SOLAR TRACKING AND VOLTAGE MONITORING DEVICE

A Project Design
Presented to the Faculty of the
College of Communication and Information Technology
Ramon Magsaysay Technological University
Iba Campus, Iba, Zambales

In Partial Fulfillment
of the Requirement for the Degree
Bachelor of Science in Computer Engineering

by
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March 2014

Republic of the Philippines
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The study hereto attached entitled

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Abstract

Non-renewable energy source such as fossil fuel had been the major means of generating electricity in the past. The high dependence on it has resulted in consequential implications like fuel price fluctuation, environmental hazards and global warming. Hence, there is great need for other means of electricity generation as an alternative. Renewable energy systems are presently becoming very popular.

This project design, Solar Tracking and Voltage Monitoring Device is a device that orients a payload toward the sun or harness more heat from the environment. Most solar panels are statically aligned, that is, they are placed at a fixed position towards the sky. As the sun moves across the sky throughout the day, the angle of incidence of the sun rays to the panel keeps on changing thereby resulting to low power output from the solar cells. Maximum energy is collected by the solar panel when the orientation of sun rays fall directly on it.

The aim and objective of this project is to design a solar tracker system that can continuously track sunlight to optimize energy produced from photovoltaic cells for maximum power generation and monitor its voltage. The scope and limitation of this work involves the processes in successful development of an automatic solar tracking system which include researches and study of solar energy concepts as well as selection of appropriate components to achieve the design, this provides an opportunity for expansion of the current project in future years.

On the other hand, we can see the world's energy depletion to be a major problem. Global warming, which is a major concern, switching to solar power, which is clean and green and enhancing its efficiency by using the sun trackers.