

Example of research paper on adoption of solar panels

[Environment](#), [Electricity](#)



LAS432RESEARCH

TOPIC AND OUTLINE- Solar Energy

THESIS STATEMENT (WORKING ON IT) PLEASE FEEL FREE TO ADD TO YOUR POINTS ASSIGNED AND GIVE IDEAS

I. DESCRIPTION OF THE TECHNOLOGY

- a. Solar panels work through photovoltaic process; the radiation energy (photo) is absorbed and generates electricity (voltaic). Radiation energy is absorbed by semiconductor cells and transformed from photo energy into voltaic (electrical current).
- b. When the sun radiation hits the conductor cells-normally silicon-a photon of light energy is absorbed. The released electrons create the electric current that will go to an inverter, which converts the current DC (direct current) to AC (alternating current). The system is then connected to the main power or electricity grid.

II. HISTORY OF THE TECHNOLOGY

- a. On 1967 Horace Benedict de Saussure created the first solar collector, an insulated box covered with three layers of glass to absorb heat energy, this box was known as the first solar oven, reaching temperatures of 230 degrees Fahrenheit.
- b. 1873, Photovoltaic Effect was define by Edmond Becquerel by using two electrodes placed in the electrolyte, between the years of 1873-1916 photoconductivity was discovered on the selenium, during this time several inventions were made that contributed to the evolution of the solar energy, but it wasn't until 1947 (after the Second World War) that solar power became more popular in U. S. A.

c. The U. S. government embraced the use of solar energy by launching the Solar Energy Research Institute in 1977 and in 1981 Paul Macready produced the first solar powered air craft. d. But is not until 2012, where the number of Solar Plants break a record, the largest solar energy plant is the Golmud Solar Park in China

III. POLITICAL AND LEGAL INFLUENCES

a. With the introduction of solar energy, the nations that do not have oil tend to encourage users in the exploitation of solar energy.

b. Solar energy is said to be clean and never runs out in use. Many countries find it better for lower earners and is the selling point during campaigns

c. Politicians tend to open up to new ideas when undertaking solar energy. They tend to come up with new ideas of how to exploit solar energy when they are undertaking their campaigns.

d. Some politicians will encourage use of oil while they make all the money while others will want to incorporate new ideas to the public.

IV. ECONOMIC CONSIDERATIONS

a. Solar energy is economical for the users because they are affordable and easier to set up. Compared to oil imports, it is better to make use of solar panels than import oil.

b. In the national levels, it is easier to import solar panels than use oil. The economy on the other hand, has helped in the national economy. If many people shift to

V. PSYCHOLOGICAL CONSIDERATIONS AND SOCIOLOGICAL EFFECTS

- a. The social considerations that come with solar energy include the fact that solar panels do not work in dense atmosphere or weather. This could be a problem for the people who do not access extensive periods of solar energy. They could be disturbed psychologically.
- b. Solar energy panels can have psychological effects on users as they are easier to steal. The users and owners could be worried at night that they might be stolen.

VI. CULTURAL CONTEXT, MEDIA INFLUENCE

- a. The media have influenced the adoption of the solar energy. They have encouraged the small scale energy users to adopt solar energy. This way, they have changed the way the adoption rate of the users.
- b. The cultural influence is that it has caused a change of culture and lifestyle for other users who would otherwise not access electricity. With electricity, they have managed to access international news channels as they are now able to access news channels with the use of solar energy. Their lifestyle and culture has changed.

VII. IMPLICATIONS FOR THE ENVIRONMENT

- a. The environment has changed from the pollution that was initially caused by the crude source of energy. Use of oil and petroleum products has had an effect on the environment due to pollution.
- b. Solar panel manufacturers could have effects on the environment due to the materials that are used to manufacture the solar cells. These materials could be harmful to the environment.

VIII. MORAL AND ETHICAL IMPLICATIONS

a. The ethical implications of the use of solar panels are that there will be the creation of shades in places which were not meant to be. There are panels which are spread in open fields and this has caused threats to the environment.

b. Solar energy is sometimes not sufficient for heavy commercial use. If many people install solar panels, the need for electricity may diminish. This is a false implication for the government because solar panels cannot solve other processes. If the solar energy is used, there will be fewer users of solar energy.