

CWSF 2016 - Montreal, Quebec



Paul Drakos

A Prototype "Water Coil" for Generating Electricity

Challenge: Innovation

Category: Junior

Region: Bay Area

City: Oakville, ON

School: Hillfield Strathallan College

Abstract: Wasted heat energy can be converted to electrical energy through Thermoelectric Generation. The purpose of my experiment was to evaluate whether a prototype "Water Coil" could generate electricity from the temperature difference existing in hot and cold water lines. The evolving design was successful in producing electricity and could be a cost effective, reliable way of harnessing "wasted" energy in residential and commercial applications.

Biography

My name is Paul Drakos. I am a grade 8 honours student at Hillfield Strathallan College in Hamilton, Ontario. I enjoy playing basketball and golf and am a member of our school band, robotics team and leader of the ambassador committee. I have always had a keen interest in science and engineering. At the Bay Area Science and Engineering Fair my project received several awards including the ArcelorMittal Dofasco Central Trades and Services Department Award, the Primary Fluid Systems Award, the Canadian Nuclear Society (Golden Horseshoe Branch) Award, the Professional Engineers of Ontario-Hamilton/Burlington Chapter Award and the Primary Fluid Systems Gold Merit Award. My project was inspired by the discovery that a small LED light bulb could be powered through body heat. This motivated me to look at other ways to produce electricity using "wasted" heat energy. The results have been very promising and I plan to continue to evolve my design with the goal of making it a product that can be used in homes, businesses and industry. My advice to future candidates is to choose a topic that interests them and don't be discouraged by an initial design that doesn't perform as well as anticipated.

Awards

Value

Excellence Award - Junior - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - \$2000 Entrance Scholarship Sponsor: Western University	\$2 000
Total	\$2 000