

How do solar panels work?

The Earth intercepts a lot of solar power: 173,000 terawatts. That is 10,000 times more power than the planet's population uses. So, is it possible that one day the world could be completely reliant on solar energy? Richard Komp examines how solar panels convert solar energy to electrical energy.

- 1) What are most solar cells made from?
 - a. Copper
 - b. Concrete
 - c. Silicon
 - d. Coal
- 2) What is the carrier of the electric current from solar cells?
 - a. Silicon atoms
 - b. Electrons
 - c. Water
 - d. Holes
- 3) What is light?
- 4) What from the Sun causes the solar cell to produce the electricity?
 - a. Photon particles of sunlight
 - b. The heat from the Sun
 - c. The shadow under the solar cell
- 5) What are the major social barriers to using solar energy?
- 6) What creates the potential difference (voltage) in a solar cell?
 - a. A battery
 - b. The bonds between the silicon atoms
 - c. An outside generator
 - d. The p-n junction
- 7) How efficient are the normal commercial solar cells?
 - a. Less than 10 %
 - b. 15 – 20 %
 - c. As high as 46 %
 - d. More than 70 %
- 8) How important is the use of solar energy in mitigating¹ the effects of the global warming we are experiencing?



¹ Mitigating = making something less harmful, unpleasant, or bad