

WIND ENERGY: A CASE STUDY ON WIND POWER AS AN ALTERNATIVE SOURCE OF RENEWABLE ENERGY

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Abstract

The aim of the research study is to investigate wind power as a source of renewable energy and to uncover the beneficial contribution and impact wind power has as an alternative source of energy and how it can be improved and managed for the benefit of the current and future generation. There are various natural resources in which energy can be generated from these include the power from natural sunlight, the wind and the constantly flowing waters of oceans and river throughout the world. Out of the world's current population the demand for energy constantly increases and due to the high demand. The demand for energy is also incurred by countries that have rapid growing economies such as China and India. These countries find it impossible to quench the demand and therefore require external assistance and alternative sources of energy. The services required by these countries include for example air conditioning services. These demands are fundamental and yet too high for the country such as India to provide utilizing its own resources and therefore India relies on coal for more than half its energy generation and to fuels for its factories and transportation. This country is a producer of coal and has 565 coal mines making it the world's third largest producer of coal but it still cannot maintain its economic growth without new energy sources. Wind energy is one of the most useful and helpful renewable energy solutions. It is a form of solar power and has proven to be successful for decades since it began being used. Wind energy provides mechanical power in order to turn electrical generators by using air flow that goes through wind turbines. The blades of a wind turbine can be up to 40 meters long and can spin around more than 20 times in a minute.

Key words

Wind power, solar energy, renewable energy sources.