

53rd Annual Rural Energy Conference

February 19-20, 2015
and

Advanced Topics in Stray Voltage Investigation Workshop

February 18, 2015

Embassy Suites
Bloomington, Minnesota



Sponsored by

Midwest Rural Energy Council
University of Wisconsin, Minnesota, Iowa and South
Dakota State Extension
University of Wisconsin Biological Systems
Engineering Department
University of Minnesota Bioproducts and Biosystems
Engineering Department
Iowa State University Agricultural and Biosystems
Engineering Department
South Dakota State University Department of Agricultural
and Biosystems Engineering

Workshop Agenda

Advanced Topics in Stray Voltage Investigation Workshop



This year's pre-conference workshop will be presented by Tom Seidl (We Energies) and Paul Ortmann (Idaho Power). Tom and Paul are experienced stray voltage investigators and have been teaching the stray voltage investigation courses for the past decade. They will cover special topics that go beyond the skills taught in the stray voltage investigation courses. These topics have been selected based on feedback from field investigators and will be illustrative of special problems encountered in field investigations including: capacitor banks, 3-phase power, fault current detection, and variable frequency drives.

Wednesday, February 18

- 11:30 AM Registration
- 12:00 PM Lunch
- 1:00 Advanced Topics in Stray Voltage Investigation - *Paul Ortmann, Idaho Power and Tom Seidl, We Energies*
- 5:00 Workshop ends. Dinner on own.

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

MREC Officers, Executive Committee and Board of Directors

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Vice President - Paul Gillis, Dairyland Power (IA, IL, MN & WI)
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Troy Schiltz, Tri-County Electric Co-op (MN)
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Roger O'Neil, Xcel Energy (MN, SD, WI)
Jerry Sorenson, Riverland Energy (WI)
Steve Stackhouse, Oconto Electric Co-op (WI)
Tim Weir, Stearns Cooperative Electric Association (MI, WI)*

* Member of MN Rural Electric Association (MREA)

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

Conference Agenda

This year's annual conference will focus on energy issues in agriculture. All of the breakouts will be presented multiple times so that you can choose from both tracks to design your own conference agenda.

Thursday, February 19

- 7:00 AM Registration & Refreshments
8:00 **Welcome and Conference Overview** - Robert Fick, Alliant Energy, MREC President
8:15 **Iowa Stray Voltage Guidelines** - Tony Harvey, Alliant Energy
10:00 Break
10:15 **Standby Generation, Peak Shaving, and Tier 4 Engines**
11:00 **Robotic Milking Do's and Don'ts** - Dan Schultz, Farmer, Taylor, WI
12:00 PM Lunch
1:00 **Breakout Session 1**
2:00 **Breakout Session 2**
3:00 Break
3:15 **Breakout Session 3**
4:15 **Breakout Session 4**
5:30 Dinner and Round Table
Discussion of Current Issues

Research posters will be on display all day Thursday. Presenters will be available during breaks.

- 1. Reviewing Stray Voltage Literature**, Doug Reinemann, University of Wisconsin
- 2. LED Lighting Technology Updates**, Scott Sanford, University of Wisconsin

Friday, February 20

- 7:30 AM Refreshments
8:00 **MREC Business Meeting** - Paul Gillis, Dairyland Power Cooperative, MREC Vice President
8:15 **Smart Grid and Impacts for the Rural Electric System** - Massoud Amin, University of Minnesota

Friday, February 20 (continued ...)

- 9:00 **Overview of Precision Dairy Technologies Including Automated Milking and Calf Feeding** - Marcia Endress, University of Minnesota
10:00 Break
10:30 **Economics of Corn, Dairy, Feed, and How It Relates to Energy Issues** - Jim Salfer, University of Minnesota-Extension
11:30 AM **Adjourn**

Thursday Breakout Sessions

Track 1: Agricultural Energy Management on Farms

- 1. Energy Use in Swine Production**, Larry Jacobson, University of Minnesota
- 2. Energy Management for Corn Drying**, Mark Hanna, Iowa State University Extension
- 3. Overview of Customer Owned Solar in Wisconsin**, Mike Moore, Wisconsin Public Service Commission
- 4. A High School Science Curriculum on Digesters**, Mike Moore, Wisconsin Public Service Commission

Track 2: Farm Wiring and Electrical Safety

- 1. Power Quality Recordings: How to Decipher What the Recorder is Telling You**, Tom Seidl and Pete Enstrom, We Energies
- 2. Pools, Piers, and Shower Houses: Preventing Shocks and Worse**, Chuck DeNardo, We Energies and Steve Meyer, Jackson Electric
- 3. Lessons Learned from Farm Wiring Inspectors**, Monte Ewing, Electrical Inspector
- 4. What Do Wind Turbines Do For Single Phase Distribution?**, Jim Thiede, Infrastructure and Energy Alternatives, LLC



Registration

Please refer to the registration panel for workshop and conference fees. **Advanced Topics in Stray Voltage Investigation Workshop** fee includes materials, breaks, and lunch (dinner is on your own). Hotel accommodations are not included in the fee. Please note that breakfast is included with your guest room reservation at the Embassy Suites Hotel.

The **Conference registration fee** includes materials, breaks, lunch, reception, and dinner Thursday. A break is included on Friday. Hotel accommodations are not included in the fee. Please note that breakfast is included with your guest room reservation at the Embassy Suites Hotel.

Make check payable to: UW-Madison

Mail or fax to:

CALS Conference Services, 640 Babcock Drive
Madison, WI 53706; Fax: (608) 262-5088

Or register on-line at:

<http://www.mrec.org/>

Cancellations: In order to receive a full refund, you must cancel by contacting CALS Conference Services at (608) 263-1672 prior to February 7. If you fail to cancel by February 7, the full fee will apply. Substitutions are welcome at any time.

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

Location and Lodging

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

Embassy Suites Hotel - Minneapolis Airport
7901 34th Avenue South, Bloomington, MN 55425
Phone: (952) 854-1000; or online: www.embassyspairport.com and use group code 1MR.

A block of rooms has been reserved until January 28, 2015 (or until all rooms are reserved, whichever comes first) for conference participants at the nightly rate of \$149, single or double, plus 14.275% taxes. Breakfast is included with your guest room reservation. Be sure to mention that you are attending the MREC Rural Energy Conference to receive the special rate.

Registration Form

53rd Annual Rural Energy
Conference & Workshop
February 18-20, 2015

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

Early registration deadline is February 7, 2015

Name _____

Company _____

Address _____

City/State/Zip _____

Daytime Phone _____

E-mail _____

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

Advanced Topics in Stray Voltage Investigation Workshop - February 18

\$ 195 (\$220 received after February 7)

Rural Energy Conference - February 19-20

\$ 345 (\$370 after February 7)

_____ 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 American Express or

Discover

Card Number _____

Exp. Date _____ Name on Card _____

Signature _____

Register on-line at:
<http://www.mrec.org/>