



**CALIFORNIA STATE SCIENCE FAIR  
2015 PROJECT SUMMARY**

<b>Name(s)</b> Sean P. Weiss	<b>Project Number</b>  35878
<b>Project Title</b> From Waste to Watts	
<b>Abstract</b> <b>Objectives/Goals</b> In this experiment, I tested which animals' waste produces the most easily harnessed methane energy. <b>Methods/Materials</b> I used animal waste from cow, horse, dog and pig to undergo fermentation and harvest methane gas, which can then be converted to energy. I will need to be able to harness the energy quickly and efficiently to make sure I get maximum methane output. From there I need to find a way to measure and analyze the methane collected and carry out calculations to convert the information. <b>Results</b> I found that cow waste has the potential to produce more energy than any other animal because it produces a long-term count of methane gas. It was able to produce easily captured methane for over a month and still continues to produce weeks later. It can reach its full methane potential from 75 degree Fahrenheit incubation. Overall, cow waste has a great potential for making a cleaner planet and a cleaner source of power. <b>Conclusions/Discussion</b> My research has proved my research-based hypothesis correct. I hypothesized that if cow waste undergoes fermentation fastest, then it will make the most stable and usable methane gas because fermentation helps to produce methane. Finally the dog waste didn't produce any methane but I do have a solution to that problem. It needed to be incubated at a higher temperature in order to produce any methane. All in all my experiment was a large success because I have found a cleaner source of energy for us to make a cleaner society.	
<b>Summary Statement</b> I found a way to harvest green, usable energy produced from the methane gases from animal waste and identify the animal waste with the highest energy potential.	
<b>Help Received</b> I worked alone on this project and only had help from my mom getting the animal waste from the local farm.	