

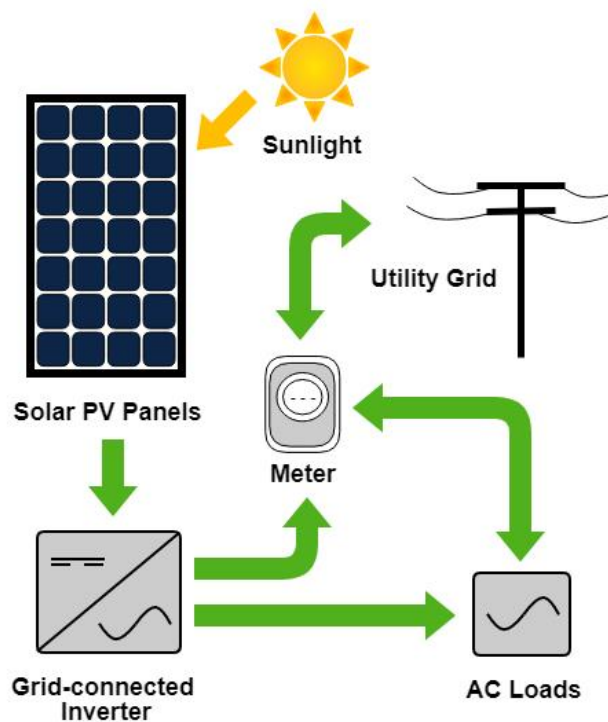
Introduction to PV

Solar photovoltaic systems, commonly referred to as solar PV systems, convert sunlight directly into electricity. This is different to the solar thermal collectors for solar water heaters. A solar PV system can help reduce carbon emissions and your electricity bill by producing sustainable electricity from the sun instead of burning fossil fuels. Apricus offers a range of solar PV products to help you harness the power of the sun for commercial, industrial and residential electricity applications of all sizes.

Most electricity is distributed through an electrical utility provider, the company that produces and/or distributes electricity to consumers. The electricity from a variety of sources is distributed along the electrical grid and can span hundreds of miles from the power plants to homes and businesses. This grid network is not always reliable due to overloading, severe weather, and maintenance or upgrades. Installing a PV power system allows you to create your own electricity to supply your entire home or business and can potentially eliminate the issues associated with large utility grids. The amount of electricity generated is dependent on several factors: the size and arrangement of the PV power system, the [PV module type](#), the available sunlight, and the efficiency of the electrical components used to convert solar energy into electricity usable by your home or building.

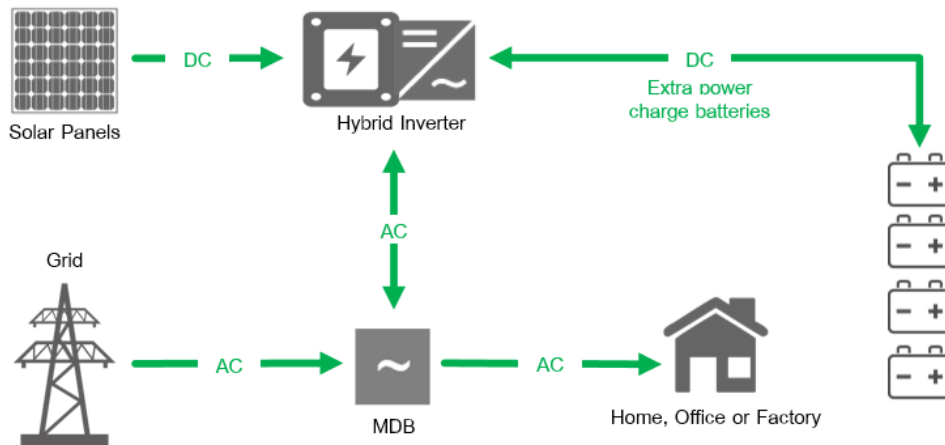
How PV Systems Work

Grid-connected PV System



The grid-connected solar photovoltaic (PV) system is a common and cost-effective option to reduce electricity bills and emissions. It consists of [PV modules](#), a grid-connect [inverter](#), associated [mounting hardware](#), and electrical cables and safety devices. You can generate your own renewable energy on site, and supplement your electricity needs from the local utility grid when the PV system is not supplying enough energy. You can also export excess electricity back to the utility company when the PV system is generating more electricity than you need during daylight hours. The way this exported electricity is metered and the rate of financial return varies by country, state, local district, and utility provider. The downside of this system configuration is that you are still connected to the grid. Depending on local regulations the system will automatically shut down if the grid becomes unavailable, meaning you will not produce any solar power during this time, and would still experience blackouts. You would also only use solar power during daylight hours with good solar irradiation, so at night and on cloudy days you would still draw power from the grid and pay an electricity bill.

Hybrid Solar System



Suitable for customers who:

- What to have the best of both worlds
- Want to the solar generated power at night when the sun is down
- Do not mind investing in new battery banks every 5-10 years