

INTRO TO STRAY VOLTAGE WORKSHOP

March 10, 2010

and

48TH ANNUAL RURAL ENERGY CONFERENCE

March 11-12, 2010

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
Engineering Dept.
South Dakota State University Agricultural and
Biosystems Engineering

Workshop Agenda

Introduction to Stray Voltage Workshop

Wednesday, March 10

This one day workshop will get you ready to do a basic stray voltage Investigation. Your Instructors have been performing stray voltage investigations for decades and will present practical information on the equipment required for a stray voltage investigation, measurement setup, data collection and data analysis. You will also be enrolled in an on-line training session to prepare you for this course and for your review after the course This course will also prepare you for the Stray Voltage Investigation (Spring 2010) and Advanced Stray Voltage courses (Fall 2010) offered by UW Extension, the MREC and The Public Service Commission of Wisconsin.

7:00 AM	Registration and Breakfast
8:00	Introduction, Test Equipment and Setup
12:00 PM	Lunch
1:00	Data Collection and Analysis
5:00	Dinner

Course Instructors:

Paul Ortmann is a Senior Electrical Engineer with Idaho Power Company. He has been involved in the investigation of stray voltage for several years, and has taught classes on stray voltage in Wisconsin, Minnesota, and Idaho. Paul has also been involved in the development of stray voltage rules and investigation protocols.

Douglas J. Reinemann, PhD is professor of Biological Systems Engineering at the University of Wisconsin-Madison. He has Extension, Research and Teaching appointments in the areas of machine milking and rural energy issues. He has conducted research and educational programs on stray voltage since 1990. For more information about Dr. Reinemann's research visit his web page www.uwex.edu/uwmril.

Tom Seidl is a Principle Engineer with We Energies, a Wisconsin utility. In the course of his duties he has been conducting stray voltage investigation and analysis for over 25 years.

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Tim Weir, Stearns Cooperative Electric Association (MN)*

* Member of MN Rural Electric Association (MREA)

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

Conference Agenda

This year's annual conference will again feature two tracks, one focused on farm wiring, electrical distribution and stray voltage issues and the other on energy efficiency, renewable energy development in agricultural operations and conservation. All of the breakouts will be presented multiple times so that you can choose from both tracks to design your own conference agenda.

Thursday, March 11

- 7:00 AM Registration & Full Breakfast
8:00 **Welcome and Conference Overview**
- *Mike Kawleski*, Wisconsin Public Service Corporation, MREC President
- 8:15 **Smart Grid Projects** - *Dan Gunderson*, Minnesota Power
- 9:15 Introduction to Breakout Session Topics and Speakers
- 9:30 **Breakout Session 1**
10:30 Break
11:00 **Breakout Session 2**
12:00 PM Lunch
1:00 **Breakout Session 3**
2:00 **Breakout Session 4**
3:00 **Breakout Session 5**
4:00 **Breakout Session 6**
5:30 Dinner and Evening Program
Tales from the Woods: Amusing Incidents in the Life of a Lineman, Various MREC Members

Friday, March 12

- 7:00 AM Full Breakfast
8:00 **Results of French Stray Voltage Research** - *Karim Rigalma*, AgroParis Tech
- 9:00 **Review of the Minnesota Science Advisors Earth Current Study: 10 Years After** - *LaVerne Stetson* and other Members of the Minnesota Science Advisors Process
- 10:00 Break
10:30 **Whats Happening with Nuclear Power?** - *Paul Wilson*, Professor of Nuclear Engineering, UW-Madison
- 11:30 **MREC business Meeting** - *Mike Kawleski*, Wisconsin Public Service Corporation, MREC President
- 12:00 PM **Adjourn**

Break-out Sessions

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

- 1. Sorting out Dairy Farm Management and Symptoms Attributed to Stray Voltage** - *Roger Mellenberger*, Emeritus Professor, Michigan State University
- 2. Update on Recent Stray Voltage and EMF Research** - *Douglas J. Reinemann*, University of Wisconsin-Madison
- 3. VFD Applications and Installation** - *Robin Priestley*, Rockwell International
- 4. National Electric Code Review: Grounding** - *Jim Biesterveld*, Dunn Electric Coop
- 5. Stray Voltage Testing on Farms with 480/277 Volt Service** - *Tom Seidl*, We Energies and Mark Cook, PSCW
- 6. Contact Voltage Detection - A We Energies Update** - *Chad Hadley*, We Energies

Track 2: Energy Efficiency, Renewable Energy, and Conservation

- 1. What's happening in the Small Wind Market?** - *Jenny Heinzen*, Lakeshore Technical College
- 2. What's Happening in the Solar PV Market?** - *Niels Wolter*, Wisconsin Energy Conservation Corporation
- 3. Metering and Interconnect Issues for Small Wind and PV** - *Jim Hunt*, WE Energies
- 4. Real-Time Power Monitoring: How Will It Help the Consumer?** - *Dan Gunderson*, Minnesota Power
- 5. Meeting our RPS Goals: Incentives and Technologies** - *Brian Rude*, Dairyland Power
- 6. MREC Scholar Projects** - *MREC Scholars past and present*



Registration

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

The **Conference registration fee includes** materials, breakfast, breaks, lunch, and dinner Thursday. Breakfast and a 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 26. If you fail to cancel by February 26, 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 February 7, 2010 for conference participants at the nightly rate of \$105/one king bed-city view or \$115/two queen beds-river view, plus 13.5% taxes. Be sure to mention that you are attending the *MREC Rural Energy Conference* to receive the special rate.

Registration Form

48th Annual Rural Energy Conference & Workshop March 10-12, 2010

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 26, 2010

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.

Intro to Stray Voltage Workshop - March 10

\$ 150 (\$175 received after February 26)

Rural Energy Conference - March 11-12

\$ 275 (\$300 after February 26)

_____ **Total Enclosed**

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 Exp. Date _____

Card Number _____

Name on Card _____

Signature _____

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