



# The First-Time Buyer's Guide to a Solar System



## Energy costs are projected to continue rising.

[A growing number of homeowners](#) have become interested in more affordable alternatives. Transitioning to solar power is the best way to reduce energy costs, but few homeowners understand exactly what this entails; questions about the efficacy and environmental impact of solar systems abound.

This primer will help you understand the nature of solar power and the reasons why it is superior to fossil-fuel-based energy sources.



## WHY GO SOLAR?

Solar panels provide a diverse array of benefits, but the first thing you will notice is reduced power bills. With a solar system installed on your home, you will begin harvesting the same energy source that powers most of the planet — sunlight. This will allow you to purchase less energy from the power company, thereby lowering your energy bills. Additionally, most residential solar systems yield surplus energy, which you can sell back to your local utility provider.

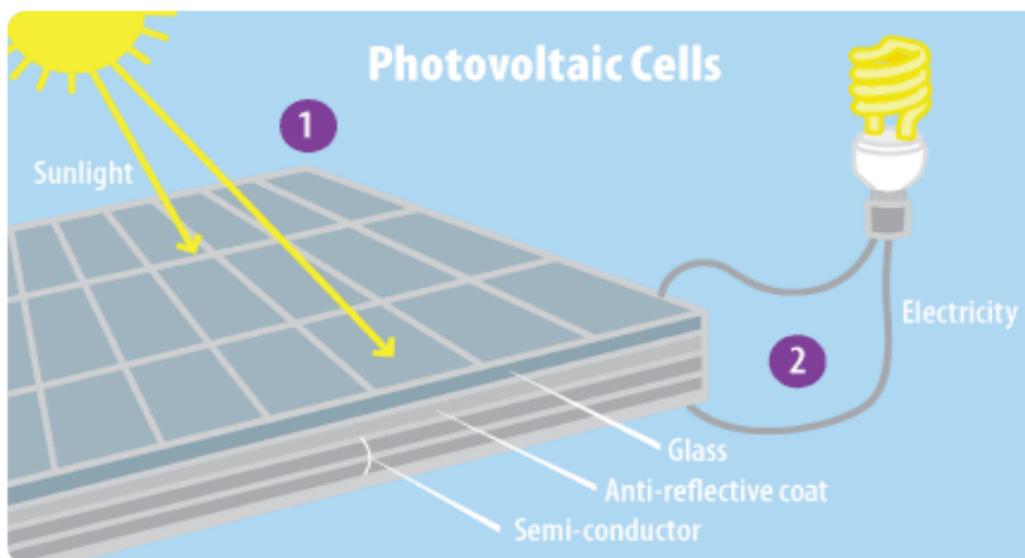
Many municipalities even offer financial incentives for residents who install solar panel systems on their homes. For example, Colorado Springs residents may be eligible for a 50-cent-per-watt rebate, which can offset [40 to 60 percent](#) of the price of solar panel installation.

As the market for solar panels has grown and the technology matured, the cost of solar panels has plummeted. In fact, according to the [Solar Energy Industry Association](#), the average price of a residential solar system in Colorado has fallen by about 24 percent over the last year. What used to be a luxury purchase, out of reach for all but the most affluent homeowners, has now become an affordable option for most middle-class families.

Solar panel systems are not only helpful for your bottom line; they are also better for the planet. Simply put, residential solar panels are some of the most efficient and cleanest alternatives available to homeowners. Even after allowing for the carbon produced during panel construction and installation, solar panels produce less carbon than coal- and natural-gas derived energy sources. Over their lifetime, solar panels produce about [30 times less carbon](#) than coal-powered energy sources.

## HOW SOLAR SYSTEMS WORK

Solar panels convert the energy contained within sunlight into direct current (DC) power. However, since DC power is not suitable for the appliances in your home, the system must convert the power into usable form. The system accomplishes this through a special device called an inverter, which converts the power to alternating current (AC).



Once converted to AC, the energy travels to your electrical panel, where it is distributed to the various outlets in your home. Once the solar-derived energy reaches the electrical panel, it becomes indistinguishable

from the energy you normally purchase from your local provider.

During the installation process, we will connect a new electricity meter — called a net meter — to your home. Like a normal electricity meter, this device will track the amount of electricity you draw from the main power grid. However, the meter will also track the amount of electricity your solar panels produce. If you produce more energy than you use, you will receive bill credits from your local provider.



## SOLAR PANEL SELECTION

Proper solar panel sizing and selection is imperative for maximizing your energy savings; solar systems are not a “one size fits all” technology.

Accordingly, all of our solar systems are custom designed to match your home, lifestyle and energy needs perfectly. Different models and configurations have varying strengths and weaknesses, and our experienced design team will work closely with you to choose the best models and layout for your home. This will allow you to overcome the challenges associated with shade, unusual architecture and other factors.

## SOLAR PANEL INSTALLATION

You want your solar panels to capture as much sunlight as possible, thus, you should consider the location of the panels carefully. Generally speaking, south-facing roofs are the ideal location to install your new panels, as southern exposures receive the most hours of sunlight in Colorado (and everywhere else in the northern hemisphere). However, other considerations — such as the pitch, or angle, of your roof — influence the performance of the panels; our technicians will help analyze your home and suggest the best location for your circumstances.

We usually install the panels a few inches above the roof, since the constant sun exposure tends to make the panels heat up. By including an air space below the panels, air is able to pass underneath, which helps avoid any overheating of panels. This also helps improve efficiency and extends the life of your solar panels.

Installation of solar panels is a relatively quick and painless procedure that rarely takes more than a few days to complete.

## GET THE BALL ROLLING: WHAT TO EXPECT

Visit [EcoMark Solar](#) and fill out our brief inquiry form. After providing us with a little information about yourself and your home, a member of our sales staff will contact you and schedule an in-home appointment at your convenience. Once there, we will analyze your home and lifestyle to determine the best way to use the sun's rays to power your life.

Shortly after meeting with you, we will present you with a custom-designed solar system, including images of what your home will look like after the process is completed. Our experienced staff will walk you through the entire transition and be ready to address any questions or concerns you may have.

Are you ready to collect the free energy hitting your roof every day, reduce your energy bills and do your part to maintain a cleaner, healthier planet?

**[Contact EcoMark Solar](#) today, and let us help.**

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