

41ST ANNUAL RURAL ENERGY CONFERENCE & SEMINAR

March 5-7, 2003
 Holiday Inn St. Paul East
 St. Paul, MN



Sponsored by
 Midwest Rural Energy Council
 University of WI and University of MN Extension
 University of WI Biological Systems Engineering Dept.
 University of MN Biosystems and Agricultural
 Engineering Dept.

Seminar Agenda

Update on Measuring Cow Contact Voltages

Improve your understanding and application of measurement equipment for measuring 60 Hz and high frequency voltage/current.

Wednesday, March 5

8:00 - 8:45 am	Registration	12:00 - 1:00 pm	Buffet Lunch
8:45 - 9:00	Welcome	1:00 - 2:00	Review of Instruments on the Market - VOMs, Oscilloscopes, and power quality analyzers Chuck Forster, Phasor Labs
9:00 - 10:00	What's Out There - a description of the types of voltages and currents and electrical and magnetic fields occurring in the farm environment Mark Cook, Wisconsin Public Service Commission	2:00 - 4:00	Instrument Lab - hands on experience measuring low and high frequency waveforms Cook, Forster & Reinemann
10:00 - 11:00	Animal Sensitivity - single component waveforms and multiple frequency events Douglas Reinemann, University of Wisconsin-Madison	4:00 - 5:00	Analysis of Lab Data and Wrap Up Cook, Forster & Reinemann
11:00 - 12:00	Instrument Basics - sample rate, data analysis and compression, measurement leads Chuck Forster, Phasor Labs	5:00	Adjourn

Continuing Education Units (CEUs) are available to those who wish to receive credit for this program. Contact CALS Outreach Services at (608) 263-1672, 620 Babcock Drive, Madison, WI 53706 for information on how to receive CEUs.

MREC Officers/Board Members

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 Douglas Reinemann, University of WI-Madison
 Troy Schiltz, Tri-County Electric Cooperative (MN)
 Rick Seeling, United Services Group (MN)*

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

Conference Agenda

Thursday, March 6

- 8:00 - 8:45 AM Registration & Buffet Breakfast
- 8:45 - 9:00 Welcome
- 9:00 - 10:30 **The Scientific Investigation of Real World Problems**
John Loud, Exponent
- 10:30 - 10:45 Break
- 10:45 - 11:30 **Final Report on Earth Current Measurements in Wisconsin**
David Alumbaugh, UW-Madison
- 11:30 - 12:15 **Updates on Recent Legal Developments in Stray Voltage**
Robert Fick, Alliant Energy
Chuck Denardo, We Energies
Keith Tinsey, Michigan Ag Electric Council
- 12:15 - 1:15 PM Buffet Lunch
- 1:15 - 1:30 **Intro. to Break-out Sessions**
- 1:30 - 2:30 **Break-out Session No. 1**
- 2:30 - 2:45 Break
- 2:45 - 3:45 **Break-out Session No. 2**
- 3:45 - 4:00 Break
- 4:00 - 5:00 **Break-out Session No. 3**
- 5:00 - 6:00 Social Hour
- 6:00 - 7:00 Buffet Dinner

Friday, March 7

- 7:00 - 8:00 AM Buffet Breakfast
- 7:30 - 8:00 **MREC Business Meeting**
- 8:00 - 8:15 **Introduction**
- 8:15 - 9:15 **EPRI Contact Current Research**
Robert Kavet, EPRI
- 9:15 - 10:00 **Stress and Workplace Safety Concerns**
John Shutske, UM-St. Paul
- 10:00 - 10:15 Break
- 10:15 - 10:45 **Chemicals and Fuels from Biomass in the Midwest: Iowa State University**
Norm Olson
- 10:45 - 11:15 **Update on Biomass & other Research: University of Minnesota**
Vance Morey
- 11:15 - 11:45 **Dairy Cow Reaction to Multiple Frequency Wave Forms**
Douglas Reinemann
- 11:45 - 12:30 **Accomplishments of the WI Public Service Commission**
Mark Cook, WI Public Service Commission
- 12:30 **Adjourn**

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Break-out Sessions

1. **Distributed Generation: Applications in Rural Areas**
2. **Coordinated Response to Farm Bill Initiative**
3. **Overview of Stray Voltage Instrumentation**
4. **The Scientific Investigation of Real World Problems: Q/A Session**
5. **Automated Meter Reading**
6. **A Veterinarian's Perspective on Stray Voltage**

John Helbling, Alliant Energy
 Rich Hackner, WI Focus on Energy
 Douglas Reinemann, UW-Madison and Chuck Forster, Phasor Labs
 John Loud, Exponent
 Robert Richardson, DCSI and Allan Herrman, WI Public Service
 John Roberts, WI Dept. of Ag. Trade and Consumer Protection



Registration

Please refer to the registration panel for seminar and conference fees. **Seminar fee includes** materials, breaks, and lunch. **Conference registration fee includes** materials, breakfast, breaks, lunch, reception, and dinner Thursday. Breakfast and break is included on Friday. Hotel accommodations are not included in the fees.

Make check payable to: UW Madison

Mail or fax to:

CALS Outreach Services
 620 Babcock Drive
 Madison, WI 53706
 Phone: (608) 263-1672 or Fax: (608) 262-5088

Cancellations: In order to receive a full refund, you must cancel by contacting CALS Outreach Services at (608) 263-1672 prior to February 26. If you fail to cancel by February 26, the full fee will apply. Substitutions are welcome at any time.

Questions: Contact CALS Outreach 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

I-94 at McKnight Road
 2201 Burns Avenue
 St. Paul, MN 55119
 Phone: (651) 731-2220

A block of rooms has been reserved until February 19, 2003 for conference participants at the nightly rate of \$99/single plus 13% room tax. Be sure to mention that you are attending the *MREC Rural Energy Conference to receive the special rate.*

Registration Form

41st Annual Rural Energy Conference & Seminar March 5-7, 2003

Complete a separate registration form (or copy) for each registrant.

Registration deadline is February 17, 2003

Name _____

Company _____

Address _____

Circle one: Home or Business

City/State/Zip _____

Daytime Phone _____

E-mail _____

Web site _____

Seminar Registration Fees:

- \$ 160 members* (\$175 received after Feb. 17)
- \$ 185 non-members** (\$200 received after Feb. 17)

Conference Registration Fees:

- \$ 195 members* (\$210 received after Feb 17)
- \$ 225 non-members** (\$240 after Feb. 17)

_____ **Total Enclosed**

* *Members include employees of IOUs and Co-ops, the MEUW; and Association 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 _____	