

Solar Sunflower System – Henry Vilas Zoo

Conservation is an important mission of Henry Vilas Zoo. It participates in national programs to conserve animal habitats and endangered species, and installs energy-saving technologies in its facilities. Learning about the animals the zoo cares for helps us appreciate the need to protect our environment.

Energy use impacts our environment, affecting air and water quality. As our area grows, we burn more fossil fuels to meet the increasing need for electricity. Using energy efficiently and developing clean power options can help to reduce the impacts.

Capturing energy produced by the sun is one option. Solar energy is clean; no emissions are released into the atmosphere. It also avoids the environmental effects of drilling for oil and gas and mining for coal.

This Solar Sunflower Project is a partnership between the Henry Vilas Zoo and Madison Gas and Electric. We are working together to raise the visibility of solar



energy and to provide data about its suitability for our area.

The electricity produced by the panels is fed into the local power system. It offsets power that would have been produced by power plants. The zoo is paid a percentage of the value of the electricity generated.

For more information, call the MGE Home Energy Line at 252-7117 or visit mge.com/solar.

Project features

- Dual-axis tracking. The array moves from east to west throughout the day to track the sun. It also tilts up and down to adjust to the changes in the sun's position by season. This system generates 30% more energy than a nontracking system.
- Real-time system monitor. Many of the MGE solar systems, including the zoo system, feed real-time data to mge.com. Students and others can use the data to learn about solar energy.

Technical description

- The entire system is called an array. The array has four modules.
- The array is rated at 1,200 watts. Each module is rated at 300 watts.
- Average annual energy production is 1,950 kilowatt-hours, about one-quarter of the annual energy use of a home.
- The panel is 10-foot square and center-mounted on a 6-inch diameter steel post. It is mounted 4.5 feet off the ground to avoid bothering the flamingos.

