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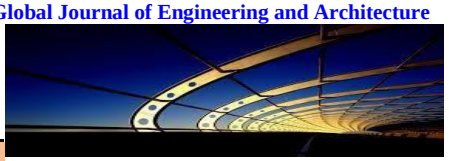

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Solar Photovoltaic Energy: Advantages and Disadvantages

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DESCRIPTION

Solar photovoltaic energy is nothing but which directly converts sunlight into electricity by using a concept based on the photovoltaic effect. The photovoltaic effect is used for power generation and photosensors. When radiation from the sun fall on one of the surface of a photoelectric cell which is called as solar panel. When small tiny packets of light energy which are called as photons are seize by electrons, and impart enough energy to remove the electron free of its host atom. Near the upper surface of the cell there is one way membrane which is called as called a pn-junction. There are three types of solar panels they are Photovoltaic cell, Thermal, Thermodynamics. The photovoltaic cells are of three types they are crystalline silicon cells, thin film cells, organic cell, Perovskites. The crystalline silicon cell is extracted from silica and they produce a latter form which also includes quartz that is obtained from sand.

Firstly the photovoltaic technology was introduced to provide electricity to satellites.

Advantages

The photovoltaic cells are eco-friendly and provide clear green energy. At the time of electricity generation photovoltaic cell no effect to greenhouse gas emission by this it clears that non-hazardous to environment.

The solar photovoltaic panels which generate power is non-polluting and limitless. It also provides the support for local employment and sustainable development and also minimizes the carbon emission.

A photovoltaic system consist of solar modules, in which each of them having a number of solar cells, which generate electricity. Photovoltaic can be installations many way some of may be ground-mounted, some may be rooftop-mounted, wall-mounted or floating mounted. The mount can be used as a solar tracker to follow the sun transversely along the sky.

The use of Photovoltaic as a source needs of energy storage systems. So the power lines produces the additional costs and also causes many disadvantages one of them is unstable power generation .The photovoltaic have the life span of 10 to 30 years so they cost effective.

Availability

Since the solar energy is inexhaustible they produces energy abundantly everywhere sunlight is present. Smart energy network. The solar panels are especially useful for smart energy networks .The distributed power generation is upcoming next generation power network.

Cost effective

The solar panels are cost effective and coming years there cost may decrease at high rate. So the future scope they are economical feasible and sustainable growth.

Disadvantages

As we know except wind energy all the renewable energy has the intermittency problems because there is no sun during night and some times during day time due to cloudy sky or when it is raining .So this makes the solar panel less reliable Occupy large area. The installation of solar panel requires more space .So it is very difficult to select the area which occupy less space.

Damageable

The solar panel does not require maintenance and they are cost effective .So they are very brittle and they can be easily damaged.

CONCLUSION

Therefore, solar photovoltaic cell is eco-friendly and cost effective. The progress of this source of energy requires an detailed knowledge of prospective possibilities taking into consideration on seasonal differences.