City of Tucson Solar
Introduction

Humans have been harnessing radiant energy from the sun for thousands of years. From the 7th century B.C., when magnifying glasses were used to start fires, to the solar-powered space craft of today, applications of solar technology have been constantly evolving.

Of the 174 petawatts of solar energy that reach Earth's upper atmosphere, roughly half penetrates to the surface of the earth. This is more than enough energy to power human needs many times over. In fact, the Earth receives enough solar energy in one and a half hours to satisfy human energy needs for more than a year!

Many countries are already using solar power to produce large amounts of electricity. In some cases, acres of photovoltaic cells–or just several panels on the roof of a house–directly create electricity from sunlight. In so-called concentrated solar power systems, mirrors or lenses concentrate sunlight onto a receiver where it is then converted to heat energy. Heat can be used to directly power turbines that create electricity or it can be stored until needed, allowing electricity to be produced even after the sun has set.

In the United States, Arizona has been a leader in solar power generation since the early 2000s. In 2008, Tucson, AZ was one of twenty-five cities from New England to southern California to be selected as Solar America Cities. These cities were recognized with grants from the Department of Energy for their work to accelerate the adoption of solar energy technologies for a cleaner, more secure energy future.