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Mentors signature

Project name:- Dual axis solar tracking system.

Introduction:-

You may have heard about ordinary solar panel in T.V., news papers and internet. The ordinary solar panels have been used for a long while. But, issue of those solar panels is that they are stationary. The problem is that they can gain maximum intensity of light only at a specific time.

But our project “Dual Axis Solar Tracking system” tracks the movement of sun across the sky, and tries to maintain solar panel perpendicular to Sun’s rays in order to get maximum intensity all the time.

The energy to move solar tracker comes from Sun itself, so it is self starting and reduces the use of electricity. It uses renewable and never ending source of energy. In the “Dual Axis Solar Tracking system” all the work is done automatically by ICs and sensors, and saves men-power and time.

Working

Working of the “dual axis solar tracking system” is conversion of light energy into electrical energy. This phenomenon is called photovoltaic effect.

When solar panel is exposed to sun light, the sum of photons of light, are absorbed by the solar cells, which cause significant number of free electrons in the crystal. That is the reason for producing electricity due to photovoltaic effect.

The dual axis solar tracker comprises comparator IC-LM339, motor driver IC-L293d, 4 LDR which is as sensor to detect the panel position related to Sun. This provides signal to the motor driver IC-L293d to move the solar panel in the direction of Sun’s position.

The use of IC-LM339 is to compare between intensity of light falling on different LDRs. The LDR which receives maximum intensity of light, the solar panel starts rotating in that direction. The same concept is applied for vertical and horizontal rotation.

Advantages

* Reliable
* Use of renewable source of energy
* Eco-friendly
* Saves more electricity
* Automation
* Advancement in technology
* Cost effective
* Easy installation
* Saves men-power

Conclusion:-

Using this, we conclude that better use of latest technology is good in many ways in terms of economy, men-power and environment.

The Solar technology has been upgrading ever since and it is a great step

Application

* It can be used in industry.
* It can replace coal industry to get cleaner energy.
* Can be applied in remote areas.
* Street light.
* Can be used on roof tops.

.ACHIEVEMENT:-

My project was selected for ANVESHANA (international organization)

On 10th of feburary I achieve the 4th rank in india and one certificate + gold medal + 5000 cash prize.