

The Program

This program aims to reduce energy use on Michigan farms and rural businesses while maintaining or improving overall productivity, safety and operator comfort. It is geared towards training, technical assistance, continuing education development for certified Michigan farm energy auditors and administration of the certification process

The initial focus was on dairy farms but now the program has expanded to greenhouse and other farm operations. The program also can also assist farmers with "Green Energy" feasibility/technical assessments.

It is being coordinated by MSU Extension and MAEC and being implemented by the Departments of Biosystems & Agricultural Engineering and Agriculture, Food & Resource Economics.

The training program, technical materials and calculation tools were reviewed by USDA Rural Development and Natural Resources Conservation Service to be utilized through their REAP and CSP programs.



Any Questions? Call us at (517) 353-0643
or visit our web site at
<http://farmenergy.canr.msu.edu>

Program Partners

- Michigan State University Extension
- Michigan Agricultural Energy Council
- Biosystems and Agricultural Engineering Department – Michigan State University
- Agriculture, Food and Resource Economics Department – Michigan State University
- USDA (REAP & NRCS)
- Michigan Milk Producers Association
- RETAP - Michigan Department of Energy, Labor and Economic Growth
- Great Lakes Energy
- Thumb Electric
- Home Works Tri-County Electric
- Detroit Edison
- Consumers Energy
- Focus on Energy - Wisconsin

Funding Support:

The Herrick Foundation
USDA – REAP
MI DELEG
MAEC

MI Farm Energy Audit Program

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East Lansing, MI 48824-1323
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MI Farm Energy Audit Program

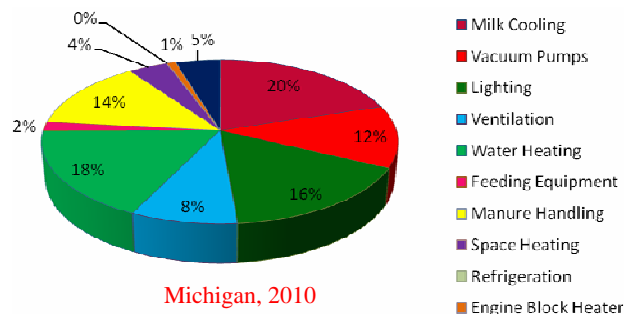
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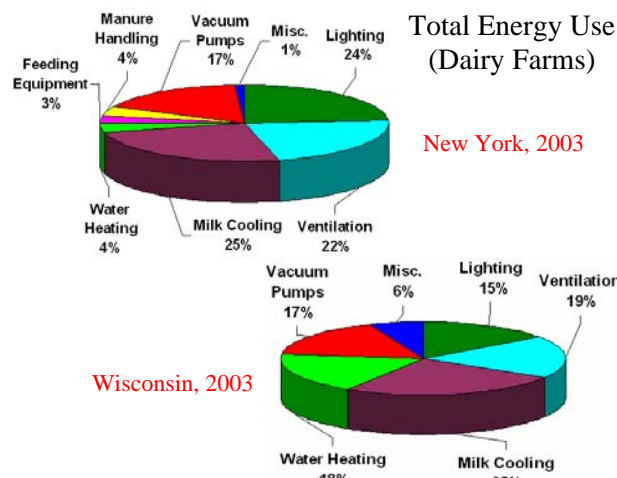
MI Farm Energy Audit Program – Farms & Rural Businesses

Farm Energy Cost

Energy audits on 42 Michigan dairy farms in 2010 (milking herd size from 35 to 3200 - average 284) shows a potential energy efficiency savings of 32% or \$7,383 annually. Similar savings have been realized for greenhouses and other farms enterprises especially with diesel irrigation or grain drying operations. Additional saving from reduced fossil fuel use can be further achieved with the incorporation of alternative energy options.



Energy use information from similar dairy states show the general breakdown of energy use on dairy farms.



Energy Audit Benefits

- ✚ **Practical solutions with projected costs savings and payback information to help you make energy saving decisions.**
 - ✚ **A certified farm Energy Audit report.**
 - ✚ **Possible funding option review.**
- An energy audit is an essential mgt. tool in developing a comprehensive energy plan for agricultural and rural businesses.
 - It is confidential report developed by a certified farm energy auditor that identifies potential energy efficiency strategies and provides operational benchmarks to compare future energy investments.
 - It provides information for implementation prioritization decisions based upon energy efficiency improvements, complexity, capital outlay, and payback
 - It can improve operational efficiency and may pinpoint areas for reducing energy cost and energy use.

Certified Energy Audits are required for State and Federal grant/loan applications dealing with energy efficiency and conservation.

Requirements

- ✚ **Your time and cooperation.**
- ✚ **Farm access by the Audit team.**
- ✚ **Farm energy bills & energy usage data.**
- ✚ **Equipment and facility technical as well as operational information.**
- ✚ **\$500 fee. Possible refund/rebate options.**

Energy Assessments

- Dairy
 - Water & Space Heating, Heat Recovery
 - Milk Cooling
 - Compressors and Heat Exchangers
 - Pumps and Variable Frequency Drives
 - Lighting and Day-Long Options
 - Ventilation and Electric Motors
 - Feeding and Manure Handling
 - Building Insulation and Space Heating
 - Block Heaters, Timers and Sensors
- Greenhouses
 - Heating and Heat Recovery
 - Thermal Curtains
 - Construction Materials and Coating Film
 - Pumps and Variable Frequency Drives
 - Weatherization and Insulation
- Grain Drying
 - Drying Process
- Irrigation
 - Single Phase Environment Alternatives
 - Pumps and Variable Frequency Drives
 - Maintenance
- Poultry and Hogs
 - Heating and Heat Recovery
 - Ventilation and Electric Motors
- Rural Businesses
 - Heating and Cooling
 - Machinery and Building Insulation
- Standard Assessment Areas
 - High Efficiency Motors
 - Ventilation and Electric Motors
 - Lighting, Timers and Sensors
 - Fuel Source Comparison and Energy Use
 - Weather-Proofing and Insulation
 - Appropriate Utility Rate/program
 - Renewable Energy Options