

Published based on [Solar Panels for Electricity: Getting the Most Out of the Sun](#)

Solar Panels for Electricity: Getting the Most Out of the Sun

Solar panels for electricity can help reduce your energy bills by directly capturing energy from the sun and convert it into electricity. This is a more potent and reliable way to generate electrical energy in comparison to wind mills and is also much more cost-effective than purchasing commercially produced energy from power companies.

Let's see how solar panels for electricity work:

How Panels Convert Sunlight to Electricity

Simple. Panels collect radiation from the sun and actively convert the absorbed energy to electricity. These panels are composed of several solar cells which work similarly to large semiconductors. When cells are exposed to the rays of the sun, the positive-negative junction diodes convert the energy from the sun into electrical energy. This conversion is called the photovoltaic effect. Basically, the more cells and the higher the quality of these cells, the higher amount of electrical output is produced by the panel. Factors such as the weather condition, obstructions to sunlight and the placement or position at which the panel is installed can greatly affect the power output of the panels.

Utilizing Solar Panels to Power a House

The amount of energy needed by a home is linked to the number and type of appliances homeowners possess. You might quite hesitant to pursue solar panels for electricity due to its high cost of initial installation. However, what you should also think about is the fact that it makes a great investment after quite some time. You can significantly save some money on electricity bills while you are also insured against the rising cost of electricity. Some experts believe that the cost of energy will shoot as much as 50 percent more by 2035 according to US Energy Information Administration. With that in mind, residential panels installed in your home are indeed a good investment and protection from future financial distress.

Producing Energy on the Road

Aside from home appliances, solar panels can also supply energy to cars and road signs. These panels are photovoltaic, which means they produce electricity using sunlight. The electricity produced is basically stored in batteries, and the stored energy is used to power up electric motors even during nighttime. When batteries are drained, they will not be able to operate a device again until they absorb enough sunlight again during the day.

New Technologies and Future Inventions

Scientific breakthroughs in producing new materials enable some panels to work in very low light and even on cloudy days. Whilst it is still doubtful to predict that there will be solar panels for electricity to power up in complete darkness, the innovation in technology will certainly reach a certain point to meet those needs. In the middle of the 21st century, fossil fuels are expected to become a critical source of power generation. With this speculation, there will be a tremendous worldwide demand for solar power. As the demand increases, so does the need for more efficient ways to provide the community enough energy to keep the lights on through the night.

[Solar Panels for Electricity: Getting the Most Out of the Sun](#)

You can also find this article published on [Solar Panels for Electricity: Getting the Most Out of the Sun](#), and on the tag pages [Appliances](#), [Conversion](#), [Electrical Energy](#), [Electrical Output](#), [Electricity Work](#), [Energy Bills](#), [Power House](#), [Radiation](#), [Semiconductors](#), [Solar Cells](#), [solar electricity](#), [Solar Panels](#), [Solar Power](#), [Sun Energy](#), [Sunlight](#), [Weather Condition](#).