

Kathmandu Solar Tracking System





Overview

What is solar tracking?

Solar tracking is a mechanized system to track the sun's position that increases power output of solar panel 30% to 60% than the stationary system. S. Shanmugam et al. had given the tracking of the sun for solar paraboloid dish concentrators in 2005.

How a solar tracker is designed?

Light dependent resistors are used as the sensors of the solar tracker. The designed tracker has precise control mechanism which will provide three ways of controlling system. A small prototype of solar tracking system is also constructed to implement the design methodology presented here.

How much solar energy can we generate in Nepal?

If we use just 0.01% of the total area of Nepal, we can generate solar electricity of 9.7 GWh/day that is 3540.5 GWh/year (which is more than the energy generated by NEA in the FY 2013/2014 amounting 2283 GWh/year).

Can a solar tracking system capture maximum sunlight?

In this context, the solar tracking system plays a significant role for efficiency improvement. This work aims at design and implementation of a sensor-less dual axis solar tracking system based on solar sun chart program using Arduino Uno to capture maximum sunlight.



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So Nepal having a smaller area and limited land as compared to other larger countries like China and India now has even more potential for tracking solar systems to ...

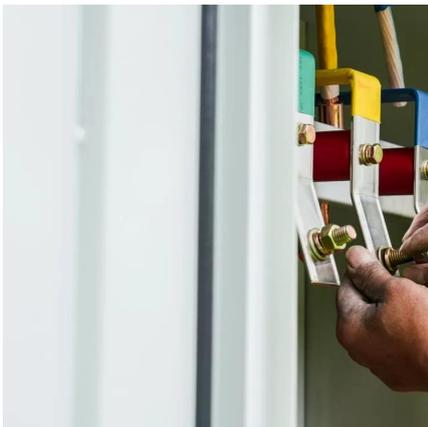
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2-Axis Tracking System , LightRIDS-Nepal

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GitHub

This project is a dual-axis solar tracker combined with a Maximum Power Point Tracking (MPPT) system for Arduino. The tracker automatically adjusts the position of solar ...

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The design guide is a prescriptive guidance for system designers who will develop solar power based mini grid systems in Nepal whether it be government, non-government, and ...

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[\(PDF\) Final Report on Dual Axis Solar Tracking System](#)

The dual axis solar tracking system can increase solar energy output by 30% to 60%. Its design utilizes Arduino microcontroller for automated sun tracking functionality. Solar panel efficiency ...

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