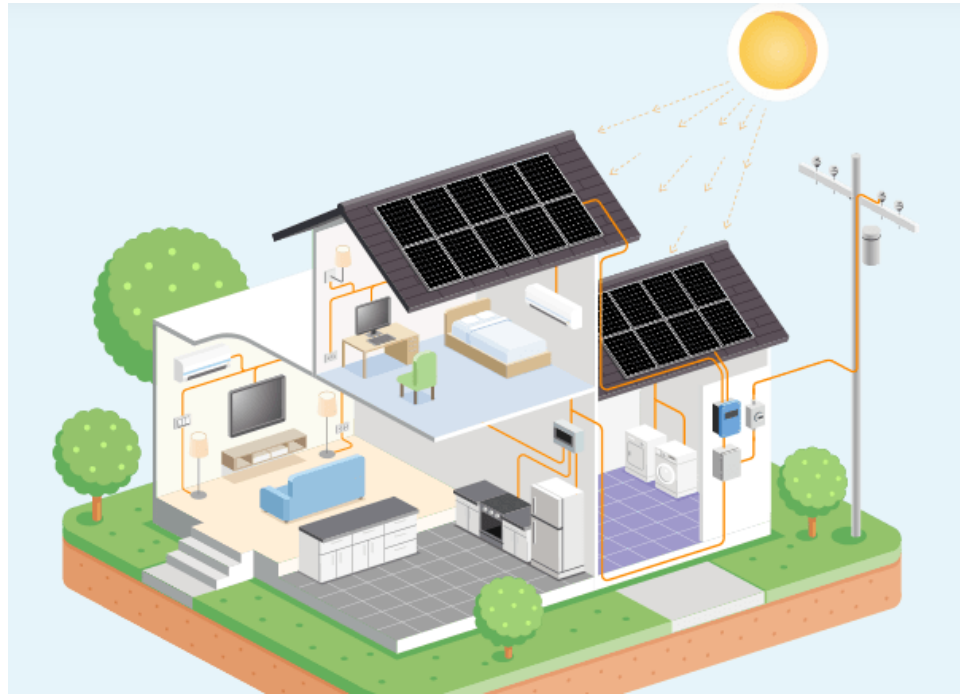


Acknowledgement : Power Home





How Do Solar Panels Work?

Solar panels work by capturing energy from the sun and converting it into electricity for homes and businesses. Once installed on your roof, solar panels convert sunlight into direct current (DC) electricity that flows into an inverter. The inverter converts the DC electricity into alternating current (AC) that your home can use. Any additional power generated that you don't use gets pushed back into the electric grid for a credit on your electric bill.





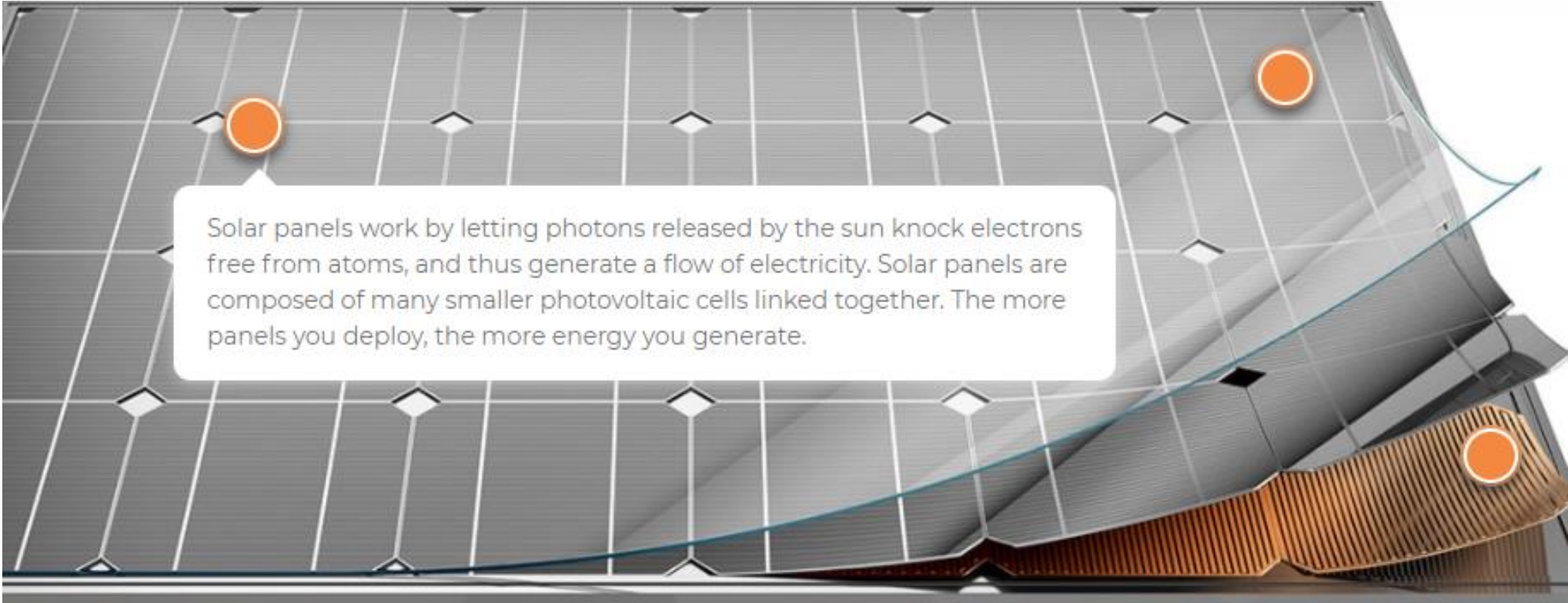
Advantages of Solar Energy

Once you have solar panels on your home, your home will generate its own electricity for decades to come.

Not only does solar energy save you money now, but it can also help the environment. And, since most of us have sun hitting our roofs, it's the best, most affordable way to generate clean energy for your home



Cell level



Solar panels work by letting photons released by the sun knock electrons free from atoms, and thus generate a flow of electricity. Solar panels are composed of many smaller photovoltaic cells linked together. The more panels you deploy, the more energy you generate.

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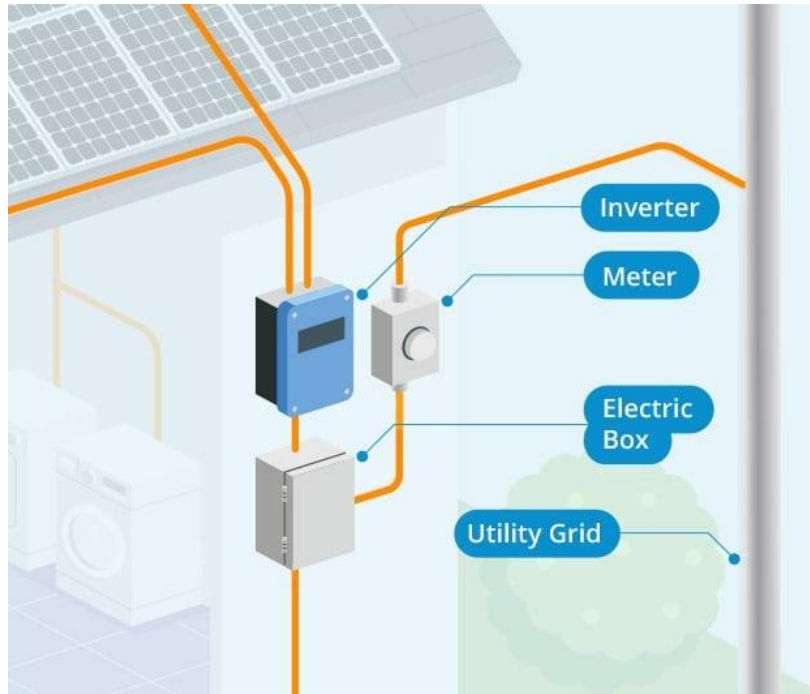


How Does Solar Energy Work?

Once solar panels are installed on your roof and begin to create energy, there are a few steps required to turn it into energy your home can use. As the sun hits the solar panels, they generate direct current (DC) electricity, where the electrons flow around a circuit in one direction. In order for your home to use this energy, it must be converted from DC electricity to alternating current (AC) electricity, where the electrons are pushed and pulled. When you have solar panels installed on your home, you will also have a solar inverter installed. The solar inverter changes the DC output of the solar panels into AC electricity that your home can use.



How Does Net Metering Work?



When your solar panels produce more energy than your home needs at any one time, you may wonder where that energy goes. That energy is sent back to the power grid and you get credit for it on your electric bill. This process is called net metering, and it's one of the great things about solar. In essence, your roof is producing energy and sending the excess back into the electric grid through the meter on your home. This allows you to benefit from all the energy your home produces.



What Is a Solar Inverter?

- In the beginning of the solar industry, there were central solar inverters, and since their introduction, they have pretty much dominated the industry. However, the introduction of power optimizers and microinverters created a big technology shift in the solar industry. Power optimizers and microinverters optimize production for each solar panel while central inverters optimize for the entire system. By optimizing for each panel, every panel performs at its maximum potential. In the long, run, this “smart” technology makes your entire solar panel system more efficient.

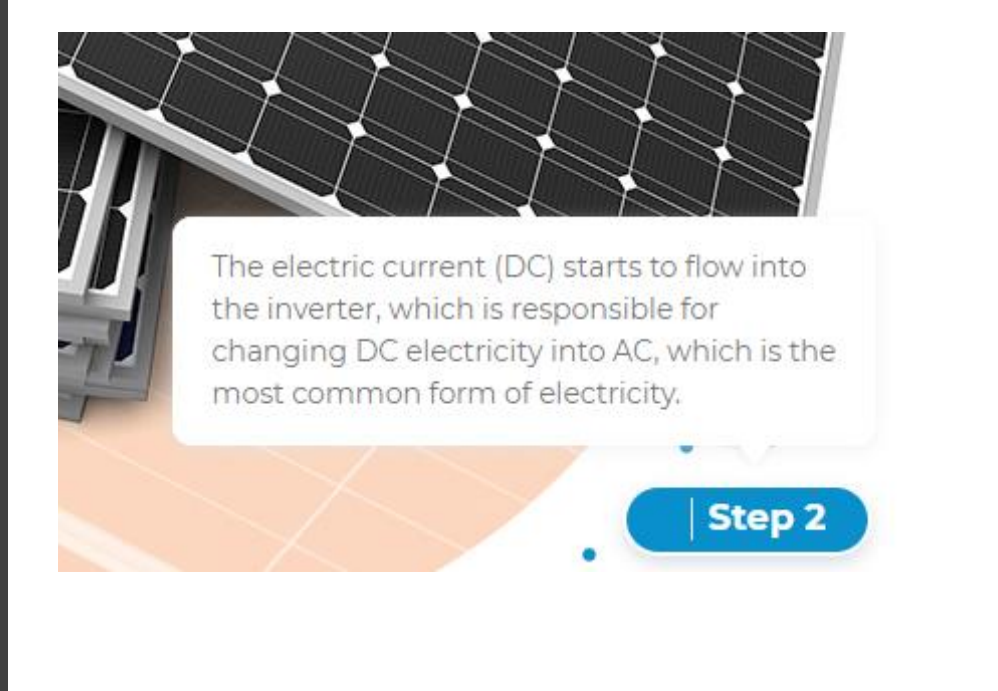


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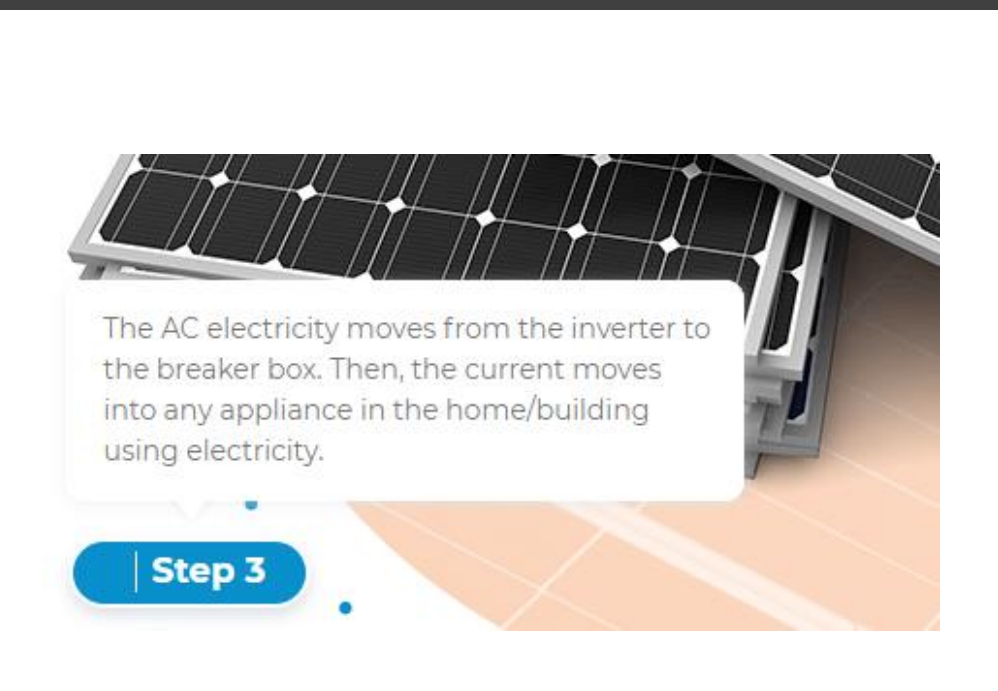
Step 1

Sunlight reaches the solar panels, and they start working to generate an electric current (DC).



The electric current (DC) starts to flow into the inverter, which is responsible for changing DC electricity into AC, which is the most common form of electricity.

Step 2



The AC electricity moves from the inverter to the breaker box. Then, the current moves into any appliance in the home/building using electricity.

Step 3



Step 4

Unused electricity moves back to the utility meter and into the grid. You get a credit for that on your electric bill. When your home needs more energy than what is produced by your solar panels, electricity will be drawn from the grid.

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