

## Energy Conservation Award



The winner of this year's Energy Award is Mark and Mary Eitel, for their wind turbine.

The basis of selection of individual awardees was determined on the following points:

- a. Efficient use of energy in farmstead buildings, equipment, and operations including but not limited to building insulation; heating and cooling such as ground source heat pumps; lighting; and striving for peak fuel efficiency in high energy consumption components such as irrigation pumping, refrigeration, power units for tillage, harvesting equipment, etc
- b. Production of energy from renewable sources including but not limited to solar; wind; biomass; biofuels such as biodiesel, methane, ethanol, etc
- c. Utilization of renewable energy sources including those mentioned in b. above as well as other similar sources
- d. Cogeneration of energy such as internal combustion engine powered generator with beneficial use of waste engine heat
- e. Co-utilization of energy through combining processes such as heat one stream while cooling another by using heat exchanger; cool milk while heating water for cleaning by using a heat pump; etc.

The wind turbine Mark and Mary constructed is located at their home farmstead and powers their house, shop, and other structures located there. Mark and Mary began to plan and layout their project in October of 2010 and became operational in June 2011. The goal for installing the turbine was two-fold. The first being the obvious side of offsetting the rising electric costs, and the second was using it as a test or a way to get his feet wet for a possible larger project in the future. Mark also added that "harvesting the wind" has been a family tradition since before his family immigrated to this country.

Currently the turbine is generating about 3,000 kilowatt hours per month, which is roughly \$300 in electricity. Along with hedging future electric costs, another huge benefit to the project has been that Mark has been able to familiarize himself with the wind energy industry, which he hopes will come in handy in the future. The biggest challenge that they have faced has been the initial coordination of all the different contractors that worked to install all of the parts and pieces.