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# The Role of Wind Energy in Preserving the Environment

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# THE ROLE OF WIND ENERGY IN PRESERVING THE ENVIRONMENT

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## Introduction

This section will present the background of the research. Various issues concerning wind energy will be discussed in the paper. Wind energy has proved itself to be more advantageous in conserving the environment compared with fossil fuels. Fossil fuels contribute to global warming, air pollution as well as acid rain. This paper will show the importance of wind turbines and its economic benefits to the society. Fossil fuels cause global warming which later leads to tribal wars and future global conflict. It also noted that turbines in wind energy kill birds a reason that make some people to oppose this form of energy.

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## Literature Review

The literature review present several advantages of wind energy. This section will also discuss some innovations as well as weaknesses of wind energy, and describe the present status of literature in the context

of this research. The issues are discussed deeply under the following subheadings.

## **A. ADVANTAGES OF WIND ENERGY**

- a) Wind energy is a source of renewable energy
- b) It reduces consumption of fossil fuels
- c) Causes less pollution to air and water
- d) Initial production cost is low
- e) Provides employments
- f) Wind turbines can be built on existing farms

## **B. WEAKNESSES OF WIND ENERGY**

- a) Most wind energies are located in remote areas rather than near the cities where more people reside
- b) Turbine blade usually damages local wildlife especially birds
- c) The turbines lead to aesthetic and noise pollution
- d) They might be located in lands where other more profitable alternatives can be applied
- e) Even though the investment of wind energy has drastically dropped, the technology still applies higher initial finances than fossil fuel generators

## **C. INNOVATIONS IN WIND ENERGY**

- a) Dual axis resonance testing blades

- b) New and compact designs
- c) Renewable energy load matching software
- d) Energy surety micro grid
- e) Coating surfaces with super-hydrophobic powder

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## Methodology

In order to understand the uses of wind energy, field study will be carried out. Data will be collected through interviews, questionnaires and direct observations. The selected method will be implemented to test for effective and efficiency of wind energy.

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## Findings

In this section, some of the findings will be highlighted. The research will show how wind energy works, how they are maintained as well as number of homes that can be powered by one turbine.

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## Discussion

Benefits and challenges faced with fossil fuels will be discussed in this section and highlight the benefits of wind energy compared to fossil fuels. The following topics will be discussed in details.

## **A. ADVANTAGES OF FOSSIL FUEL AS A SOURCE OF ENERGY**

- a) They are readily available
- b) Produce large amount of energy
- c) Produces high calorific value
- d) They are more stable than other fuels since they are composed of carbon and hydrogen molecules
- e) They are readily available throughout the world making them have low cost
- g) They are the most commonly used since they are abundantly available
- h) Easily stored and transported from one place to another

## **B. CHALLENGES ENCOUNTERED WITH FOSSIL FUELS**

- a) They produce carbon dioxide causing air as well water pollution
- b) No stable prices
- c) When burnt they produce sulphur dioxide that is contributing factor to acid rain
- d) Leads to diseases like the cancer since they contribute to worn out of ozone layer
- e) Fossil fuels are non-renewable

- f) Affects aquatic plants and animals
- g) Dangerous while mining
- h) Require huge amount of reserves

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## Conclusion

Wind energy is more preferred as compared to other fuels because it is environmental friendly. Wind energy has new and compact designs that are mostly set in urban areas. This form of energy is regarded as the cheapest since it requires a low cost to develop and to maintain. Even with such advantages some people go ahead and oppose it. These people argue that the turbines may cause risks of death to human beings. Fossil fuel also causes global warming.