Dairy Farms**
Review of the latest energy efficient technologies
Scott Sanford, Senior Outreach Specialist, Department of Biological Systems Engineering, UW-Madison
- 11:15 **Considering an Anaerobic Digester?**
Update on digester designs that work, manure handling systems for digesters and electric generation technology
Mark Moser, RCM Digesters
- 12:00 pm Lunch

- 1:00 **Your Electrical System**
How to do it right the first time and when is it time to rewire.
Mark Cook, State Certified Electrical Inspector
- 1:45 **Everything You Ever Wanted to Know About Putting Wind Power on Your Farm.**
David Blecker, 7th Generation Energy
- 2:30 Break
- 3:00 **Breakout Sessions**
(for individual discussions and more detailed information)
- ◆ The modern milking parlor: labor efficiency, energy efficiency, variable frequency drive applications, water heating, milk cooling, data systems and management
 - ◆ Anaerobic digesters
 - ◆ Grid interconnect issues
 - ◆ Electric fences and cow trainer installation and safety
 - ◆ Efficient and effective ventilation
 - ◆ Let there be efficient lighting
 - ◆ Power quality protection
 - ◆ Small scale wind generators and large scale wind farms
 - ◆ Working with an electrical contractor
- 4:30 **Adjourn**

Please note: The conference and symposium are two different events. You can register for either one or both. Please see the registration panel.

MREC Officers/Board Members

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William Johnson, Alliant Energy (WI)
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Doug Reinemann, University of Wisconsin-Madison (WI)

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Jay Harmon, Iowa State University (ex-officio)

Steve Healy, Pierce-Pepin Electric Cooperative (WI)**
William Johnson, Alliant Energy (IA, IL, MN, WI)
Kendall Kahl, Madison Gas & Electric Company (WI)
Mike Kawleski, Wisconsin Public Service Corporation
Wes Lane, Otter Tail Power Company (MN, ND)
Steve Meyer, Jackson Electric Cooperative (WI)**
Vance Morey, University of MN-St. Paul (ex-officio)
Roger O'Neil, Xcel Energy (MN, WI)
Douglas Reinemann, University of WI-Madison (ex-officio)
Troy Schiltz, Tri-County Electric Cooperative (MN)*
Tim Weir, Stearns Electric Association (MN)*

* Member of MN Rural Electric Association (MREA)

** Member of WI Electric Co-op Association (WECA)

Conference Agenda

Thursday, March 3

- 7:30 AM Registration & Continental Breakfast
 8:00 Welcome and Introductions
 8:30 **The Iowa BioEconomy Initiative and USDA/DOE BioEnergy/BioProducts Programs**
Dr. Robert C. Brown, Bergles Professor in Thermal Science, Director of the Office of Biorenewables Programs at Iowa State University
 9:30 **Powering the Plains: Initiatives in Energy and Agriculture**
Brad Crabtree, The Great Plains Institute for Sustainable Development
 10:15 Break
 10:30 **The Apollo Alliance: Creating a Stronger Economy Through Energy Independence**
Joel Rogers, UW-Madison, Center on Wisconsin Strategies (COWS)
 11:15 **From Agro Forestry to Electric Power**
Ken Ragland, Energy Performance Systems, Inc.
 12:00 PM Lunch
 1:00 **Introduction to Break-out Sessions**
 1:15 **Break-out Session No. 1**
 2:00 **Break-out Session No. 2**
 2:45 Break
 3:00 **Break-out Session No. 3**
 3:45 **Break-out Session No. 4**

- 4:30 Social Hour
 5:30 Buffet Dinner
 6:30 **Communications Skills Workshop**
 8:00 Adjourn

Friday, March 4

- 7:00 AM Breakfast Buffet
 8:00 **MREC Business Meeting**
 8:30 **Agricultural Wiring Materials and Electric Code Update**
LaVerne Stetson, USDA-ARS, University of Nebraska, Emeritus
 9:15 **Stray Voltage - Regulation Versus Litigation**
Paul Ortmann, Power Quality Engineer, Idaho Power Co.
 10:00 Break
 10:15 **Energy Efficiency Opportunities in Food Processing Plants and Other Rural Industries**
Tom Tucker, Focus on Energy
 11:00 **Bio Energy Research at the University of Minnesota**
Vance Morey, University of Minnesota
 11:30 **Earth Current Research Update**
Doug Reinemann, UW-Madison
 12:15 PM Adjourn

Break-out Sessions

Energy Resources

- Chemicals and Power via Biomass Gasification and Fast Pyrolysis**, *Dr. Robert C. Brown*, Iowa State University
- Anaerobic Digester Electrical Technologies**, *Mark Moser*, RCM Digesters
- Wisconsin Biorefining/Bio-Energy Roadmap**, *Jenny Hermans*, UW-Madison
- Corn Plus: Biomass For Natural Gas Process Heat Replacement In Ethanol Plants**, *Tom Leneghan*, Alliant Energy
- Microturbines for Combined Heat and Power from Biogas**, *Jan Scott*, Unison Solutions

Ag Wiring and Stray Voltage

- Idaho Power's Stray Voltage Program**
Paul Ortmann, Power Quality Engineer, Idaho Power Co.
- Agricultural Energy Conservation Web Resources**, *Scott Sanford*, UW-Madison
- Overview of NFPA Rules on Protective Gear for Electrical Investigations**, *Tom Seidl*, We Energies
- Stray Voltage Measurement Workshop**, *Chuck Forster*, Phasor Labs
- The Facts About Electrical Filtering**, *Dick Reines*, Public Service Commission Of Wisconsin



Registration

Please refer to the registration panel for symposium and conference fees. The **Dairy Energy Symposium fee includes** materials, breaks, and lunch. Hotel accommodations are not included.

The **Conference registration fee includes** materials, continental breakfast, breaks, lunch, reception, and dinner Thursday. Breakfast and break is included on Friday. Hotel accommodations are not included in the fee.

Make check payable to: UW-Madison

Mail or fax to:

CALS Conference Services
 620 Babcock Drive
 Madison, WI 53706
 Fax: (608) 262-5088

Or register on-line at: <http://www.peopleware.net/2723>

Cancellations: In order to receive a full refund, you must cancel by contacting CALS Conference Services at (608) 263-1672 prior to February 24. If you fail to cancel by February 24, the full fee will apply. Substitutions are welcome at any time.

Questions: Contact CALS Conference Services at (608) 263-1672.

Location & Lodging

A confirmation notice and map will be mailed upon receipt of registration. The conference will be held at:

Holiday Inn St. Paul East
 2201 Burns Avenue
 St. Paul, MN 55119
 Phone: (651) 731-2220

A block of rooms has been reserved until February 15, 2005 for conference participants at the nightly rate of \$99.00/single plus taxes. Be sure to mention that you are attending the *MREC Rural Energy Conference* to receive the special rate.

Registration Form

43rd Annual Rural Energy Conference & Symposium March 2-4, 2005

Complete a separate registration form (or copy) for each registrant or register on-line at <http://www.peopleware.net/2723>

Early registration deadline is February 17, 2005

Name _____

Company _____

Address _____

Circle one: Home or Business

City/State/Zip _____

Daytime Phone _____

E-mail _____

The conference and symposium are two separate events. You can register for either one or both.

- Yes, I'd like to register for the **Dairy Energy Symposium**
- \$ 75 (\$85 received after Feb. 17)
- Yes, I'd like to register for the **conference**
- \$ 195 members* (\$210 received after Feb 17)
- \$ 225 non-members** (\$240 after Feb. 17)

_____ **Total Enclosed**

* *Members include employees of IOUs and Co-ops that are Full members; and Corporate Affiliate and Affiliate members.*

** *Includes an Affiliate membership to MREC.*

Enclose fee. Checks payable to **UW-Madison**

- Check enclosed
- Purchase order number # _____
- Please charge on the following account

_____ VISA	_____ Master Card
Card Number _____	
Exp. Date _____ Name on Card _____	
Signature _____	

Register on-line at: <http://www.peopleware.net/2723>