

STRAY VOLTAGE MEASUREMENT WORKSHOP

February 27, 2008

and

46TH ANNUAL RURAL ENERGY CONFERENCE

February 28-29, 2008

Radisson Hotel
La Crosse, Wisconsin



Sponsored by

Midwest Rural Energy Council
University of WI, MN, Iowa and South Dakota State Extension
University of WI Biological Systems Engineering Dept.
University of MN Biosystems and Agricultural
Engineering Dept.
Iowa State University Agricultural and Biosystems
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South Dakota State University Agricultural and
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College of Agricultural & Life Sciences

CALS Conference Services
620 Babcock Drive
Madison, WI 53706

Workshop Agenda

Stray Voltage Measurement Workshop

This year's pre-conference technical workshop will provide you with a refresher on some basic stray voltage circuit analysis in the morning and some advanced stray voltage and power quality measurement topics in the afternoon. The instructors for this seminar will include Mark Cook (Public Service Commission of Wisconsin), Tom Seidl (We Energies) and Dr. Doug Reinemann (University of Wisconsin-Madison).

Wednesday, February 27

7:00 AM	Breakfast	5:00	Dinner
8:00	Introductory Stray Voltage Testing Update -- Review of Primary, Secondary and Cow Contact Circuits - <i>Mark Cook, Tom Seidl and Doug Reinemann</i> -- Review of Basic Cow Contact and Steady State Measurement Methods (PSCW Phase I) - <i>Mark Cook and Tom Seidl</i>	6:00	Update on Michigan Rulings <i>Rod Lewis</i>
12:00 PM	Lunch	6:30	Current Topics and Alternative Views <i>MREC Panel and Dr. Bruce Wollenberg, University of Minnesota Department of Electrical Engineering</i>
1:00	Advanced Stray Voltage Testing Update -- Determining On and Off Farm Sources of NEV: Load Box Testing 120/240 V (PSCW Phase II Protocol) -- <i>Mark Cook, Tom Seidl</i>	7:30	Adjourn

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

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* Member of MN Rural Electric Association (MREA)

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

Conference Agenda

This year's annual conference will have two tracks, one focused on agricultural wiring, electrical distribution and stray voltage issues and another on energy efficiency and renewable energy development in agricultural operations. All of the breakouts will be presented multiple times so that you can choose from both tracks to design your own conference agenda. The MREC and UW have been working with the Natural Resource Conservation Service of USDA to design on-line self assessment tools for energy efficiency and renewable energy development on farms. We will be unveiling these tools and providing tutorials on each as part of Track 2.

Thursday, February 28

- 7:00 AM Registration & Full Breakfast
8:00 Welcome and Introduction to Breakouts - *Bill Johnson*, Alliant Energy, MREC President
Track 1: Farm Wiring, Stray Voltage, and Electrical Distribution
Track 2: Farm Energy Efficiency and Renewable Energy Systems
8:30 **Breakout Sessions (4 sessions)**
12:00 PM Lunch
1:00 **Breakout Sessions (5 sessions)**
5:15 Adjourn
5:30 Dinner and Evening Program
Dealing with Personally and Professionally Challenging Situations - *Stefan Salmonson*, Protective Services
7:30 Optional Tour of City Brewery in La Crosse

Friday, February 29

- 7:00 AM Full Breakfast
8:00 **Meeting Renewable Energy Portfolio Goals**
Moderator: *Bill Johnson*, Alliant Energy
Panelists: *Paul Johnson*, MN Power; *Mark Rathbun*, Great River Energy; *Chris Vandeventer*, Basin Electric Power Cooperative; *Rob Benninghoff*, WI Public Service Corp.; *Steve Schultz*, Ottertail Power
10:30 Break
10:45 **MREC Business Meeting and Review of New Features on www.mrec.org**
11:15 Adjourn and Checkout

Break-out Sessions

Track 1: Farm Wiring, Stray Voltage, and Electrical Distribution

- Review of Filters for 'Dirty' Electricity** - *Dr. Bruce Wollenberg*, University of Minnesota Department of Electrical Engineering
- IEEE Stray and Contact Voltage Working Group Update**, *Chuck DeNardo*, We Energies
- Review of Fluke TI555 Thermal Imaging for Distribution Monitoring**, *Paul Twite*, 24-7 Power Inc.
- Farm Re-Wiring and Inspection and Transmission Under-Build Issues**, *Mark Cook*, PSC of Wisconsin
- Review of Waverider Setup for Stray Voltage Monitoring**, *Jim Biesterveld*, Dunn County Electric Cooperative
- Meta-Analysis of Stray Voltage Studies**, *Linda Erdreich*, Exponent
- Considerations for 400 Amp+ Service on Single-Phase Distribution**, *Nick Veverka*, Alliant Energy
- Dealing with Personally and Professionally Challenging Situations**, *Stefan Salmonson*, Protective Services

Track 2: Farm Energy Efficiency and Renewable Energy Systems

- Introduction to USDA/NRCS On-Line Energy Self Assessment Tools** - *Stefanie Ashman*, NRCS
- NRCS Energy Efficiency Tools: Dairy and Beef Operations**, *Joe Schultz*, GDS Associates
- NRCS Energy Efficiency Tools: Greenhouses**, *Scott Sanford*, University of Wisconsin-Madison
- NRCS Energy Efficiency Tools: Ag Lighting, Livestock Waterers**, *Jennifer Brinker*, GDS Associates
- NRCS Energy Efficiency Tools: Grain Drying, Irrigation Potato Storage**, *Scott Sanford*, University of Wisconsin-Madison
- NRCS Renewable Energy Tools: Wind, Solar, Biomass**, *Jeannette LeBoyer*, MREC Scholar
- Applying for State and Federal Energy Efficiency and Renewable Programs**, *Lisa Noty and Kelley Oehler*, USDA Rural Development Program
- New Fuels and Chemicals from Biomass**, *Norm Olson*, Iowa Energy Center BECON Facility



Registration

Please refer to the registration panel for workshop and conference fees. The **Stray Voltage Measurement Workshop fee includes** materials, breakfast, lunch and dinner. Hotel accommodations are not included in the fee.

The **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 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 15. If you fail to cancel by February 15, the full fee will apply. Substitutions are welcome at any time.

Questions: Call 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:

The Radisson Hotel La Crosse

200 Harborview Plaza, La Crosse, WI 54601
Phone: (608) 784-6680 or (800) 333-3333

A block of rooms has been reserved until January 27, 2008 for conference participants at the nightly rate of \$97/one king bed-city view or \$107/two queen beds-river view, plus 12.5% taxes. Be sure to mention that you are attending the *MREC Rural Energy Conference* to receive the special rate. Plaza level rooms are available at the rate of \$127 and \$137.

Registration Form

46th Annual Rural Energy Conference & Workshop February 27-29, 2008

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 15, 2008

Name _____

Company _____

Address _____

Circle one: Home or Business

City/State/Zip _____

Daytime Phone _____

E-mail _____

The workshop and conference are separate events. You can register for one or both.

Stray Voltage Measurement Workshop - February 27

- \$ 125 (\$150 received after Feb. 15)

Rural Energy Conference - February 28-29

- \$ 250 members* (\$275 received after Feb. 15)
 \$ 300 non-members** (\$325 after Feb. 15)

_____ **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.

Payment must be made at time of registration.

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

Check enclosed

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>