**SUN TRACKING SOLAR PANEL TO TRACK THE MAXIMUM RAYS USING LDR'S**

**ABSTRACT**

This project employs sun tracking solar panel to track the maximum rays using ldr's**.** This is better compared to the light-sensing method that may not be accurate always – for example, during cloudy days. With the impending scarcity of non-renewable resources, people are considering to use alternate sources of energy. Barring all the other available resources, the solar energy is the most abundant and it is comparatively easy to convert into electrical energy. The usage of solar panel to convert Sun energy into electrical energy is very popular, but due to the transition of sun from east to west, the fixed solar panel may not be able to generate optimum energy. The proposed system solves this problem by an arrangement for the solar panel to track the maximum Sun rays.

This tracking movement is achieved by coupling LDR sensors with a DC motor to the solar panel such that the panel maintains its face always perpendicular to the sun to generate maximum energy. This is achieved by using a programmed ARDUINO IC. We are placed LDR sensors such a way that when the LDR1 is in dark then the motor will be rotated in clockwise direction for such a way that the maximum rays should be fall on both the LDR’s. At that time both the LDR’S shows equal values on LCD display. And when the LDR2 is in dark then the motor will be rotated in anti-clockwise direction. The motor is driven by motor driver IC which is an interfacing with arduino board so that it is capable of handling the power requirements of the motor. This particular project is provided with a dummy solar panel, which can be used for demonstration purpose only.

Furthermore, this project can be enhanced by using an RTC (Real Time Clock) to follow the sun rays maximum. This helps in maintaining the required position of the panel even if the power is interrupted for some time.

**BLOCK DIAGRAM**

