

## Lake County Renewable Energy Demonstration Project

**Scope:** A portable interactive display for the purpose of educating and creating public awareness for renewable energy and energy efficiency.

**Description:** The Renewable Energy Demonstration project will include an assortment of interactive educational models and a back drop display. An eye-catching display with graphics of both large and small scale renewable energy systems will highlight some of the recent renewable energy developments in the county and create a space for residents to learn about renewable energy and energy efficiency technologies. Components will include:

- A small solar water pump
- Geothermal Heat Pump (non-operational)
- Solar cell phone charging station
- Solar Fence charger
- Wind and solar powered battery chargers and solar cell phone charger
- Meters and Electricity Usage Monitors
- A small wind turbine
- A solar electric system with an inverter and battery bank
- Other demonstration items including solar lights, solar vents, solar shower, etc.

### **User Experience:**

Visitors will encounter a variety of renewable energy systems on display. Visitors can observe a small residential size wind turbine as well as an operating model wind electric system. If the display is set up inside, we will have a fan that visitors can turn on to see the model wind turbine power a light bulb. The Renewable Energy Coordinator and other volunteer staff will engage visitors in the operation of a small solar water pump, to demonstrate how renewable energy can be harnessed for agricultural work. Visitors will be able to see and try out commercially available products such as solar lights, battery and cell phone charges. In addition, a station with meters and electric usage monitors will allow visitors to measure the amount of energy used by a standard incandescent bulb vs. a CFL.

A working solar electric system with solar modules, an inverter and battery bank will power a touchscreen mounted to the storage trailer. Through the touchscreen, visitors will be able to access videos, photos, diagrams of renewable energy systems, and live solar data from a site in Lakeview. The content of the touchscreen can be updated as needed to showcase new renewable energy developments in Lake County and provide current resources for residents. Inside the trailer, visitors will

also be able to examine a geothermal heat pump and follow a diagram explaining how geothermal systems work.

The display will be staffed by the Renewable Energy Coordinator and community renewable energy advocates. They will be available to explain how the renewable energy systems work and answer questions. Visitors who want more information will be able to take home collateral materials on individual renewable energy technologies and energy efficiency strategies.

**Project Goals:**

- Dispel myths about renewable energy
- Raise level of awareness of available renewable energy and energy efficiency technologies
- Show concrete, affordable applications for homes and businesses
- Allow people to see first-hand how renewable energy systems work
- Provide information and resources to homeowners and business owners who are interested in installing renewable energy systems or making energy efficiency upgrades
- Distribute collateral materials on renewable energy technologies, tax credits and incentives for homeowners and business owners