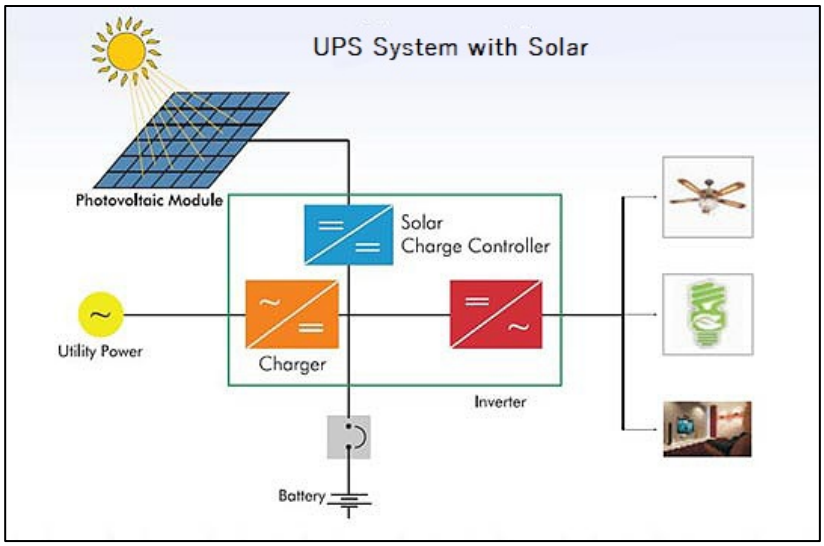
Adding Solar to a UPS System

The following is a discussion on the complications and considerations that go into adding solar into a UPS System.

BRIEF OVERVIEW OF UPS SYSTEMS

A UPS system, or uninterruptible power supply system, is an electrical aid that assists in power fails. A UPS system runs for only a short time, but it is sufficient enough to either turn on and protect the equipment or start a standby power source. The power comes from battery-stored energy and is used mostly in computers, telecommunication equipment, and electrical equipment. The UPS system helps to avert otherwise disastrous situations which can be life-threatening.

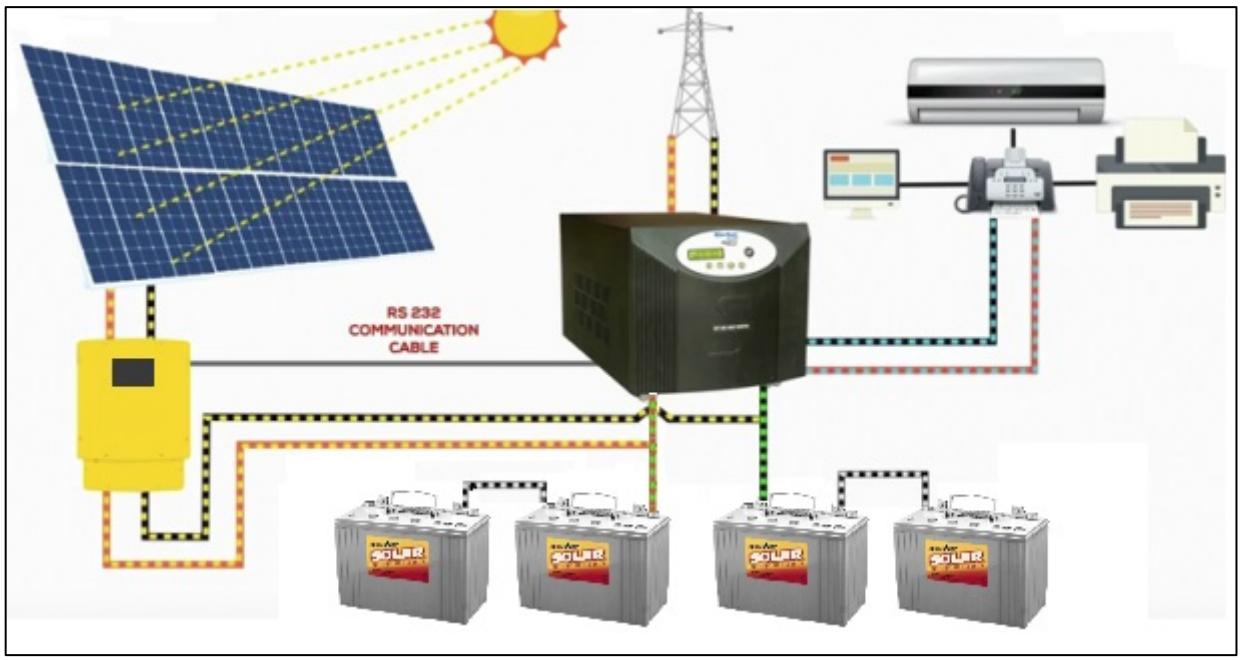


SHOULD I ADD SOLAR TO MY UPS SYSTEM?

The answer depends! If you are trying to reduce the energy consumed from the utility, then yes, add as much solar as necessary to offset the utility. However, if you are trying to add a backup to the backup, then things get a bit more complicated.

THE COMPLICATIONS

Adding solar only makes sense if it's enough to be a stand-alone system. If the solar added is not enough to be a stand-alone system, then it makes less sense to use it since the solar would only be enough to run for a few hours while the sun was available. To function properly, the system must essentially become a solar system with a utility backup. To be a true backup, the solar has to be big enough to power the load and recharge the battery enough to support the load at night when the sunsets, and the solar array has to do all of this in the few hours that the sun is available.



FINAL VERDICT

Solar can be added to your UPS system and still run separate and autonomous from each other. However, the benefit depends on how large the solar array is and what goal is trying to be achieved.