

Installing Solar Panels For Homes

Solar energy technology has evolved over the years with the capability to get you completely off the grid even if you live in a housing tract. When you envision a solar-powered home do you see a cabin in the woods where the only energy you can get is from solar and wind, or do you see large, unattractive panels on roofs where people are constantly worrying about their electrical consumption. Do you envision not being able to enjoy the big-screen televisions, multiple refrigerators, or even living without air conditioning in a hot climate? These views on solar capabilities are much different today as the demand for solar energy has become vital in this economy. Getting off-the-grid is no longer only a dream, but is becoming a reality for residential and commercial properties. If you are interested in buying [Solar Systems Wauchope](#) . Check our packages here.

Solar panel technology and know-how has developed more efficient and affordable systems you can install for your home. Even though the solar option is still more expensive to install than conventional power, with fuel and utility expenses rising, the demand for solar energy rising-and the industry is prepared to meet that demand. Many newly built homes are being constructed with a solar panel array on the roof that is less obtrusive than the huge panels of earlier times. The solar panels of today are much more efficient and can convert an abundant amount of energy with a smaller size than in the past. This makes them more inconspicuous and, although a solar array on a roof will still be seen, it will blend in substantially more with your building, actually looking very attractive and "modern".

Generating solar electricity is really a new concept for some people. The "old" off-the-grid stereotype does not fit in the economy of today with its advanced technology. When you see houses with solar arrays on the roof today, these homes are often connected to conventional utilities also. By utilizing a mixture of traditional energy and solar energy, these homeowners are able to drastically slash their electricity costs and not sacrifice their lifestyle at all in the way they use electricity. It is highly likely that the homeowners of today can churn out a sufficient amount of solar energy to meet their needs and even have excess energy they can sell back to the utility companies for a change, rather than getting charged for the energy they consume. Installing a solar array on your roof does not cost as much as many expect. Local and federal government is subsidizing the costs of installing solar panels for homes in many ways. There are at least 10 federal incentives you can get for installing renewable and efficient energy. Most federal programs contain tax credits, corporate and private exemptions and special loans and grants for residential home mortgages and renewable energy manufacturing. Most, if not all states offer incentives as well, including local rebates, property tax incentives, sales tax incentives, and many more. Some states even take care of up to 70 percent of installation costs. If you are thinking about installing solar panels for your home, here are a few facts you will need to know to help you in making the decision to go solar.

About Solar Panels for Homes

Solar panels, or photovoltaic systems, convert sunlight into electrical energy. Every solar panel is composed usually of a group of about 30-40 solar cells made with crystalline silicon or some

other type of sun absorbing material. The materials they are made of are highly efficient at absorbing light. Each solar panel is simply a series of solar cells connected all together and encased in a shielding enclosure with a clear face to allow sun to enter and a solid backing. The entire panel is sealed to prevent moisture from degrading the panel.

The part of the solar cell the sunlight is absorbed into is considered to be electrically negative, and the bottom of each cell is considered to be electrically positive. When the sun is absorbed into the silicon cells, electrons are knocked loose and travel from the top (electrically negative) to the bottom (electrically positive) layer. This sun-induced electrical energy is passed through the contacts in the top layer and is routed through the circuit array, producing electrical power.

Effectiveness of Solar Panels in Your Area

Solar panel systems can churn out sufficient electricity under optimal conditions to power all the lights and electrical appliances in a typical American home and even to keep warm in the winter and cool in the summer. The efficiency of your solar panels really depends on your location.

Solar panels are installed on whichever surface of your house gets the majority of solar exposure-in southern climates this is the north-facing side, and in northern climates it is the south-facing side.

If your residential home does not get an average of six hours of constant sunlight everyday throughout the year, you will not generate as much energy. Also, the sun shines stronger in some areas than in others. A home in less sunny areas will need more solar panels to produce the same energy as a home with less solar panel in a sunnier area.

Not enough sunlight?

Even if you do not get enough sun to generate electricity to satisfy all of your energy needs, you can still benefit greatly by installing solar panels for your home. The majority of modern homes with solar panels installed are not entirely off-the-grid. Many homes use both solar panels and conventional utilities. Doing it this way, they reduce the cost of their electricity consumption and depend less on the conventional power received from the utility company. They are not completely off-the-grid, but they can still conserve energy while continuing to make use of all the appliances they are accustomed to.

How much will Solar Panels cost?

If you do not go the "hybrid" route of being partly on the grid and supplementing your energy with solar, you should expect your installation to cost more. Getting completely off the grid generally costs about \$12 to \$15 per watt. This equates to \$12K to \$15K per kilowatt hour of energy you want to produce. Compared to upwards of \$35K per mile the utility company would charge you to run electric lines to your location, solar energy is much more cost effective. If your home is in an isolated area where commercial electricity is not available, the only way to get electricity is to rely on solar energy. The cost of installing solar panels is far outweighed by the significant breaks in your electric bill as a result. Even so, it will take a few years to realize a return on your investment and less time if you are able to sell excess energy back to the utility company.