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"TO STUDY INSTALLATION 1KW SOLAR POWER PLANT OFF GRID IN ELECTRICAL DEPARTMENT"

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Abstract: Sale energy is an and loss unsoiled an prospective energy an source. Among all other non -conventinal energy option. The sale pv system depends on a geargraphical location on a type of pv modual implemente. PV system are beneficial in areas having a mental amount of incident solar radiation. Solar pawer is used to charge batteries so that solar pawer devices can be used at night. The batteries can obtain be large and heavy taking up space and needing to be a place from time to time.

The 1 KW off gride solar pawer plant to full field the ever-grading need customer. More ever use provide solar pawer plant project by our experts and professional. The solar pawer plant design service is non for their reliability and affordable rules. The study is based on design of solar PV system and a case study based on cost analysis of 1.0 KW off grid photovoltaic energy see. The both monthly and weekly cost of energy produce by the one 1 KW pave system having been calculation. The solar 1 KW system can be given internal rate of return of about 1.714% on investment. An annual average solar radiation off about 5.4 Kwahu/m a day. The total amount of energy generated by the system and various losses occurring in the system.

1 KW pave system of rupees 0.9724 .0.9724/kwh is the estimated for a project with profitable life for 25 years with no other financial support. this translates to rupees 80000 payment area the livelier cost of energy of 1kwh generated by the system. 1 kw pave system is also very useful in rural areas of India.

INTRODUCTION

Solar PV installation in the roof top of houses is increasingly becoming popular as we race to reduce our carbon footprint and keep the plant suffer.Solar panel are device that convert light into electricity. They are called solar panel because the most of time, the most powerful. Source of light available is they sun. Called solution by astronomers. Some scientist calls them photovoltaic which means, basically, (light electricity)

Solar panel is a collection of solar cell lets of small solar cell spend a large area can work together to provide though energy to be useful the more light that heat a cell, The more electricity it produces the best-off grid solar system is windy nation 400 w kit energy 100 w solar states kit, exon - worthy 200 w complete solar panels kit, eco LLC 2,000w 48 volt off grid solar system ALTF tiny house base kit #3.

An off-grid PV system which utilize photovoltaic innovation the system utilizes the DC yield of the PV module power the DC load while a battery bank is utilize to store energy when there is demand.

A solar system which has battery store and a backup is called an off grid solar system. That generate electricity often power cut off during the night house. It is basic component of solar PV installation

1. Solar PV panel
2. Solar charge controller
3. Battery bank
4. Inverter to power your alternating current AC loading.
5. Appropriate wiring
6. Appropriate protection against lighting, short circuit, and overload

An off grid solar system comes in various capacity for different type of applications such as small home 2-3 floor homes.

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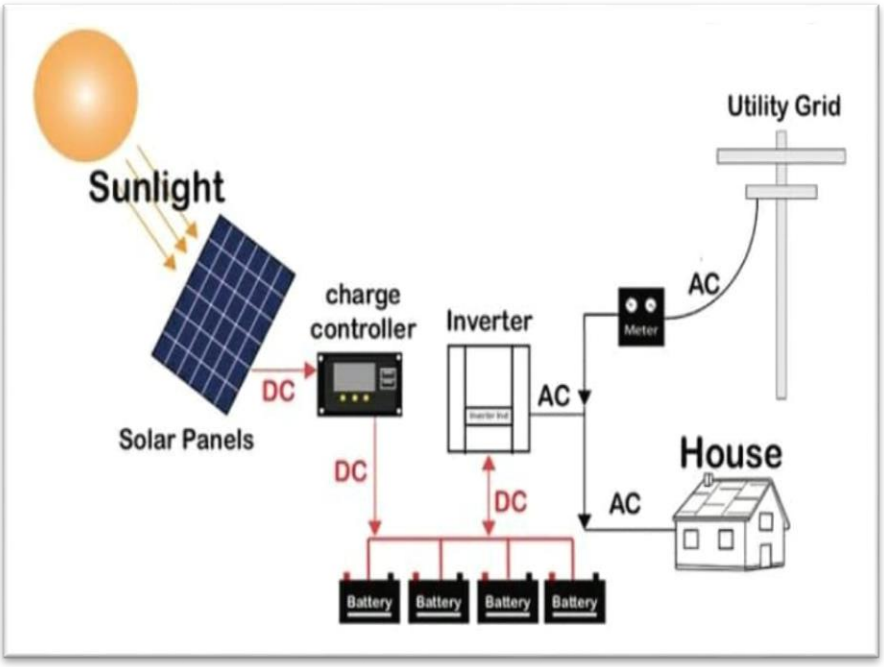
WORKING



The Demand and prices of electricity have kept and rising the world loop at renewable energy sources for its pawer needs. The solar energy has become a popular renewable energy. Energy source because of its following cost and improving efficiency. A solar system is a setup that generate electricity by utilizing the solar energy system a typically solar system consists of solar panel inverter (which convert DC into AC) Mounting structure batteries.

A solar system come in various size 1KWH,2KWH,3KWH,75KW and 10 KW
An off - grid solar system has four main component solar PV panel, solar charge controller, battery bank, inverter to power your alternating current (AC) loadings, appropriate wiring, appropriate protection against lighting, short circuit and overload.
Solar panel generates DC current in sunlight and store in batteries. To run DC application (12v), such as fan, lights, you need a charge controller if run AC appliances (220v) and inverter that convent DC voltage to AC voltage.

The electricity generated by the solar system charges batteries and run appliances directly
The most appliances such as fans, div., cooler, AC, water pump etc. 1KW off grid solar system is sufficient for a 2-4BHK house but it is also wanted to run 1HP water pump in your home. you could use a 3KW off grid solar system. For commercial set up 10KW off grid solar system is the used.

APPLICATION

1) It is use as solar home lighting system, solar street lighting, solar pump, solar power plant, Solar lanterns and solar study lamps.
2) It is use for to reduce electricity bill.
3) It's reduced pollution as it generates green energy.
4) It is used for property value increases by installing solar system on ruff.
5) It is also used for rural hamlets, Hospital, Bungalows, educational institutions, government instructions, petrol pump, work shop, water pump etc.

CONCLUSION

1KW off grid solar system is studies for small home. Only for rustic area sited in India. There is a cost associated with electrifying house that increase the difference between the grid and the house. Performance of the system and cost analysis for the design system has been evaluated using PV system software. The PV system generate 3101.2KWH/year solar energy is supplied to the user and 167.8 KWH energy. Unused may be due to battery full condition or low energy demand

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during generation. The off-grid system is more suited areas where the electrification is yet to be a accomplish and or the consumer should not to supply back the energy generated at his/her end.

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