

Frequently Asked Questions

What are some sources of information relative to solar energy?

Florida Solar Energy Center
www.fsec.ucf.edu
Phone: (321) 638-1015
E-mail: info@fsec.ucf.edu

Iowa Department of Natural Resources
www.solarmidwest.org
Phone: (515) 281-6150

Iowa Energy Center
www.energy.iastate.edu
Phone: (515) 294-8819
E-mail: iec@energy.iastate.edu

U.S. Department of Energy
Office of Energy Efficiency & Renewable Resources — Midwest Regional Office
www.eere.energy.gov
Phone: (312) 886-8570

National Center for Photovoltaics
www.nrel.gov/ncpv

Which vendors should I work with regarding my solar unit?

The cooperative does not endorse one particular solar or PV vendor. There are several resources on the Internet, for example, which may give you some additional background information.

Frequently Asked Questions

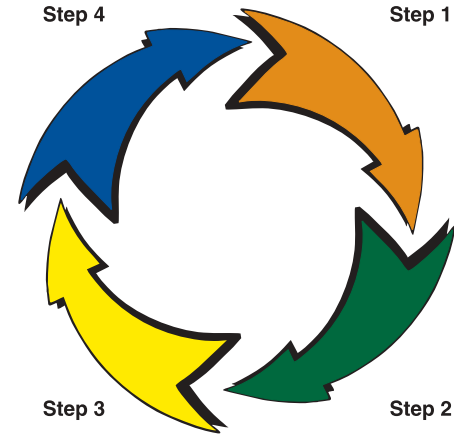
What rebates or other incentives do entities such as the state or federal government have for solar energy?

Incentives can come in the form of tax credits, low interest loans or other delivery mechanisms. The Energy Policy Act of 2005 established a new 30 percent federal tax credit up to \$2,000 for the purchase and installation of photovoltaic and solar hot water heating property for residential use. The equipment must be placed in a dwelling unit in the U.S. and used as a residence by the taxpayer. This tax credit also applies to fuel cells in the amount of \$500 per 500 watts. To be eligible for the credit, equipment must be "placed in service" between Jan. 1, 2006 and Dec. 31, 2007. Your tax accountant or tax attorney can advise you about tax credits or other tax incentives relating to the installation of a solar unit.

What rate will the cooperative pay for kWhs generated from a solar unit?

The cooperative will purchase excess power that the member-consumer generates over and above what is consumed. The cooperative will purchase excess power at rates comparable to what the cooperative's power supplier would incur if comparable power were generated by the power supplier or purchased from another source.

Recommended Process for Member-Consumers



- Step 1** Contact your cooperative to arrange a meeting
- Step 2** Meet with the cooperative to verbally express your intentions
- Step 3** Work with your cooperative to develop a written agreement
- Step 4** Proceed as outlined in the agreement

For more information contact:



**Iowa Association of
Electric Cooperatives**

A Touchstone Energy® Cooperative 

8525 Douglas, Suite 48
Des Moines, Iowa 50322-2992
phone: 515.276.5350 fax: 515.276.7946
www.iowarec.org

Solar Generation



Power from
the Sun

Today's changing energy landscape is bringing more attention to renewable energy resources, including solar energy. Iowa's rural electric cooperatives support generation that is safe, reliable, affordable and environmentally responsible.

Solar energy systems, also known as photovoltaic or PV systems, use a visible renewable resource — the sun. Solar systems are most effective when they are part of an energy efficient home or business. Purchasing and installing a solar system can be a significant investment for a consumer. Therefore, Iowa's electric cooperatives recommend carefully researching the potential investment, so you make the right decision for your home or business.

Solar Energy for Homes or Businesses

The two most common approaches to harnessing energy from the sun for homes and businesses are **photovoltaics** and **solar heating systems**.

Photovoltaics (PV systems) transform the sun's energy into electricity using solar cells, which are wafer-thin circles or rectangles measuring three to four inches across. Through the photovoltaic effect, a typical four-inch silicon solar cell produces about one watt of direct current electricity.

While many people are familiar with the larger ground and roof panels, PV systems can be installed as smaller panels that are integrated into roof tiles or shingles or can replace building facades or curtain walls.

Iowa's electric cooperatives support generation that is **safe, reliable, affordable** and **environmentally responsible**.

Solar heating systems capture the power of the sun to provide thermal energy for water and space heating. The efficiency and reliability of solar heating systems have increased, making them attractive options for homes and businesses.

Passive solar space heating takes advantage of warmth from the sun through design features, such as large south-facing windows and materials in the floors or walls that absorb warmth during the day and release the warmth at night. A sunroom or greenhouse is a good example of a passive system.

Active solar space-heating systems consist of collectors that absorb and save solar energy and work in tandem with electric fans or pumps that transfer and distribute the solar heat. Active systems also generally have an energy storage system to provide heat when the sun is not shining.

When considering the installation of a PV system, your cooperative places a strong emphasis on **safety, reliability and integrity of the power grid**, and **fairness in terms of cost to member-consumers**. Anytime generation is connected to the transmission grid, the safety of cooperative employees, member-consumers and the general public must be given top priority. In addition, the member-consumer must meet certain requirements to allow your cooperative to maintain the reliability of the power grid and to ensure that the associated costs are not imposed on other member-consumers.

Member-Consumer/ Cooperative Responsibilities

Before investing in a PV system that would be interconnected to the power grid, you should meet with the appropriate cooperative representatives to gain an understanding of the expectations for both the cooperative and member-consumer.

Your local electric cooperative will work with you to establish a written agreement, which will address these expectations as well as each party's responsibilities. The agreement will also cover the terms and conditions of the interconnection, including such things as rates paid for the power you deliver to the grid, insurance and metering requirements.

Investing in Solar Energy

Cooperative's responsibilities

Cooperatives are your partner in providing you with safe, reliable electric



Your cooperative places a strong emphasis on **safety, reliability** and **integrity** of the power grid, and **fairness** in terms of cost to member-consumers.

service. We have requirements in place to address issues of safety, grid integrity and cost fairness. Those requirements (1) protect the safety of member-consumers and cooperative employees (2) maintain the integrity and reliability of the grid and (3) ensure cost fairness.

Cooperatives must adhere to all applicable federal and state laws when working with a member-consumer to connect solar systems to the grid. A written agreement between the cooperative and the member-consumer typically is developed to ensure proper communication and protections are in place, prior to connection of the facility to the grid. Consideration must also be given to established requirements for installation, maintenance, metering, switching and liability insurance.

Member-consumer's responsibilities

The general requirements for a member-consumer to install and interconnect PV generation include paying for any interconnection devices and/or system improvements that are necessary to protect the safety of the cooperative representatives and to maintain the integrity of the delivery system. The member-consumer is also expected to carry liability insurance. Individuals must also pay for the necessary metering equipment used to measure kilowatt-hour (kWhs) delivered back to the grid by the member-consumer.