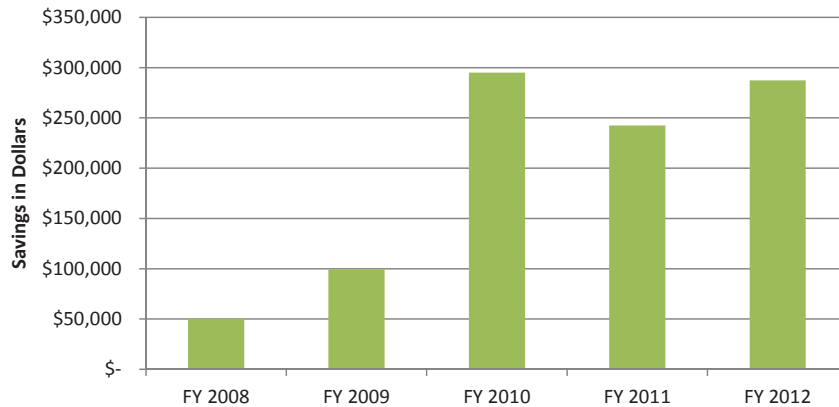
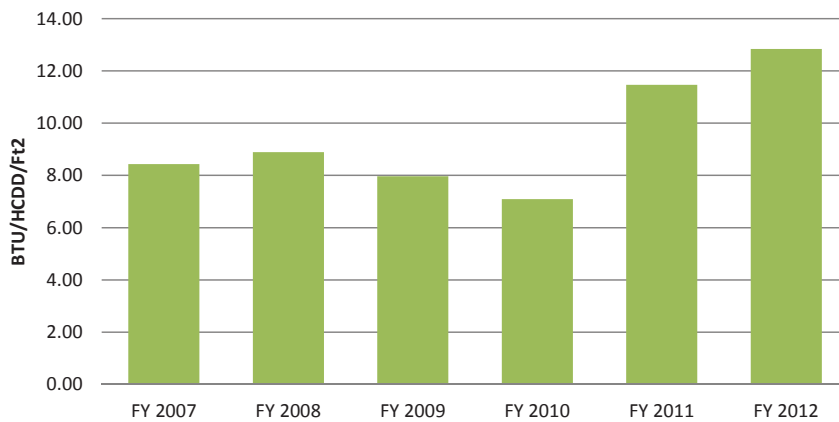


Environmental Assessment Report Insert

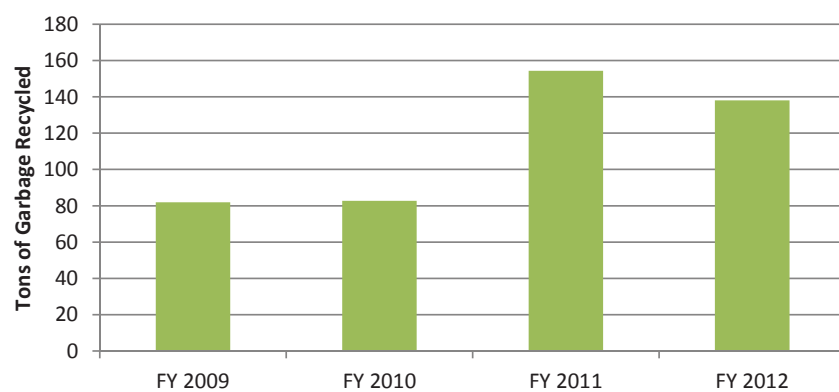
Total Energy Cost Savings by Fiscal Year



Energy Used by Square Foot by Fiscal Year



Single Stream Recycling Efforts



Lake Land's Eco-Friendly Programs

Lake Land has identified alternative energy as a top priority because it saves money while protecting the environment. By using less natural gas and coal generated electricity, the College saves money while reducing pollution, its carbon footprint, and the amount of fossil fuel needed to operate the college. Through these efforts the College is creating an alternative power curriculum based on the technology the College uses to prepare its students for energy efficient jobs.

Lake Land's **Renewable Energy (AAS) program** prepares students for entry level positions into the field of renewable energy technicians and technical maintenance. Emphasis is placed on "green" technologies including electricity, physics, chemistry, wind, photovoltaics, solar thermal, bioenergy, energy efficiency, and smart grid technology. There is a critical skill shortage of trained workers knowledgeable with issues relating specifically to renewable energy and who can troubleshoot renewable energy systems.

Lake Land's **Civil Engineering Technology (CET) program** has investigated new ways to produce asphalt using less energy. This Warm Asphalt application has been incorporated into appropriate courses in the CET program. The benefits of this application include: 1) reducing fuel consumption; 2) decreasing plant and jobsite emissions; 3) reducing generation of dust; 4) extending hauling distance; 5) allowing for immediate return of traffic; and 5) extending paving season.

Lake Land's **Building Construction Technology (BCT) program** incorporates LEED standards into courses where applicable. Some BCT courses emphasize recycled content in building materials, controlling water run-off to avoid contaminating water bodies, energy efficiency, and geothermal energy.

Lake Land's **Automotive Program** incorporates education related to hybrid electric vehicles into the courses offered to students.

Lake Land's **Mechanical Engineering Technology (MET) program** offers a specialization in renewable energy sources focusing on wind energy. Specific courses in wind energy are offered that teach students about various types of wind turbines, how to measure wind speed, locating wind turbines, and maintaining wind turbines.

Lake Land's **Electronic Engineering Technology (EET) program** offers a technical foundation for designing, installing, and evaluating residential and commercial solar energy systems. This program teaches students 1) how orientation affects solar energy received, 2) to identify the relationship among solar cells, modules, and arrays, and 3) to evaluate design priorities for solar energy in different types of applications.

By converting four of the major classroom buildings on Lake Land College's main campus to geothermal, Lake Land College saved \$287,242 in energy costs in FY 2012.

Lake Land has installed two large wind turbines that will produce over 220,000 kilowatt hours (kWh) per year each, thereby reducing the number of kilowatt hours of electricity needed by 440,000. The college estimates the initial energy savings to be around \$44,000 annually.

Lake Land currently has two small wind turbines and solar panels used primarily as educational tools. The larger wind turbine produces enough energy to power an average Illinois residence. Both turbines and the solar panels were installed using funding from the Lumpkin Family Foundation.

Lake Land also provides recycling services not only for the College but the community as well. Lake Land's single stream recycling efforts involve recycling everything except used food, #6 plastic, and cardboard in one container. Over 457 tons of garbage have been recycled between 2009 and 2012.