



CALIFORNIA SCIENCE & ENGINEERING FAIR 2019 PROJECT SUMMARY

Name(s) Selena Macias	Project Number J0211
Project Title Solar Energy to the Test	
<p style="text-align: center;">Abstract</p> <p>Objectives The objective of this project is to determine how different environmental factors affect the productivity of solar cells.</p> <p>Methods 4 Solar Panels, water, ash, dirt samples, infrared thermometer were used as my major materials. Solar panels were treated with different environmental factors: just sunlight (control), froze the panels, covered panels with ash, and panels heated to 98 degrees Fahrenheit. I used a voltmeter to read the solar panel energy production.</p> <p>Results The result of my investigation on does the condition/cleanliness of the solar panels affect how much energy is produced, is that the solar panel with ash pollution created the most energy. I determined this by repeating multiple trials of each solar panel treated with different treatments and calculated the average. Average amount of volts produced (with ash pollution) was 4.86 volts.</p> <p>Conclusions After completing my investigation on does the cleanliness of the solar panel affect the amount of energy produced. I have concluded that the variable ash produced the most energy. After my trials I learned that having water on your solar panels will decrease the amount of energy produced by approximately 0.5 times less energy. The water variable created the least amount of voltage. I also learned that the pollution (ash) produced the most amount of voltage it increases the energy by 1.04. So I do think that it is worth it to have someone clean your solar panels even though it will cost you a bite of money it will be worth it in the long run.</p>	
Summary Statement Different environmental factors affect solar panel energy production.	
Help Received Joseph Linares, Glenn Kinney	