CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY

Name(s)
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Project Number
J1018

Project Title
Energy Production of Various Water Types

Abstract

Objectives/Goals
I wanted to know if salt water passed through a turbine would produce more electricity than other water types, such as tap water, distilled water, and filtered water. My hypothesis was that the heavier the water type, the greater amount of electricity it will produce when passed through the turbine.

Methods/Materials
I built an experimental set-up using a 2-liter bottle, Lego bricks, a turbine, and a multimeter. I ran several trials dispensing each water type from the 2-liter bottle, down the chute and into the turbine and measured the electrical current produced in milliamps.

Results
My results showed that the average current produced by salt water was greater than the other water types. Tap water produced the second most, followed by filtered water producing the third most electricity and distilled water producing the least amount.

Conclusions/Discussion
My results supported my hypothesis. I thought salt water would generate the most electricity, and this is what happened. This information might be useful as we look to the future of water supply and energy needs. For instance, it might be possible to build a desalination plant that can create energy by flowing incoming salt water through a turbine before it goes through the process of desalination. I learned from my experiment that salt water can be more efficient at producing electricity than fresh water.

Summary Statement
My project is about comparing the hydroelectric production of 4 water types when passed through a turbine.

Help Received
I designed, constructed, and tested my experiment on my own.