

WILL MY TOUCHSTONE ENERGY COOPERATIVE BUY ANY EXCESS ENERGY I PRODUCE WITH A SOLAR PV SYSTEM?

Grid connected PV systems are connected to the cooperative's power lines. That means electricity can flow both ways (to your home from your cooperative, and from your PV system back to the electrical grid). Particularly on sunny days when your energy use may be low, your system may produce excess energy that can flow back to the grid and may be purchased back by your cooperative. Many cooperatives purchase energy generated by a PV system above what the homeowner uses. Check with your cooperative to get specific details for your area, including requirements for interconnection, safety, metering, and applicable rates.

HOW MUCH DOES A SOLAR PV SYSTEM COST?

The price of PV components varies depending on the size of the system (generating capacity), type and quality of the components purchased, and complexity of the system selected. The good news for consumers is that the cost of PV has declined dramatically, while the technology has improved, equally dramatically. Installation costs depend on the size and complexity of the system, but also on the home layout and construction. For example, a simple, south-facing roof allows for an easier install than a roof with hips and valleys. In addition, some homes require structural or wiring upgrades. An average 4 kW system may cost between \$10,000 and \$20,000, before credits and incentives. This is based on a typical installed cost of \$2.50 to \$5 per Watt of distributed generation capacity. To determine your costs, look for online calculators to help you estimate your pricing, and also get bids from reputable installers.

ARE THERE INCENTIVES AND TAX CREDITS FOR INSTALLING SOLAR PV SYSTEMS?

Yes. There is a federal tax credit of thirty percent through 2019, then a slow phase out of the credit by the end of 2021. In addition, there may be state or local income tax credits, property tax exemptions, and rebate programs from government agencies. Your cooperative may offer payments or credits based on electricity generation, loans, net metering policies and others. These vary by state, city and utility, and may also depend on whether the system is purchased or leased. Find information about your state's programs: <http://programs.dsireusa.org/system/program/maps>. Be sure to consult with your financial and tax advisor.

HOW LONG IS THE PAYBACK PERIOD ON A SOLAR PV SYSTEM?

The payback period can range from fewer than 10 years to more than 20 years, depending on the system cost, available rebates and incentives, the amount of electricity produced, and the retail price of electricity you purchase from your cooperative. Check with your cooperative for more information.

HOW LONG DO SOLAR PV SYSTEMS LAST?

Certified PV products and systems generally are reliable, with a life expectancy of about 30 years. Manufacturers test PV panels for hail impact, high wind, and freeze-thaw cycles to represent real-life situations. Most manufacturers offer 20- to 25-year warranties for panels; extended warranties may be available at an extra cost. Little maintenance is required; occasionally it may be necessary to rinse modules off with water to remove dust and grime. Other components like inverters may have a shorter life. PV panels may outlast the roof they are attached to. Make sure your roof is in good shape or budget for replacement during the life of the system.

HOW CAN I KNOW IF A SOLAR PV SYSTEM WILL WORK ON MY HOUSE?

To begin, you can look at factors such as which direction your home faces, the condition of your roof, and obstructions such as trees and other buildings that may block the sun during the peak generation period of 9:00 a.m. to 3:00 p.m. Solar contractors can provide a more detailed analysis on what to expect, and your cooperative can offer advice, too.

IF MY HOUSE IS NOT SITED FOR A SOLAR UNIT, ARE THERE OTHER SOLAR OPTIONS?

If your house is not ideal for solar, you rent your home, or you just aren't ready to make a big investment, there are other options. Talk to your cooperative about community solar or green power purchase option.

HOW DO I GET STARTED WITH SOLAR?

Before choosing a solar system be sure that your home is as energy efficient as possible; you may want to get a home energy audit from your cooperative to help determine which improvements will be most beneficial. Investing in energy efficiency provides a faster return on your investment. By improving your home's energy efficiency first you will reduce your overall energy use and may reduce the size of PV system called - that saves more money. Also make sure your roof is in tip-top shape. If yours is older, you may need to repair or replace it before installing solar (and remember, a solar PV system may last up to 30 years, so be sure your roof will last, too). Research solar and solar contractors thoroughly before investing in a system; get at least three quotes before choosing a one. Be sure to work closely with your cooperative for advice and assistance on interconnecting with the grid. They can provide information and history of your energy usage that can help you size your system and evaluate savings. Co-op staff has experience in working with other member-owners and solar contractors.

**FOR MORE INFORMATION, VISIT
TOUCHSTONEENERGY.COM**