

## **Abstract:**

Talk about future energy needs, threats of fuel shortages  
Recent research about oil, gas, coal  
Carbon emission rates  
Need for research in solar power, PV panel efficiencies and pollution

## **Introduction:**

### **Problem Statement:**

Thesis statement:

PV panels produce a large range of power efficiencies, but manufacturing produces many toxins

Main points

- High efficiency panels
- Materials and chemicals (Cadmium Telluride, etc.)
- Dangers of ground depositing

### **Purpose of Study:**

Research comparison of pollutants used and produced in the production of PV panels in comparison to PV panel power efficiencies

### **Significance of Research:**

Data will be used to show comparison of efficiency to pollution  
Additional objective of building a body of research

## **Methodology:**

Research pollution output, PV power efficiencies

- Manufacturing methods
- Pollutant handling
- Disposal
- Efficiencies