

www.sreedevsolar.com





| Profile |

DEV INTERNATIONAL, a company established 15 years before in Coimbatore, South India. It is a Manufacturing Company concentrated in Home Appliances in particularly Table Top Wet grinder. We had invented the Armless Table Top Wet Grinder and got Patten Rights. Our Grinders were marketed in the Brand Name of "PVG" (Price-Value-Guarantee) for the past 15 years.

We are one of the major supplier of Wet Grinder to Tamilnadu Government for its welfare scheme and supplied 5 lakh Grinders. To expand our business, we were installed 6 Wind Mills at different locations in Tamilnadu having capacity of producing 50 Lakhs units of power every year. Towards further diversification of our business, we stepped in Manufacturing of Solar Power Generating systems in 2011. In Solar, we are not stopped our business mere selling Solar Products. In addition to that we are established as Solution Provider to everyone who needs alternate power due to acute gird power shortage in our country.

We are enlisted by TEDA and MNRE for solar system integration.

In solar, we initiated to manufacture Solar Panels by importing Solar Cells. Now we have a plant capacity to produce more than 10MW Solar Panels per year. In the Solar Power Generating System, solar panel alone will not solve our power problem. Other two major components are needed i.e. Inverter and Battery. The Inverter will convert the Solar Power (DC) to usable AC Power which is the most important process in the Solar Power Generation. Now we have reached a milestone not only in the Inverter but also in the Power Storage Batteries.

We are getting bright and beautiful sun-shine more than 350 days in a year. No need to pay any cost for the Sun-Shine. Beyond that in Solar only, we can generate power by our self to fulfill our needs. There is no doubt that the solar power only eliminates the power shortage in our Country. The life span of the Solar Panels is 25 years without much degradation. Even after 25 years it will works very well at 80% efficiency.

We have done more than 800 installations for the past 3 years both On-Grid (without Battery) and Off-Grid System (with Battery) in Domestic, Industry, Commercial Shopping malls, Hospitals, Petrol Pump and last but not least Agriculture Pumps. We are also providing Stand Alone and Centralised Solar Street Light System.



D.Devarajan M.E., FIE., Managing Director





## | Off Grid Solar Power Generating System |

In this system energy harvested from solar will be used directly and also if the generation is more than the demand then the excess power will be utilized for charging the batteries. In this system with high intelligence program to take care battery charging and regulate the power supply by convert DC power to AC power and also make use of solar power in optimum way. In this system the program will be carried out such a manner the preference is given to solar power to energize the load and battery charging. In this system there is an option to have grid interaction and it is programmed such a manner in case of less solar power generation, and the power in the battery also drained then the grid power will come into action in the final stage till the solar power resumes back. In a good sun shine day the average production per kW (1000 watts panel) will be 5 units (5000 W) in solar. In India almost 340 days we can able to harvest 5 units of power from 1 kW system.

Since this system combines three different electrical energy (energy from solar, stored energy in the battery and energy from the grid) this will act as an uninterrupted power supply and maintenance the load with any one of the powers from the three sources. Because of this advantage, apart from saving in energy it also provides a continues power .This system will be well utilized applications like domestic, hospitals, data centers and also in educational laboratories.

In this off grid system the only recurring expenditure is changing batteries once in 4 to 5 years. This system is very much useful to the places where there daily requirement of power is less than 100 units (1 lakhs watts). Beyond that in case of grid failure, running a generator is expensive and it produces enormous sound and pollutes the surroundings in places like hospitals, hotels, textile shops, jewellary shops etc.







## | On Grid Solar Power Generating System |

In this ON GRID solar power generating system the energy harvested by the solar is directly consumed by the load available. There is no system for storing the energy. In this system there is an on grid inverter in which the solar DC power will feed in one side and the opposite side the grid power will feed. The output from the inverter can be a single phase or three phase AC power. The on grid inverter designed such a manner, the output current should be defined through an input AC load. In case of input load failure the system won't work. It is the major disadvantage. But the other advantage is in case of fluxuation in solar power the deficiency power required for the output load is drawn from the input AC power. But if there is no load demand then naturally the solar power will go back to grid itself. Hence in this scenario we have to fix a bidirectional net meter in which whatever will be the power we exporting can be known.

This on grid solar system is much useful for grid interactive domestic system which is very much successful in European countries. The day time the power produced in the solar system is exported and which intern taken back in the night time for the usage. Through the net meter the power bill will be raised if there is an excess consumption from the grid.

Generally the on grid solar system is much beneficial to the bigger industries and commercial establishments, colleges and schools where the demand is only in the day time. For example in an establishment has the connected load 200kW, if they install 100 kW of solar panel which is more than enough. The reason behind is normally sanctioned load is based on the complete equipments installed in the unit and their starting load is always high. By installing 50% of solar power, most of the time the demand is met through solar and if there is any surge load and that alone taken from grid. And also in holidays they can export the power to the grid and they can taken back in other time during their usage.

This on grid system doesn't have any consumables like batteries and other things. It got life span of more than 25 years, and hence the power cost is much cheaper compared with anything including the grid.









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