On-grid

Solar inverter could be single phase or three phase.

House electricity could be single phase or three phase.

|  |  |  |
| --- | --- | --- |
| House Inverter | Single phase | Three phase |
| Single phase | All generated power from PV panels used in house and excess or demand is supplied to/by grid | It could be not possible or wise selection |
| Three phase | One of the phases is surely unbalanced. This one shoud be checked according to regulations and standards. | Similar case with 1PhHouse&1PhInv. Generated power from PV panels are splitted in to 3 phase. All phases excessive/demand could be different. Meter gives the net energy sink/source results. |

Could on-grid inverter can work when the grid is not available?

When the grid is not available, for example, due to power outage, the inverter should detect the no-grid and protect the device and others from anti-islanding. Isolation of the house from the grid and powering the loads in the house requires back-up power. However, this type of application could be not appropriate for grid-tie inverters. Grid-tie inverters cannot power the house in sufficient amount with variable PV power. There should be battery or some backup power.

Sun Point: <https://www.solarreviews.com/>