

# ENERGY MATTERS

Facts & Tips from the U.S. Department of Energy

## Bright Hopes For The Future Of Solar Energy

(NAPSA)—Research is shedding new light on an unexpected source of energy for heating homes and generating electricity—the sun.

The sun—directly or indirectly—is the primary source for most forms of energy found on Earth. Solar energy is clean, abundant and renewable.

Though we think of solar power as a new discovery, ancient civilizations found innovative ways to use solar energy. Among them, the Greeks, Romans and Chinese all developed ways to use solar warmth for their homes, including using southern exposures to maximize solar heating and making use of solar lighting.

Now, thanks to innovative technologies, it's possible to capture this energy, concentrate it, store it and convert it into electricity.

Sunlight is converted into electricity using solar cells. Solar cells are also called photovoltaic cells, or "PV cells" for short. PV cells were first developed in the 1950s for use in American space satellites. Today, they are used for power needs ranging from telecommunications to rural electrification. PV cells can be found on items we use daily, such as calculators, flashlights, radios, landscape lighting and children's toys.

Portable PV units are also available for emergency and disaster use, such as keeping cell phones and small appliances charged when the user is away from the grid or during blackouts.

Consumers can harness the power of the sun for themselves more easily than ever. Solar panels you see on buildings and homes have been available on the market for decades. New systems—which incorporate solar into roofing shingles—are now aesthetically pleasing, efficient and durable.



2006 ushers in new tax credits for solar energy technologies and consumers may also be eligible for state rebates.

For more information, consult with a tax professional, contact the Internal Revenue Service at [www.irs.gov](http://www.irs.gov), or check out [www.doe.gov](http://www.doe.gov) for the latest in tax credit information.

Sunlight isn't only used to generate electricity. It is also used to heat water, which can be used to warm homes and businesses. Solar-powered radiant heating systems run some industrial processes and drive turbines to generate electricity. Many solar thermal technologies have been used in homes for decades and can last more than 20 years.

Experts believe that solar energy technologies can benefit this nation in many ways. They have the potential to help diversify this country's energy supply, reduce the dependence on imported fuels, improve air quality, offset greenhouse gas emissions and stimulate the economy by helping to create jobs in the manufacturing and installation of solar energy systems.

To learn more, visit the Web site at [www.eere.energy.gov/solar](http://www.eere.energy.gov/solar).