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Installing a concentrating solar power system in Gila Bend, Arizona. The curved mirrors are tilted toward the sun, focusing sunlight on tubes that run the length of the mirrors. The reflected sunlight heats a fluid flowing through the tubes. The hot fluid then is used to boil water in a conventional steam-turbine generator to produce electricity. | Photo by Dennis Schroeder.



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V R O D U B

- Visit the [NREL](#), [EIA](#), and [Solar Technologies Program](#) websites for more solar energy resources.

This article is part of the [Energy.gov](#) series highlighting the "[Top Things You Didn't Know About...](#)" series. Be sure to check back for more entries soon.

6. Solar energy is the most abundant energy resource on earth – 173,000 terawatts of solar energy strikes the Earth continuously. That's more than 10,000 times the world's total energy use.

5. The first silicon solar cell, the precursor of all solar-powered devices, was built by Bell Laboratories in 1954. On page one of its April 26, 1954 issue, *The New York Times* proclaimed the milestone, "the beginning of a new era, leading eventually to the realization of one of mankind's most cherished dreams -- the harnessing of the almost limitless energy of the sun for the uses of civilization."

4. The space industry was an early adopter of solar technology. In the 1960s the space industry began to use solar technology to provide power aboard spacecrafts. The Vanguard 1 -- the first artificial earth satellite powered by solar cells -- remains the oldest manmade satellite in orbit – logging more than 6 billion miles.

3. Fast track to today and demand for solar in the United States is at [an all time high](#). In the first quarter of 2012, developers installed 85 percent more solar panels compared to the first quarter of last year. Total U.S. installations may reach 3,300 megawatts this year – putting the country on track to be the fourth largest solar market in the world.

2. As prices continue to fall, solar energy is increasingly becoming an economical energy choice for American homeowners and businesses. Still, the biggest hurdle to affordable solar energy remains the soft costs – like permitting, zoning, and hooking a solar system up to the power grid. On average local permitting and inspection processes add [more than \\$2,500](#) to the total cost of a solar energy system. The Energy Department [SunShot Initiative](#) works to aggressively drive down these soft costs – making it faster and cheaper for families and businesses to go solar.

1. In California's Mojave Desert, the largest solar energy project in the world is currently under construction. The project relies on a technology known as solar thermal energy. Once the project is complete 350,000 mirrors will reflect light onto boilers. When the water boils, the steam turns a turbine, creating electricity. The project is expected to provide clean, renewable energy for 140,000 homes and is supported by an Energy Department loan guarantee. More details on the Energy Department's investments in large scale, innovative renewable energy projects [in this slideshow](#).

Want more solar? [The National Renewable Energy Laboratory](#), [Energy Information Administration](#), and [Solar Energy Technologies Program](#) are all great solar energy resources – for kids and adults alike.

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