

FINAL YEAR PROJECT REPORT

Solar Based Water Distribution in Deserted Areas

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Project Abstract

Solar energy is the richest stream of energy that is available directly as solar segregation and has the sources of renewable energy. Its potential is 178 Billion MW, which is about 20,000 times the world's demand. Sun provides energy in the form of electromagnetic energy.

This project esteemed for the generation of electrical energy with the help of photovoltaic arrays known as solar cell / panel. The solar cell works on the photovoltaic effect. It is the type of photovoltaic cell whose electrical characteristics are light dependant. When it is exposed to light, it can generate and support the electric current without being attached to any external voltage source. So this resultant energy produced by the solar cells can be used to switch on the electrical appliances.

The main purpose of this project is to supply water to locations which are beyond the reach of power lines. Commonly, such places require human or animal power or on diesel engines for their water supply. Solar Based Water Pump can replace the current pump system and result in socio economic benefits as well as climate related benefits. The water supplied by the Solar Based Water Pump can be used for the water distribution, Irrigation of crops, water livestock and can also provide potable drinking water.

Solar Based Water Pump is essentially an electric pump system in which the electricity is provided by one or several Photo Voltaic (PV) panels. A typical Solar Based Water Pump system consist of solar panel array that powers an electric motor, which in turns powers a bore or a water pump. The water is pumped from the ground in to a tank from where water is supplied to different populations and for other uses.

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