

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

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A Project Report on

“AXIAL FLUX VERTICAL AXIS WIND TURBINE”

(Sponsored by KSCST 37th Series Project Exhibition)

Submitted in partial fulfillment of the requirements for the award of degree of

BACHELOR OF ENGINEERING

IN ELECTRICAL AND ELECTRONICS ENGINEERING

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ABSTRACT

Electrical power has become a prime necessity for any country for economic development. And power shortage is a dominant problem, being faced by the most of the countries today. On the top of this, the conventional fuel sources for power generation i.e. coal & oil deposits are fast getting depleted. The Obvious way out, is to shift focus to renewable sources of energy. Statistics reveal that a large amount of wind energy remains untapped. Although more invention has to be carried out still in the use of non-conventional energy sources for power generation to reach to most economic point, but every little effort in this direction may provide a solution to power shortage problems. Hence the same topic was selected as a part of the curriculum. The aim of our project is to construct a small scale wind power plant which is capable of producing electrical power even with the low wind velocity. It can be placed on the places like road divider or remote places like villages those are not economical for power transmission from a power plant. Earlier and conventional practices use horizontal axis wind turbine. But to meet the suitability of this task, the vertical axis wind turbine has been employed. For Design of generator we used neodymium magnets for rotor design to get better output. The power produced by the generator can be stored in a battery and can later be used to power the street lights. These wind turbines are portable and can therefore be used on any expressways or busy highways. These turbines can be used commercially for low power applications. The implementation of such a project would reduce the dependence of a company or industry on electricity board.