

# SOLAR ENERGY PROJECT

## ABOUT THE PROJECT

In 2013, the board of directors at Great Lakes Energy approved a solar project to provide education about alternative renewable sources of energy.

The display features two working 5 kilowatt (kW) solar arrays, one fixed and the other tilting. The combined 10kW array is large enough to provide the energy needed for an average residential GLE member's home. The tilting array will be repositioned twice a year, in the spring and fall.

Data collected can be seen on a live monitor in the Boyne City office lobby and will also be shared in publications and online.

Members interested in investing in solar at their own residence or business should consider all the factors such as panel location, size

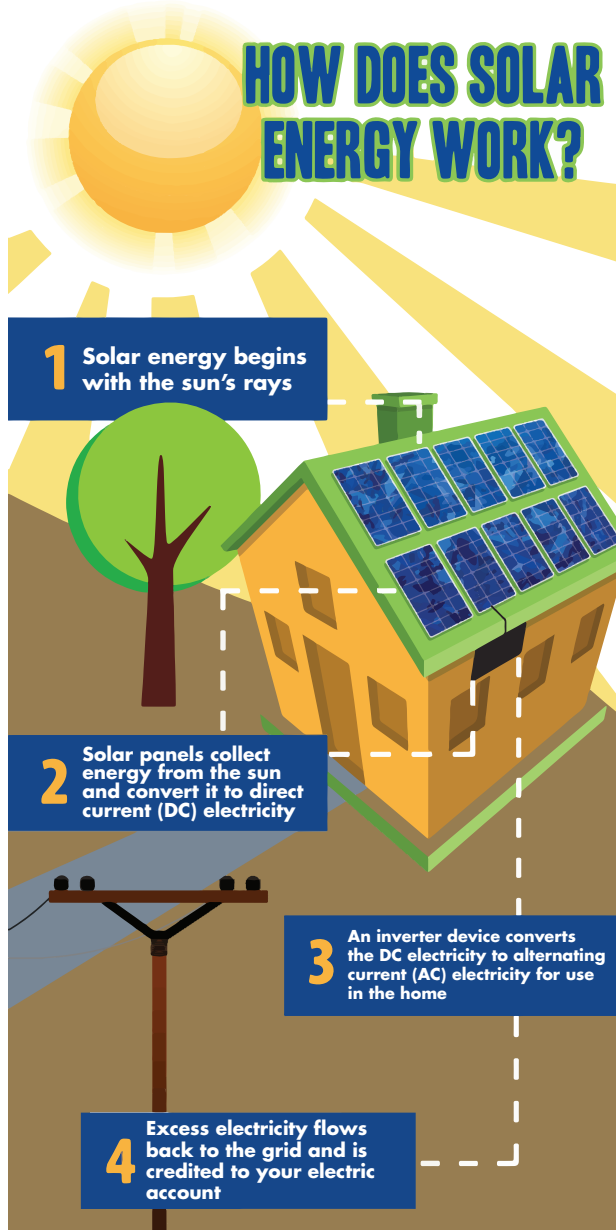
and cost, available incentives, permits, amount of energy needed, application (space heating, water heating, power generation) and more. These are things best discussed with a professional solar dealer familiar with your area.

The display is mainly for educational purposes, but is also net metered so that our office uses the energy generated. Net metering is available to members who wish to generate enough power for their home through a renewable source. Any excess energy generated is then credited to your electric bill.

To view the live monitor in the lobby, please visit during normal business hours, 8am-5pm M-F.



## HOW DOES SOLAR ENERGY WORK?



## PROJECT FACTS

Location:	GLE Headquarters, Boyne City, MI
Installation Date:	April 2014
System Size:	10 kW DC (10,000 watts) (5kW fixed mount and 5kW tilting mount)
Average Annual Energy Production:	11,080 kWh
Total 25 Yr Energy Production:	277,006 kWh
Footprint:	635 square feet
Cost, including installation and inverter:	\$41,392
Fixed Array Mounting Manufacturer:	SnapNrack (made in the US)
Tilting Array Mounting Manufacturer:	DPW Solar (made in the US)
Module Manufacturer:	Suniva (made in the US)
Inverter Manufacturer:	Fronius
Installer:	Voltage Electric, Traverse City, MI
Cell Type:	Multicrystalline solar cells
Module (panel) Dimensions:	64.56 x 39.05 in.
Number of Modules (panels):	40 (20 per array)
Wattage per Module:	250
Average Annual kWh per Module	277 kWh
Cost Per Installed kWh:	\$0.10460 with 30% tax credit \$0.14943 without tax credit
Warranty on Modules:	25 years
Warranty on Foundation:	10 years
Break-even point using 2014 GLE rates:	25 years with 30% tax credit* 35 years without tax credit
Maintenance Cost:	To be determined

\*consult with your tax advisor, based on manufacturer estimates

**QUESTIONS?**  
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