



**CALIFORNIA STATE SCIENCE FAIR
2017 PROJECT SUMMARY**

Name(s) Wyatt DeCraemer; Sergio Lozano	Project Number J1005
Project Title Wireless Transmission of Electricity	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of this project is to design an effective way to transmit useful electricity wirelessly.</p> <p>Methods/Materials A solid-state wireless electricity transmitter (Tesla coil) with input of approximately 30 volts. A smaller receiver coil with a full bridge rectifier to produce useful DC, and a few florescent light bulbs. Improve the transmitter with the engineering design process to yield greater distance.</p> <p>Results Six different versions of the design had varying levels of success. The final and most efficient was a 30 volt power transistor driven transmitter with up to a meter in range.</p> <p>Conclusions/Discussion Repeated trials proved that higher voltages yield greater power and distance, but as a disadvantage, a proportionally increasing amount of heat. It is concluded that the greater the performance becomes.</p>	
Summary Statement We showed that a low voltage Tesla Coil is an effective way to transmit long range wireless power.	
Help Received NA	