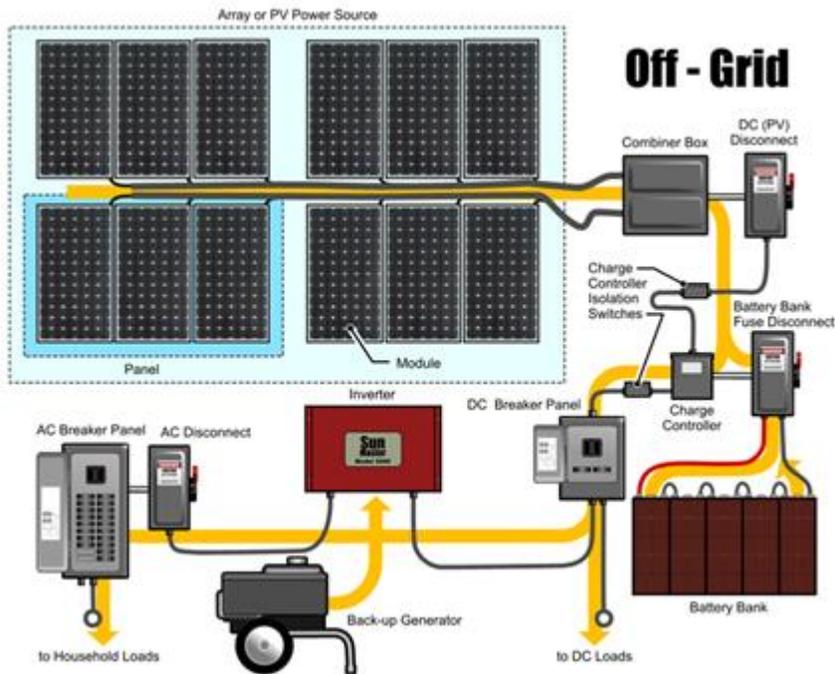


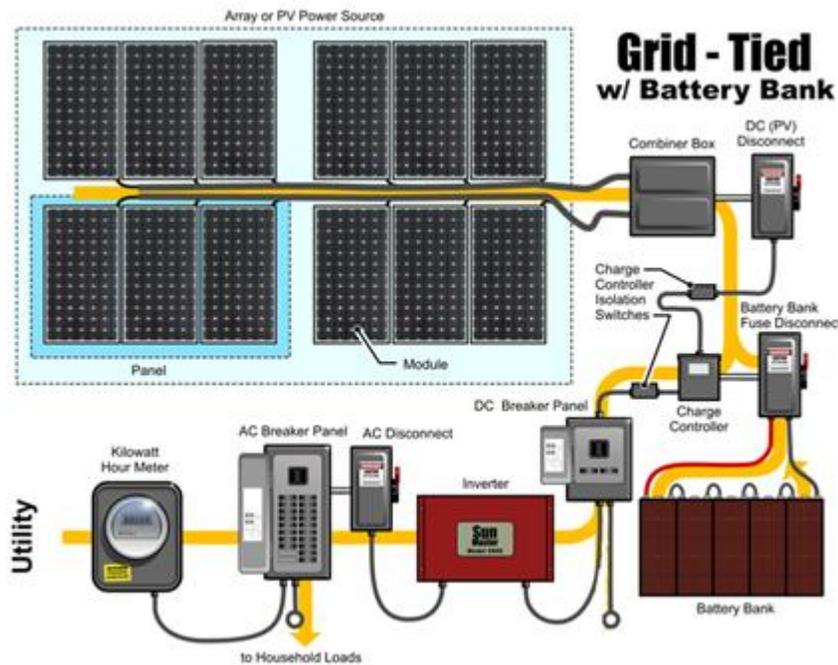
Grid-tied solar power systems (solar with grid connection which is with or without a diesel generator but with no battery backup)

- This is the most common type of system for larger power consumers who would, in any case, maintain power availability by running diesel gen-sets, when required. This system will help reduce power and diesel consumption but will not provide you with a backup
- It is important to note that this type of system will not run if the grid is down and the diesel generator is also not running
- For this type of system, solar power is always given preference over both grid and diesel. An intelligent solar inverter ensures that solar is first fully utilized and then remaining power requirement is drawn from the grid or diesel generator
- In the Indian context, even if there are power cuts but the diesel generator has to run throughout the day to meet critical loads, this type system becomes the most viable. It saves on both electricity cost and diesel bills
- Most systems being installed in Haryana for meeting obligations are also of this type.
- This system is just connected to the mains (LT Panel) and becomes a seamless part of the grid. The system needs to be sized to the base-load (minimum load running at all times) until net-metering is available. This is to avoid wastage of power in winter months when the load might be lower.
- This is the most economically viable system as there is no requirement to install a battery bank.
- Savings from the system lead to a payback period of up to 5 years. After that, you get free power for 15 more years.
- For Gurgaon, we recommend this system for customers who already have 100% power backup. When you install this system, you will still need to run the diesel generator when the power goes off but your fuel consumption will be lower.



Off-grid solar power systems (Solar with batteries but without a grid connection)

- This kind of a system will allow a customer to go off the grid
- However, these are the most expensive type as additional battery cost is incurred to provide a backup of up to 48 hours for a normal household or business functioning (including autonomy for a 1-2 rainy days)
- These are the most common installation type for areas that have no grid connection but are not very useful for urban areas.
- These systems are usually sized to not include air conditioning as it is only a seasonal load. A larger system installed to meet peak summer demand will lead to wastage of power in the winters, making it uneconomical
- Savings from the system lead to a payback period of up to 10 years. After that, you get free power for 10 more years
- We do not recommend this system type for Gurgaon



Hybrid solar power system with battery backup (solar with grid connection and batteries. It can be with or without a diesel generator)

- This type of system combines the benefits of both a grid tied system and an off-grid system. It is the most useful type of system for houses, bungalows, nursing homes and other smaller establishments. It acts like a home inverter.
- It allows for the system to provide 6-7 hours of backup for part of the load during power cuts while still delivering the benefits of a grid-tied system.
- These systems are usually sized to not include air conditioning and other seasonal induction loads. A larger system installed to meet peak summer demand will lead to wastage of power in the winters, making it un-economical
- Perhaps one air-conditioner can be used on this system when the power goes out. It will just reduce the back-up hours to 4-5 hours. For running more A/Cs in a power cut, it is recommended that the customer use a diesel generator
- Savings from the system lead to a payback period of up to 7 years. After that you get free power for 13 more years
- **For buildings in Gurgaon that have connected loads less than 20 KVA and do not have 100% power backup, we recommend this type of system the most**