



**CALIFORNIA STATE SCIENCE FAIR
2009 PROJECT SUMMARY**

Name(s) William M. Osman	Project Number S0216
Project Title People Power	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals To develop and build a version of the Sirling Engine that converts waste heat, such as human heat, and converts it into mechanical energy, and then convert the mechanical energy into electricity.</p> <p>Methods/Materials Creating the engine will involve the use of CNC machines and other common household items.</p> <p>Results The machine worked as intended, but not off human heat. Since the device uses two different temperatures reaching equilibrium, and has several inefficiencies, the two temperatures need to be more extreme than the heat from a human and room temperature.</p> <p>Conclusions/Discussion The Stirling engine is a very practical device that can turn most heat sources into usable energy. Any two sources of heat and cold will work to power the engine as long as they are far enough apart.</p>	
Summary Statement Turning waste heat into a usable energy source.	
Help Received Kit Jones taught me how to use a CNC water-jet cutter.	