

SOLAR PV POWER PLANT – OFF GRID



WHAT ARE THE ADVANTAGES

- ❖ Provides power independently of the utility grid.
- ❖ You still have power when the grid is down.
- ❖ Don't have to deal with the utility company.
- ❖ Can save significantly on initial cost if a long grid extension is needed.
- ❖ Really encourages conservation and efficiency in the use of electricity.
- ❖ Off-grid people typically get along on far less power than on grid and do it without any significant changes.

WHAT ARE THE DISADVANTAGES

- ❖ Higher initial cost (needs a set of batteries and charge controller)
- ❖ Higher ongoing time and cost (the cost of batteries over time is significant)
- ❖ A good generator will likely be necessary from time to time
- ❖ The system must be large enough to supply your full power needs during the lowest sun part of the year (although a generator can be used to supplement during the worst times).
- ❖ Responsibility for safe and reliable operation, and maintenance rests with user.

Application area

- ❖ Hospitals
- ❖ Banks
- ❖ Malls
- ❖ Factories
- ❖ Educational Institutions
- ❖ Chimerical Buildings
- ❖ Complexes
- ❖ Showrooms
- ❖ Govt. Offices
- ❖ Central Shops
- ❖ Fuel Stations
- ❖ Industries & Corporate Offices

SOLAR PV POWER PLANT – ON GRID



SOLAR PV POWER PLANT – GRID TIED SYSTEMS WITH BATTERIES



WHAT ARE THE ADVANTAGES

- ❖ Grid tied systems only work when the grid is up.
- ❖ If the grid power goes out, the grid tie inverter is required to shut down immediately.
- ❖ Lowest initial cost (because there is no need for batteries and charge controller)
- ❖ Lowest ongoing maintenance cost (no batteries to maintain and replace)
- ❖ Simplest to install
- ❖ Most efficient (because there are losses associated with charging batteries)
- ❖ You can start small and add (with some imitations)

WHAT ARE THE DISADVANTAGES

- ❖ No power when the grid is down.
- ❖ Access to the utility power grid is required.

WHAT ARE THE ADVANTAGES

- ❖ This is Kind of mix of the TWO System
- ❖ Operates like Grid tide system but also charges set of batteries
- ❖ If the grid goes down, the inverter discontents from the grid and Continuous to supply
- ❖ Power to the system from the batteries and inverter

WHAT ARE THE DISADVANTAGES

- ❖ Additional cost of batteries.