Never Lose Power
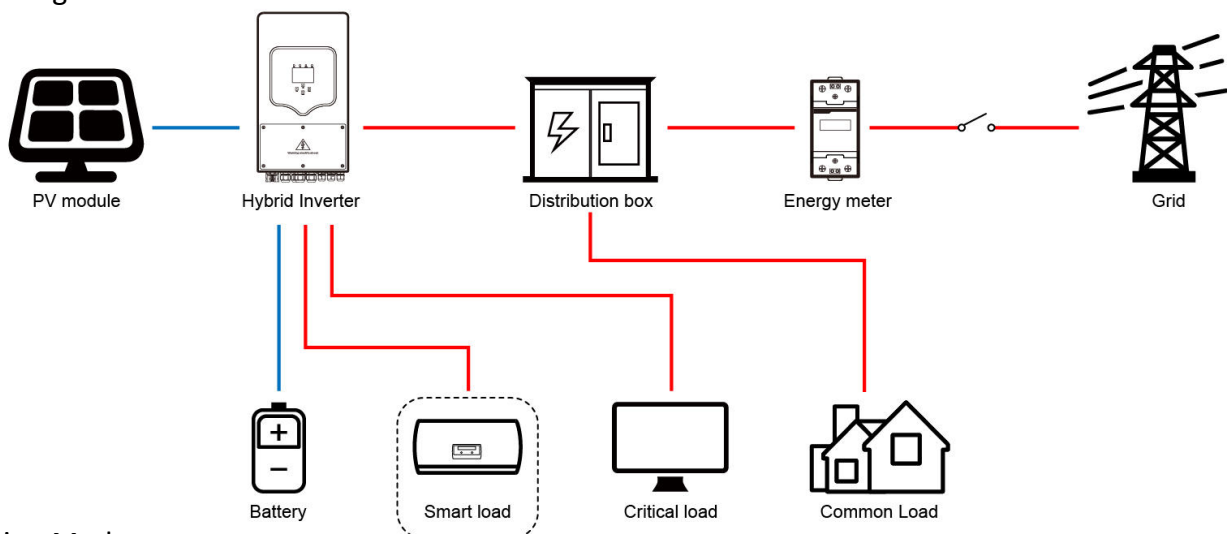
HopeTrek Energy Storage Solutions

1.Typical Application

• Maximizing solar self-consumption. During the day, the PV system generates electricity which will be provided to the loads initially. Then, the excess energy will charge the battery via Deye hybrid inverter. Finally, the stored energy can be released when the loads require it.

• Providing backup for critical loads: there're independent critical load output port and grid port. It allows critical loads such as refrigerators, routers, lamps, computers and other critical appliances can be powered when the grid fails. The system can automatically switch to backup mode within 4 milliseconds. Since the automatically time is very short, the critical loads can work smoothly even for Non-inverter type air conditioner.

• Reducing your electricity bills: Thanks to there're 6 time periods for battery charge and discharge. Deye hybrid inverter allows user to charge the battery at the off-peak time and discharge the battery during peak time. Meanwhile, it supports grid peak shaving function which can limit the Max. power from grid.

System diagram

PV module   Hybrid Inverter   Distribution box   Energy meter   Grid

Battery   Smart load   Critical load   Common Load

Operation Modes
There are three basic system work modes that end users can choose

1.1 Selling First:

This Mode allows hybrid inverter to sell back any excess power produced by the solar panels to
the grid. If the "time of use" is active, the battery energy also can be sold into grid.
The PV energy will be used to power the load and charge the battery and then excess energy will flow to grid.
Power source priority for the load is as follows:
1. Solar Panels.
2. Grid.
3. Battery (until programable % discharge is reached).

1.2, Zero Export To Load:

Hybrid inverter will only provide power to the backup load connected. The hybrid inverter will neither provide
power to the home load nor sell power to grid. The built-in CT will detect power flowing back to the grid and
will reduce the power of the inverter only to supply the local load and charge the battery.
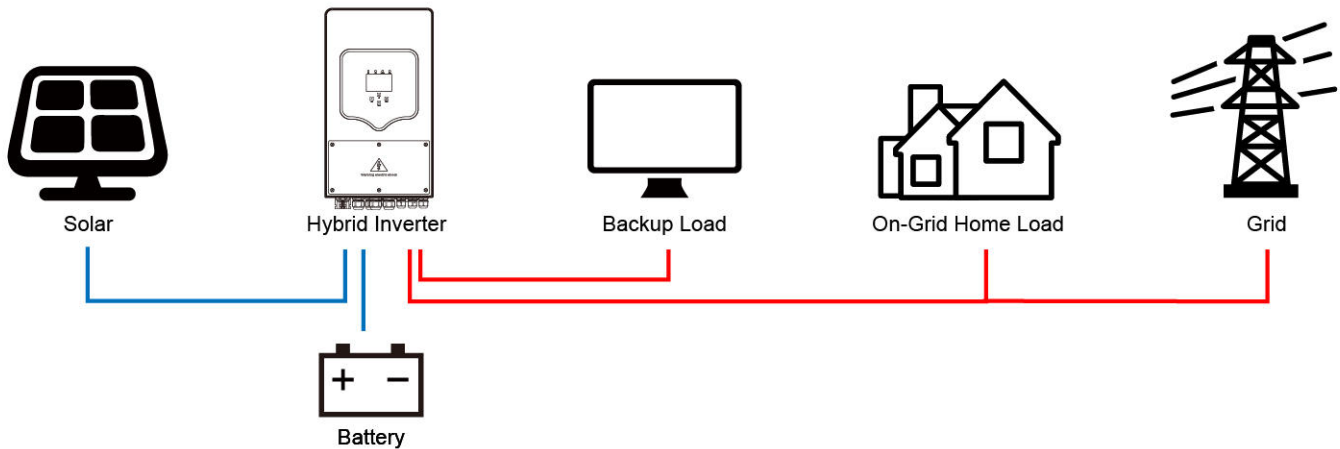
1.3, Zero Export To CT:

Hybrid inverter will not only provide power to the backup load connected but also give
power to the home load connected. If PV power and battery power is insufficient, it will take grid energy
as supplement. The hybrid inverter will not sell power to grid. In this mode, a CT is needed. The external CT will
detect power flowing back to the grid and will reduce the power of the inverter only to supply the local load,
charge battery and home load.