Training for Farm Energy Auditors

These days farmers are looking for every opportunity to cut operating costs and one area where significant savings can be found in a hurry is by reducing energy usage. Some farmers may even qualify for assistance to pay for an energy audit as well as pay some of the cost of making energy improvements. Getting rid of incandescent lamps that burn for long periods of time is one example. Mercury vapor lights were a great idea 40 years ago, but they are not very efficient and high-pressure sodium is a better choice. Fluorescent T-8 and T-5 lamps with electronic ballasts are high efficiency sources that now can be installed in cold areas if enclosed fixtures are used. New electric motors have a much higher operating efficiency than old motors especially if the old motor was manufactured before 1997. Variable frequency drives powering a vacuum system at a diary farm can save a bundle especially if operated for long periods during the day.

A training workshop to certify dairy farm energy auditors is scheduled to start the end of June and run until August at MSU. The training is subsidized by a Michigan foundation so the cost is only $200 for in-state participants. Participants will spend two days at M.S.U. (June 25 & 26) learning about energy saving techniques and how to conduct a farm energy audit as well as use the energy audit web site to calculate energy and cost savings and project payback periods for improvements. Participants will then spend a full day conducting an energy audit at a farm under the guidance of instructors (July 7, 8, 9, or 10). After the on-site inspection a small group of participants will then complete the analysis of the data and prepare an actual farm energy audit report (Complete report by July 26). Instructors are available to assist with report preparation. A full day of presentation and discussion of the various farm energy audit reports is held at MSU on July 30. This concludes the formal training and the participant must than conduct an actual farm energy audit either individually or with one other participant and complete an acceptable report by September 15.

Aside from replacing incandescent lamps with compact fluorescent lamps, most of the energy saving improvements will require the help of an electrical contractor. Some electrical contractors see this type of activity as a means of expanding their list of services. Interested persons can get more details by visiting the web site: http://web5.anr.msu.edu/fa.

Farm Wiring and Grounding Workshop

Four years ago the Michigan Agricultural Energy Council developed a two day workshop dealing with techniques for safe and effective farm wiring and grounding. The course covers how to apply the Michigan Electrical Code for farm wiring. Participants will actually do hands-on wiring in the room using nonmetallic weatherproof enclosures, connectors, UF cable, and PVC conduit. The workshop also covers the special rules for grounding on farms including circuit wiring in buildings as well as wiring between buildings. There are significant changes coming when the 2008 National Electrical Code is
adopted for use in Michigan. The reason for installing equipotential planes in animal facilities and around swimming pools will be covered as well as actual installation techniques. There will be significant changes to methods of swimming pool bonding when the 2008 NEC is adopted. Participants earn CEUs for this workshop and it is also approved as up-date training for electrical inspectors under P.A. 54. For details and cost of the workshop visit the web site http://maec.msu.edu.

MAEC Name Change

Since the work of the Council is now heavily into energy management and alternative energy it was suggested the name of the council be altered slightly with the word “electric” changed to “energy”. The Council will vote on this name change at two consecutive meetings. If you have any concerns about this change please contact Truman Surbrook (surbrook@egr.msu.edu) or your representative. (Don Deachin, DTE; Steve Wallenwine, CE; Dallas Braun or Chris Jensen, MECA; or Kevin Schnack, WI). The new name would be as follows “Michigan Agricultural Energy Council,” if approved.

MPSC Stray Voltage

A complete set of equipment including a pmi recorder is available to power suppliers for load if the need arises to conduct a dairy farm evaluation of stray voltage. The staff at MSU is also available to provide training if needed. Please contact Truman Surbrook, Aluel Go, or Jon Althouse if power suppliers need assistance with conducting a stray voltage investigation. Copies of the MPSC stray voltage rule and a guide for conducting investigations is available upon request or you can find them on the web site http://maec.msu.edu.

FFA Agricultural Mechanics/Electrification Skills Contest

The annual State FFA Skills Contest was held on the campus of Michigan State University in April. This year 36 FFA Chapters sent 136 students to this years hands-on skills competition. Half of the students compete in the electrification portion of the competition.

The contest is designed to recognize those students who have developed competencies necessary for success in the constantly changing workplace. Emphasis is placed on the way in which students access information, solve complex problems, select an appropriate technology, and apply the principles of science.