

AGRICULTURAL WIRING CODE WORKSHOP

February 27, 2013

and

51ST ANNUAL RURAL ENERGY CONFERENCE

February 28 - March 1, 2013

Embassy Suites
Bloomington, Minnesota



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 Bioproducts and Biosystems
Engineering Department
Iowa State University Agricultural and Biosystems
Engineering Dept.
South Dakota State University Agricultural and
Biosystems Engineering

Workshop Agenda

Agricultural Wiring Code Workshop



Don Nemeth of Midwestern Electrical Seminars Inc. will be providing this one day seminar on updates to the 2011 Code with a focus on Article 547 Agricultural Buildings and other issues related to neutral to earth voltage. Eight (8) hours of continuing education credits will be available for attendees from Minnesota, North Dakota, South Dakota and Wisconsin.

Don is a member of the International Association of Electrical Inspectors and has over 30 years experience teaching National Electrical Code and is an approved Electrical Division Continuing Education instructor. He is a Minnesota Class "A" Master Electrician license holder, has over 13 years experience as a State of Minnesota Electrical Inspector and Electrical Area Representative for the Minnesota Department of Labor & Industry, Electrical Division for more than 17 years.

Wednesday, February 27

- 7:00 AM Registration and Refreshments
(Full breakfast is provided with your guest room reservation at the Embassy Suites.)
- 8:00 **Agricultural Wiring Code Class**
- 12:00 PM Lunch
- 1:00 **Agricultural Wiring Code Class**
(continues)
- 5:00 Dinner

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 - Jim Biesterveld, Dunn Electric Co-op (WI)
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Paul Gillis, Dairyland Power Co-op (IA, IL, MN & WI)**
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Roger O'Neil, Xcel Energy (MN, SD, WI)
Troy Schiltz, Tri-County Electric Co-op (MN)
Ken Schlimgen, Central Electric Cooperative, Inc. (SD)
Mark Schoon, Madison Gas & Electric Company (WI)
Dan Tonder, Minnesota Power (MN, ND & SD)

* 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 on dairy farms including an overview of large dairy planning and the types of electrical systems, equipment and generation technologies we can expect to see on new dairies and options for improving energy efficiency and the electrical safety in dairy production. 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 28

- 7:00 AM Registration & Refreshments (Full breakfast is provided with your guest room reservation at the Embassy Suites.)
- 8:00 **Welcome and Conference Overview** - *Tim Wier*, Stearns Co-op Electric Association, MREC President
- 8:15 **Planning New Dairy Facilities: Building for Cow Comfort** - *Becky Brotzman*, UW-Madison Vet School Dairyland Initiative
- 10:00 Break
- 10:15 **Reducing the Carbon Footprint of Dairy Production** - *Roberta Osborne*, Innovation Center for U.S. Dairy
- 11:00 **Financing and Managing a Large Dairy** - *Terry Smith*, Dairy Strategies, Inc.
- 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**

Friday, March 1

- 7:30 AM Refreshments (Full breakfast is provided with your guest room reservation at the Embassy Suites.)

Friday, March 1 (continued ...)

- 8:00 **MREC Business Meeting** - *Jim Biesteveid*, Dunn Electric Co-op, MREC Vice President
- 8:15 **Natural Gas for Fleet Vehicles** - *Joel Hirschboeck*, Kwik Trip
- 9:00 **Iowa State Energy Efficiency Resources** - *Dana Petersen*, Iowa State University
- 10:00 Break
- 10:15 **Engineering Ethics** - *Chuck Clanton*, University of Minnesota
- 11:15 **Fracking and Sand Mines** - *Tom Wollitz*, Wisconsin DNR
- 12:00 PM **Adjourn**

Break-out Sessions

- Track 1: Farm Wiring, Stray Voltage, and Electrical Distribution**
- 1. Stray Voltage Testing on Large Dairies**, *Mark Cook*, MCC
 - 2. VFDs on Single Phase Irrigation Installations**, *Dale Bowe*, Wisconsin Public Service Corporation
 - 3. Ventilation Loads in large Dairies**, *Fred Daniels*, Franklin Energy and *Rob Juneau*, Wisconsin Public Service
 - 4. VFD Issues, Wiring Issues, Code Shielding: Power Quality**, *Monte Ewing*, Monte Ewing Consulting, LLC
- Track 2: Energy Efficiency and Renewable Energy**
- 1. Energy Efficiency on Dairy Farms**, *Dana Petersen*, Iowa State University
 - 2. Contract Options for Anaerobic Digesters**, *Frank Starr*, Energy Systems
 - 3. PV Solar - Manufacturing Perspective**, *Joel Cannon*, TenKSolar
 - 4. LED Lighting**, *TBA*



Registration

Please refer to the registration panel for workshop and conference fees. The **Agricultural Wiring Code Workshop fee includes** materials, breaks, lunch and dinner. 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 16. If you fail to cancel by February 16, 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:

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 1WM.

A block of rooms has been reserved until February 8, 2013 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 Conference* to receive the special rate.

Registration Form

51st Annual Rural Energy Conference & Workshop February 27 - March 1, 2013

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

Early registration deadline is February 16, 2013

Name _____

Company _____

Address _____

City/State/Zip _____

Daytime Phone _____

E-mail _____

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

Agricultural Wiring Code Workshop - February 27

\$ 175 (\$200 received after February 16)

Rural Energy Conference - February 28 - March 1

\$ 325 (\$350 after February 16)

_____ **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/>