



ECOBROKER International

Green Topic Pages

Solar Electricity - Photovoltaics

Technology Snapshot & Benefits:

Photovoltaics is a technology that converts radiant light energy to electricity. Photovoltaic (PV) cells, also called solar cells, are the building blocks of this technology. PV cells are connected together to form larger modules. A module is typically placed near or on a home or building to provide a portion of, and in some cases all of, the building's electricity. PV systems are used for "off-the-grid" applications (homes, cabins, and water pumping on farms) as well as federal government applications (traffic warning lights and emergency call boxes near highways).

Estimated Cost Savings:

Cost savings for PV systems are typically calculated in terms of other energy options such as extending power lines or alternative energy systems. Stand-alone photovoltaic systems can be more cost-effective than extending power lines for locations as near as a quarter mile off the grid. On a 20-year, life-cycle-cost basis, a remote PV system typically costs from 25 - 50 cents per kilowatt-hour.

Issues:

Electricity from PV systems typically costs more than electricity purchased from a local utility. However, in cases where an area is not served by a utility, a photovoltaic system is likely the most cost-effective option.

Be sure to get bids from two or three (or more) experienced photovoltaic system contractors. Multiple bids will allow you to gain immediate perspective on a fair cost for your PV system.

Getting It Done:

With the assistance of a qualified contractor, make sure to place your system in a location with adequate exposure to the sun. Check for financial incentives offered in your state by consulting the [Database of State Incentives for Renewable Energy](http://www.dsireusa.org/) (<http://www.dsireusa.org/>).

More Information On This Topic:

[U.S. Department of Energy's Office of Energy-Efficiency and Renewable Energy: Photovoltaics](http://www.eere.energy.gov/solar/photovoltaics.html)

<http://www.eere.energy.gov/solar/photovoltaics.html>

[U.S. Department of Energy's Office of Energy-Efficiency and Renewable Energy: Photovoltaic Basics](http://www.eere.energy.gov/solar/pv_basics.html)

http://www.eere.energy.gov/solar/pv_basics.html

[Energy and Environmental Building Association: Photovoltaics](http://www.eeba.org/resources/consumer/photovoltaics.htm)

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