CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY

Name(s)
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Project Number
J0209

Project Title
Here Comes the Sun

Abstract

Objectives/Goals
Every year, the world gets more polluted by energy production. The purpose of this project is to see what is the difference between the energy production rates of solar-following solar panels and static ones.

Methods/Materials
Microcontroller
Solar Panel
360 Degree Servo
180 Degree Servo
Assorted wiring
C/C#/C++ knowledge

Results
A solar-tracking panel is more efficient than a static panel. I have found, that a static solar panel does not give a consistent voltage throughout the day. For example, from 6-11 AM the voltage was fairly low and slowly rising. On the other hand, the solar-tracking panel had consistent results throughout the day. From 7 AM till about 4 PM the voltage was hovering around 5.5-6.1 volts. Overall, the static solar panel produces much less energy throughout the day than the solar-tracking one did.

Conclusions/Discussion
My hypothesis was correct; a solar-tracking panel is more efficient than a static panel. I have found, that a static solar panel does not give a consistent voltage throughout the day. For example, from 6-11 AM the voltage was fairly low and slowly rising. On the other hand, the solar-tracking panel had consistent results throughout the day. From 7 AM till about 4 PM the voltage was hovering around 5.5-6.1 volts. Overall, the static solar panel produces much less energy throughout the day than the solar-tracking one did.

Summary Statement
I compared the difference between a solar tracking panel and a static solar panel.

Help Received
No one.