



Advantages of WIND – SOLAR hybrid systems

- Wind Solar hybrid solutions can cover all most all applications , off grid , on grid , rural electrification , telecom , water pumping , water purification and many more
- Point of Generation and consumption being close to each other hence saves on infrastructure costs especially for Rural Electrification projects
- Wind – PV resources compliment very nicely , seasonally or on day to day basis , hence continuity of power generation all through the year
- Over all 18 M wind map of INDIA reveals at least 50% of India's land mass has potential for deploying hybrid system
- On an average a well designed hybrid system for 4 to 4.5 M/S average wind speeds produce about 1200 to 1400 KWH per annum
- it has ability to provide *continuity* of power as both sources are complimentary in nature
- While Solar component can improve base line consistency , Wind can offset complete absence of Solar during overcast months
- Wind and PV together with batteries emulate a virtual UPS from nature
- Over all autonomy on battery can be reduced by as much 40 % being a hybrid system this means there isn't much difference between a hybrid system and the cost only solar off grid system using quality Solar modules.
- By simply incorporating a wind turbine into an existing or new PV system, battery life can be extended by as much as 50%. This is due to the variable charge of a wind turbine, in the long run wind component can contribute to as much as 35% – 45 % on recurring expenditure towards Battery Bank replacements.
- Because lesser autonomy needed for battery in a hybrid system lesser battery costs, also there is not much difference in the cost between both resources the addition of a wind can reduce the overall cost of a renewable energy system by as much as 10% - 15%.
- A solar system needs weekly cleaning , a non maintained solar systems output can drop by as much as 30 to 40 % or more , where as a wind turbines need just an **annual check up**
- Hybrid systems are easy to install & maintain. Already proven in India & worldwide for variety of applications, virtually same skilled man power who is trained to install and maintain Solar Systems will be able to manage