


# Solar Race Rundown

August 2009



**Race Times:** Daily at 3 p.m.

**Race Weather:** Shine only

**Solar Car Lineup:** Renewable Roller (solar, wind, water and biomass), Sun Burn (orange with flames), Sun Burn (blue with sun), Blue Lightning (fluorescent), Flower Power (purple with flowers), Moo..ve Over (Holstein cow), Bug Detail (ladybug), The Green Machine (camouflage), Butter-Fly (pink with butterflies) and Hot Pursuit (squad car).



The new solar boat, Sail-Amander, was built by students at Amery Intermediate School in Amery, Wis., under the direction of their fifth-grade teacher, Sue Bielmeier.

**Car Selection:** Each racer may select one car to race. The Energy Park pit crew will assist racers with the cars and race tactics. Race cars must be returned to the Energy Park pit crew at the end of the race.

**Rules:** When the race starts, racers will place their selected solar race car in their designated lane. Solar racers will get one chance to race against another solar car. Each race heat will be timed. The best time out of all racers will receive the first-place trophy. There will be one trophy winner per race.

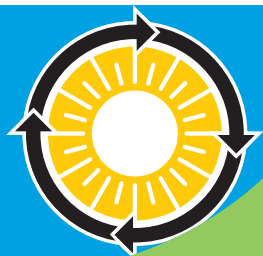
**Prizes:** All racers will receive a mini-race flag for participating. Second- and third-place winners will receive a champion medallion. And the winner of the solar car race will receive a race-day trophy.



**Post-race ideas:** Learn more about the We Energies Education Outreach Program at [www.we-energies.com/educators](http://www.we-energies.com/educators) and explore renewable energy activities on the Renewable Energy page.

**Request a Renewable Energy Science Kit with solar race cars at [www.we-energies.com/educators](http://www.we-energies.com/educators) under Classroom Resources.**





## Fun Facts

- Solar is a renewable energy source.
- Solar energy works in Wisconsin.
- One of the largest solar panel arrays in Wisconsin is located at the Urban Ecology Center in Milwaukee.
- Everyday the sun provides enough energy to meet the earth's needs for 27 years!
- In the United States, some of the best locations for solar cells are in the sun-drenched Southwest.

## QUESTION

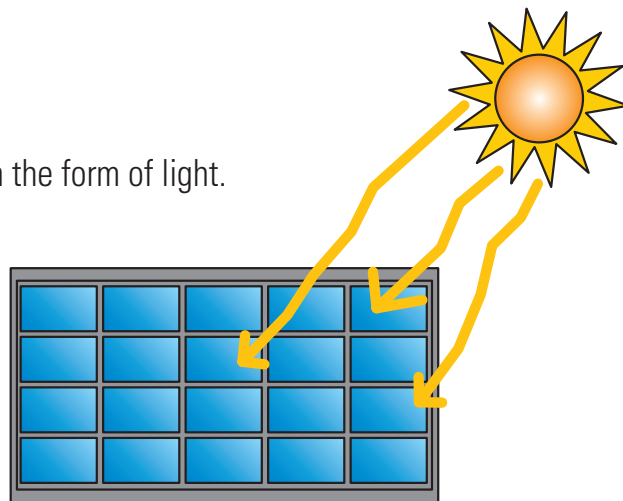
*How well does solar energy work on a cloudy day?*

**Hint:** Go to the solar car races and see how fast the cars move with and without cloud cover.

Energy comes from the sun in the form of light. Solar energy makes electricity from the sun's light. A photovoltaic cell (solar cell) is a device used to change the sun's energy into electricity.

## How It Works

1. The sun makes energy in the form of light.
2. The light frees electrons in the solar cell.
3. The electrons flow through wires in an electrical circuit to make electricity.



## Photovoltaic (PV) Cells

- Solar cells are made of semiconductor materials similar to computer chips.
- To make more power, many solar cells are connected together in a solar panel.

## Financial Incentives

We Energies provides financial incentives ranging from \$10,000 to \$100,000 for selected customer-owned renewable energy projects owned by not-for-profit, educational/academic institutions. These projects include solar installations. Visit [www.we-energies.com/re](http://www.we-energies.com/re) for more renewable energy incentive information.

**Learn more about renewable energy at [www.we-energies.com/educators](http://www.we-energies.com/educators) from We Energies' Education Outreach Program.**

