



Michigan Farm Energy Program: Gaps, Issues & Opportunities

Executive Summary

Michigan agriculture has been exempt from building and electrical codes for many years. Consequently, the energy efficiency, safety, wiring efficiency and other upgrades that have been made to these codes has not been implemented on many farm facilities. Hence, the potential for energy efficiency improvement is great.

The purpose of the Michigan Farm Energy Program (MFEP) is to help farmers and agribusinesses make those energy efficiency improvements. One way this is done is through auditor training. People who successfully complete the training are certified to conduct audits that meet the American Society of Agricultural and Biological Engineers/American National Standards Institute S612 standards for type 2 energy audits. To date, 212 people have received training through the MFEP and are certified to complete energy audits and renewable energy assessments. However, only a small number of auditors are actively completing energy audits due to the current poor agricultural economic situation. To date, 340 audits and 154 renewable energy assessments have been completed.

Since 2006, MFEP has been involved in projects totaling \$5.67 million and has received \$2.19 million in grant funding to implement specific project activities. To date, 1,751 people have participated in webinars, tours, and meetings affiliated with MFEP. Educational materials (including technical guides, reports, case studies and online calculators) have been developed for agricultural and small business clientele. Research papers have been published in scientific journals and posters have been presented at conferences around the United States. The 17 on-farm demonstration projects managed by MFEP provide the means to gather energy conservation data and disseminate energy efficiency information to the agricultural community.

Ninety-one people (N=347) with personal knowledge of energy audits and the MFEP agreed to be interviewed to determine the perceived value of their audit and the MFEP. Their responses indicated the following:

- An energy audit is a useful tool in helping farmers and small business owners make energy efficiency decisions.
- Energy audits are easy to understand.
- The process of conducting an audit is not difficult to go through.
- The MFEP has value and should be continued.

However, respondents indicated there are gaps and issues in the MFEP that need to be addressed. Their input is summarized in the following eight broad topic areas:

- Lack of personnel to implement the mission and purpose of the MFEP.
- Lack of funding to implement the mission and purpose of the MFEP.
- Poor marketing of the MFEP to agriculture, rural businesses, and food industry.
- Purpose and scope of an energy audit is too narrow.
- Infrequent auditor training.
- Inadequate auditor compensation.
- Poor partner involvement in the MFEP.
- Low number of energy conservation measures and renewable energy projects financed by lending institutions.

Respondents also identified opportunities for the MFEP. Many of these opportunities are closely related to the gaps and issues listed previously. Their input is summarized in the following 19 points:

- Provide sufficient personnel to operate and support the MFEP.
- Enable the MFEP to fund itself.
- Provide more frequent auditor training updates.



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- Expand the auditor training program to include small rural businesses.
- Aggressively market the benefits of an energy audit.
- Include measuring water usage as a part of an energy audit.
- Aggressively market the MFEP.
- Develop and cultivate closer working relationships with commodity groups.
- Improve auditor compensation.
- Encourage renewable energy projects following implementation of energy efficiency measures.
- Increase utility involvement in the MFEP.
- Reignite the AgriEnergy Alliance (or a similar board) to bring back the partnership involvement, expand technical, financial and marketing resources, and program oversight.
- Target old technology and offer incentives for its removal.
- Charge a membership fee to receive the benefits of the MFEP.
- Refer to the person who conducts an audit as an “energy advisor” rather than an “energy auditor.”
- Inform farmers about the impact of demand charges on their electric bills and help them take steps to reduce these charges.
- Help farmers determine if their operation has the proper utility rate classification.
- Work with utilities to enable farms better access to three-phase power.
- Help farmers determine energy use per unit of production.

Recommended next steps to address gaps and issues and implement opportunities are presented in a companion paper titled *Michigan Farm Energy Program: Sustainability Roadmap*.