

Solar Energy Questions

1. What is the most common material used for a photovoltaic solar cell?

Silicon

2. How much light energy is converted to electrical energy by a photovoltaic solar cell?

15%

3. How much energy is lost in converting DC energy to AC energy?

8%

4. What are the 4 basic components of a photovoltaic solar power plant?

Solar Cell, Inverter, Transformer, Power Line

5. What is the function of the inverter?

Convert DC power to AC power

6. What is the function of the step-up transformer?

Increases the voltage from the inverter to match the voltage on the power lines.

7. How does electricity get from the power plant to your home?

Power lines transport the electrical energy to the home

8. What does photovoltaic mean?

Direct conversion of sunlight to energy

9. How much power does one (1) square foot of photovoltaic solar cells generate on a sunny day?

12 Watts of electrical power

10. If your home requires 3000 watts of electrical power, how many square feet of photovoltaic solar cells would you need to power your home?

250 Square Feet
