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Iowa Farm Energy Working Group

Carole Yates
University of Northern Iowa

Kamyar Enshayan
University of Northern Iowa

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Iowa Farm Energy Working Group

Abstract

The Farm Energy Working Group's demonstration grants, field days and presentations by Iowa farmers helped show what can be done on the farm to increase energy efficiency and rely on renewable energy.

Keywords

Bioeconomy and energy

Disciplines

Entrepreneurial and Small Business Operations | Natural Resources Management and Policy | Oil, Gas, and Energy



Iowa Farm Energy Working Group

Abstract: In continuing work, the funding for Years 3 and 4 of the Farm Energy Working Group served to expand outreach and education about on-farm energy reductions for smaller operators.

Principal Investigator:

Carole Yates

Co-investigator:

Kamyar Enshayan
Center for Energy and
Environmental Education
University of
Northern Iowa
Cedar Falls

Budget:

\$55,588 for year one
\$37,190 for year two

Q Can farmers with small to mid-size operations learn to reduce on-farm energy use without a full-fledged statewide farm energy service organization funded through the state or utility companies?

A Yes, the Farm Energy Working Group's demonstration grants, field days and presentations by Iowa farmers helped show what can be done on the farm to increase energy efficiency and rely on renewable energy.

Background

Since its beginning in 2009, the Farm Energy Working Group (FEWG) has engaged a growing number of Iowa farmers and others interested in helping farmers increase energy efficiency and/or renewable energy use on their farms by using on-farm resources when possible. The outreach list has grown from 35 to more than 190 farmers and others interested in the support FEWG provides through meetings, demonstration grants, field days and educational presentations.

Farmers are increasingly aware of the need to reduce energy use. As energy costs rise, they want ideas on how to reduce their fossil fuel use to save money and rely more on other energy sources. Use of on-farm resources has been a guiding principle of sustainable farming practices. Tapping energy available on the farm has the potential to significantly reduce risks of price uncertainties and supply disruptions, while promoting self-reliance.

The Farm Energy Working Group also has fulfilled a need identified at the first meeting: to provide a one-stop shop for information and expertise on meeting on-farm energy needs. FEWG has increased communication among individuals and organizations interested in on-farm energy, including farmers, utility representatives, policy organizations, Extension Service, higher education institutions, U.S. Department of Agriculture, Natural Resources Conservation Service, farmers' organizations and renewable energy businesses. The networking that occurs through FEWG does not happen anywhere else in the state.

Original objectives for the Farm Energy Working Group were to:

1. Intensify outreach to farmers through the Value Chain Partnership program.
2. Develop webinars for three types of projects that would reduce energy use on the farm to help educate farmers about energy efficiency opportunities, policies and grants.
3. Develop an educational presentation on farm energy conservation/renewable energy for RFSWG leaders (see www.uni.edu/ceee/farmenergy/onestopshop)
4. Educate farmers about renewable energy by offering a micro-scale biogas workshop.



FEWG grant recipient Jack Bensink, Pleasantville,, installed a hybrid 10 kW wind turbine and 2 kW of solar PV system. He showed his system to FEWG participants after a fall meeting.

Approach and methods

The purpose of Years 3 and 4 of the Iowa Farm Energy Working Group was to intensify outreach to farmers on small to mid-size farms across the state through connections with the Leopold Center's Value Chain Partnership, specifically the Regional Food Systems Working Group (RFSWG) and three of its participants. A second purpose of the statewide working group was to expand outreach through meetings and events where experts from Iowa and other states shared their success stories on reducing energy use on the farm using energy efficiency, conservation and renewable energy from on-farm resources when possible.

FEWG offered two rounds of mini-grants during 2011-2012 and completed the management of six successful grant projects for 2010-2011. A group of FEWG participants facilitated by FEWG staff reviewed all mini-grants and recommended the projects to fund.

Results and discussion

The FEWG conducted these activities:

- Intensified outreach to farmers on small to mid-size farming operations by working with three northeast Iowa Regional Food Systems Working Groups. The RFSWG representatives helped identify farmers practicing energy efficiency and/or using renewable energy on their farms and engaged them in sharing their stories at Farm Energy Working Group meetings or in other ways.
- Developed an educational presentation on farm energy efficiency and use of renewable energy. It was presented at a RFSWG meeting to train leaders to share the information with their working groups.
- All website information on farm energy efficiency/renewable energy was compiled and linked at one location. This website features several video and print case studies of Iowa farmers reducing their reliance on fossil fuels, information on farm energy audits, and financial resources available to reduce energy use such as grants and utility or state incentives/rebates.
- Facilitated the Farm Energy Working Group by holding three or four working group meetings each year, offering and administering small demonstration grants, inviting experts from Iowa and other states to share success stories, co-hosting Practical Farmers of Iowa (PFI) field days related to on-farm energy reduction, and conducting an evaluation of FEWG work to date.
- Educated farmers about renewable energy use by co-hosting a micro-scale biogas workshop with 16 participants.

Between April 2011 and January 2013, FEWG email or electronic newsletter communications reached working group members once or twice per month.

Two of the original strategies in the grant were modified when Rich Dana of the National Center for Appropriate Technology (NCAT) resigned. Objective 2 on "Develop templates for three types of grants for on-farm energy use" was changed when Jeff Beneke of UNI CEEE replaced Dana. Beneke focused on webinars and FEWG then offered three webinars for farmers and other working group members. The activities on solar hot water rebate programs and writing a grant for farm-scale biogas systems in Objective 4 also were dropped when Dana left.



The Ehrhardt Dairy in Monona, received a small grant from the Farm Energy Working Group to help install a robotic milker that provides water and electricity savings.

Impact of results

Farmers and the media have learned to contact FEWG for input and participation in projects. When the working group began, a Practical Farmers of Iowa survey of its members showed that reducing energy use on the farm was not among their top five goals. However, that has changed over the four years of the working group's activities. PFI has begun several projects that help farmers reduce energy use and encouraged many farmers to participate. FEWG, with PFI, is raising Iowans' awareness of the need to reduce energy use.

An easy-to-use revised website allows farmers to view information to help reduce fossil fuel use. FEWG's One-Stop Shop website that provides a variety of useful information in one place fulfills one of the original FEWG goals set by participants. Farmers and others can go to one website to see what other farmers are doing across the state to save energy on their farms, to learn about utility/state/federal incentives, farm energy audits, financial assistance, and much more. One of the best ways for farmers to try something new is to see how their peers are using a particular process or technology. The One-Stop Shop success stories (case studies) and the mini-grant reports provide that information for anyone to access. The FEWG face-to-face meetings also offer a direct way for participants to share their stories, hear what others are doing, and gain more ideas to try.

Education and outreach

Media coverage included:

- "Alternative power integrated into farm," Farm Energy Working Group mentioned in Tom and Irene Frantzen's farm story, *Iowa Farmer Today*.
- "Online One-Stop Shop" news release appeared in these places:
 - o *Waterloo Courier*
 - o *Des Moines Register*
 - o University of Northern Iowa website home page
 - o Iowa Pork Producers Association website
 - o *Albany (NY) Times*
- Successful Farming Radio Magazine interview with Darrell Anderson (aired on 125 stations across the United States) and posted on www.agriculture.com)
- "NIFFP Farm Crawl showcases farms demonstrating innovative on-farm energy projects" in the *Waterloo Courier*
- "Small Scale Biogas Digesters" in *Wallace's Farmer*

Three Practical Farmers of Iowa field days were co-sponsored or had FEWG information available: July 2012, TJ Family Farms, energy usage documentation, McCallsburg; Rainbow Ridge Produce, passive solar season extension produce storage and curing structure, Waverly; and September 2012, New Shoots Farm, energy efficiency vegetable storage system, Emmetsburg.

Leveraged funds

No additional funds have been leveraged by this project to date.

For more information, contact:

Carole Yates,
Center for Energy
and Environmental
Education, University
of Northern Iowa,
CEEE 109, Cedar
Falls, IA 50614-0293;
(319) 273-7599, e-mail
Carole.yates@uni.edu