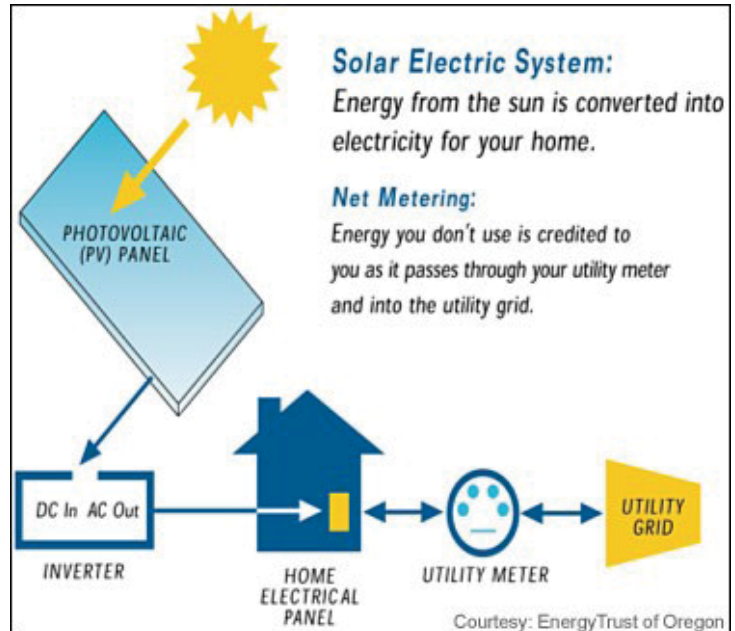


How Solar Electricity Works

Solar electric systems work by directly converting sunlight into electricity without noise, moving parts, or pollution. Therefore, the system is simple, reliable, renewable, fully automatic, and virtually maintenance - free. As shown in the image to the right, energy from the sun strikes the solar panels and produces Direct Current (DC) energy. An inverter, which is tied into your electric circuit breaker panel, changes the DC energy into Alternating Current (AC). The electricity produced by your solar panels is sent directly into your home or business, to be used by anything at your site that runs off of electricity. If at any time your solar electric system produces more electricity than you use, the system sends the excess electricity back onto the grid.



A 1988 state law allows individuals and businesses that generate excess renewable energy to sell the electricity back to the local utility company through a process called Net Metering. When you install a solar PV system at your home or business, Eversource or UI install a new meter at your site. This meter, called either a bi - directional meter or a net meter, measures both the electricity you use from the grid as well as the electricity that your solar system sends back onto the grid.

As the solar electricity is produced, your electric meter slows down or spins backwards! Your electric bill will be based on the new bi - directional meter reading and will look quite different than your current bill. In a grid - tied system, if utility electric power becomes unstable or is lost your solar PV system automatically turns off and your home does not produce solar electricity. This ensures that you do not send extra electricity onto the grid when people might be working on the power lines. However, every five minutes the inverter tests the utility power for stability and turns back on once power is restored. The system works seamlessly and automatically.



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