

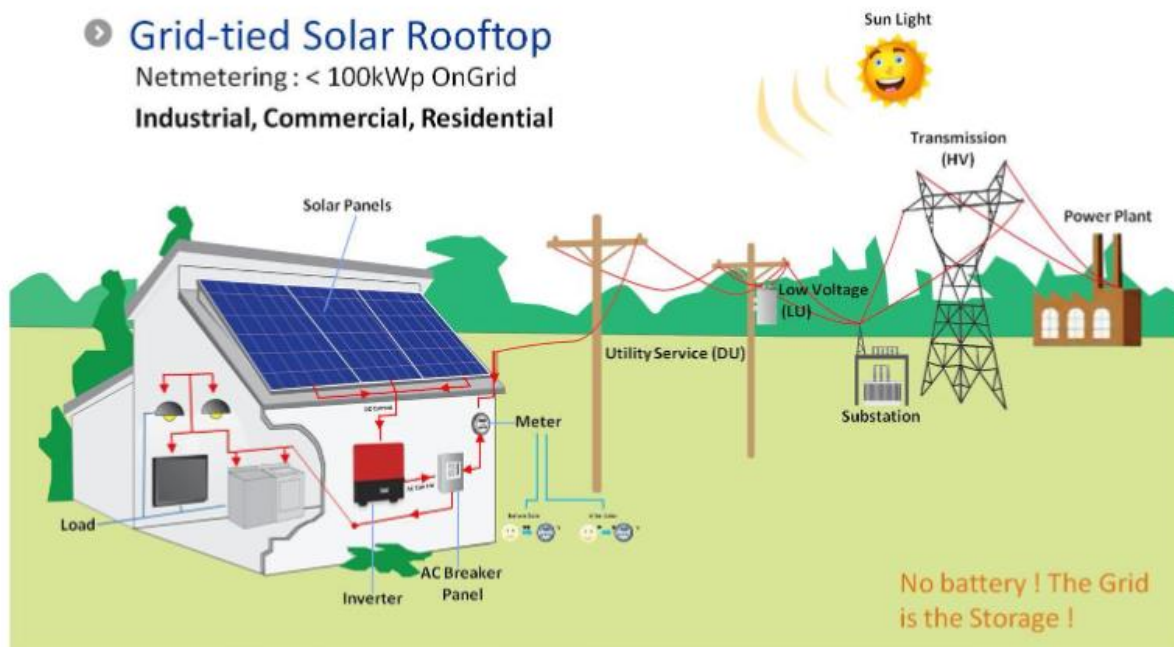
ON-GRID SOLAR POWER SYSTEM

With the rapid advancements of technology in the field of solar energy, more and more people have started installing solar power system. Of the several types of different systems installed across the globe, the on grid solar power system is the most widely chosen one.

What is on grid solar?

The solar systems can be classified into 3 different categories based on their grid-connectivity. They are on-grid solar, off-grid solar and hybrid systems which are a combination of both. On grid solar power system is a solar power generation system where it is connected to the utility grid. The electricity produced by the system is routed to the grid from where it is used to run the various appliances. The excess power at any point of time is transmitted back to the grid. An on-grid solar system is much more attractive than an off-grid system. In an on-grid solar system, the solar power is produced only when the grid is available. The power supply gets completely cut-off in case of the grid outage. Hence, one needs to depend on back-ups such as DG sets for emergency power supply. The power shut down happens, mostly in case of safety and technical reasons.

How does on grid solar power system works?



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This system works in two-ways - the supply of electricity can flow from the grid to which it is connected to the user's home and from the user's home to the grid. This feature makes the on-grid solar system affordable and highly useful. The solar panels, installed on the user's home are 'tied' to the grid. The solar panels convert sunlight into electric energy, which is Direct Current (DC). This current is then sent to an inverter. The solar inverter then converts the DC to Alternating Current (AC), thus making it power the electrical items. This electricity is then routed to the grid where it is supplied for day to day use.

The grid tied inverter additionally regulates the amount and voltage of electricity fed to the household since all the power generated is mostly much more than a home needs or can handle. An important feature is the net meter. It is a device that records the energy supplied to the grid and the energy consumed. At the end of each month, the outstanding is recorded and the consumer is provided with a bill. This 'converted' power supply is then used by homes through the main electricity distribution panel.

Benefits of on grid solar

1. Zero Electricity Bills - Though the solar power system is connected to the grid, the consumer has to pay only for the surplus electricity he consumes. The bill generated on a monthly basis determines whether the consumer has any payments to be made. However, at the same time if the consumer utilizes less electricity, the excess is fed back in the grid.
2. Easy maintenance - The on grid solar power system has the least number of parts along with simple installation. The elimination of batteries makes the maintenance quite easy.
3. Passive income generation - With connection to the grid, the consumer can charge for the surplus electricity he has generated. It not only eliminates your electricity bills but also avail the cost benefits for the excess electricity generated.
4. On-grid solar systems are most cost-effective and convenient to install. These are ideal systems for households as the cost charged can be recovered easily through the additional power transmitted to the grid.

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