WHY CONDUCT AN ENERGY AUDIT?

- **Increase profits through energy savings.** Operations in Table I saw a 35% reduction in electricity consumption and a 19% reduction in fuel consumption. Energy audits conducted on 20 Michigan dairy farms in 2012 showed an annual energy savings of $13,048 per farm.

- **Identify operational alternatives.** Practical solutions with projected costs savings and payback information will help you make the best use of available energy options.

- **Opens up funding options.** Rebates, refunds and state/federal grants/loans are contingent on completing a certified energy audit.

- **Environmental contribution.** Reducing personal energy use contributes to the worldwide effort to reduce global warming.

WHO TO CONTACT

A farm audit should be completed by a certified energy auditor. Farmers or rural businesses needing a certified energy audit for state and/or federal grant/loan applications pertaining to energy efficiency and conservation are required to use a certified energy auditor. A list of certified energy auditors can be found at the [Michigan Farm Energy Program](http://www.msu.edu) web site.

FOR MORE INFORMATION

**General Questions**

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The Michigan Farm Energy Program: Energy Audits

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WHAT IS AN ENERGY AUDIT?

An audit consists of a careful analysis of your farm’s energy use, combined with scientific analysis of possible ways to reduce energy use in a cost-effective manner. The energy audit will include an easy-to-understand report that lists recommended ways to improve energy efficiency on your farm, plus information on possible funding for installing energy efficient equipment. It will be up to you to decide what to do with this information.

Assistance will be available to help you understand your options and see how you can upgrade your farm’s energy performance. An energy audit is a required first step for many funding programs, so this is an important first step for taking advantage of a variety of energy installation programs.

FARM ENERGY SAVINGS

Energy audits conducted in 2012 on 20 Michigan dairy farms showed an annual energy efficiency savings of $13,048 per farm (Table 1). Even larger savings were realized for greenhouses and farms with diesel irrigation or grain drying operations. Additional savings can be achieved with the incorporation of alternative energy options.

ENERGY AUDIT REQUIREMENTS FOR THE FARM

- Your time and cooperation (approximately 4-8 hours per audit depending on farm size).
- Allow the audit team access to 12 months of farm energy bills and energy usage data.
- Allow the audit team access to sites on the farm that consume energy.
- Be ready to provide equipment and facility technical as well as operational information.
- There is a $500 fee for an energy audit. However, refund or rebate options may be available from your utility company.

Table I. Summary of 37 Energy Audits and 21 Renewable Energy Assessment Reports - 2012 MSU USDA REAP II

<table>
<thead>
<tr>
<th>No</th>
<th>Operation</th>
<th>Savings (kWh)</th>
<th>Savings (MMBTU)</th>
<th>Dollar Equivalent</th>
<th>Cost to Implement</th>
<th>Payback (years)</th>
<th>Annual Average Savings ($/operation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Dairy Farms</td>
<td>1,732,724</td>
<td>5,216</td>
<td>$260,971</td>
<td>$856,277</td>
<td>3.28</td>
<td>13,048</td>
</tr>
<tr>
<td>2</td>
<td>Greenhouse</td>
<td>162,817</td>
<td>14,672</td>
<td>$140,134</td>
<td>$443,814</td>
<td>3.17</td>
<td>70,067</td>
</tr>
<tr>
<td>7</td>
<td>Grain Drying</td>
<td>121,498</td>
<td>6,581</td>
<td>$137,801</td>
<td>$1,029,724</td>
<td>7.47</td>
<td>19,685</td>
</tr>
<tr>
<td>4</td>
<td>Miscellaneous</td>
<td>43,294</td>
<td>0</td>
<td>$5,579</td>
<td>$37,578</td>
<td>6.74</td>
<td>1,394</td>
</tr>
<tr>
<td>4</td>
<td>Rural Business</td>
<td>494,263</td>
<td>0</td>
<td>$47,803</td>
<td>$272,046</td>
<td>5.69</td>
<td>11,950</td>
</tr>
<tr>
<td>22</td>
<td>Renewable Energy</td>
<td>2,705,387</td>
<td>272</td>
<td>$220,008</td>
<td>$2,158,396</td>
<td>9.81</td>
<td>10,000</td>
</tr>
<tr>
<td>59</td>
<td>Total</td>
<td>5,259,983</td>
<td>26,741</td>
<td>$812,296</td>
<td>$4,797,835</td>
<td>5.94 (ave.)</td>
<td>$126,144</td>
</tr>
</tbody>
</table>

Percent Savings 34.6% 18.8%

REBATES AND REFUNDS

The Energy Optimization program provides rebates to eligible farmers across Michigan to offset the cost of implementing Energy Conservation Practices (ECMs). ECMs save you money by helping you manage energy use. ECMs are straightforward and rebates are plentiful. Rebate availability depends on participating utilities and are updated/modified annually. To see a list of ECMs and determine your eligibility, go to http://bit.ly/MiRebateOptions.

The ECM items and rebates offered are usually the same for all utility companies, however you need to go to your utility company web page and verify this. For agriculture, most utility companies will allow farms on a “residential” utility rate to avail themselves of the commercial rebates as well. However, farmers need to verify this with their utility company.