

Hybrid Power Electric Bike Charging Station Using Wind Energy and Solar Energy

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ABSTRACT

The concept behind this project is to make a small advancement towards an enduring world. And that's where we should make use of non-conventional and renewable sources of energy to generate electrical energy, rather than using conventional and non-renewable sources that damage nature and are depleting day by day. Nowadays EVs are been in more demand with various benefits. And people are also showing huge interest in these electric vehicles. Electric vehicle needs electricity to operate. A hybrid power generation model consisting of solar and wind energy for generating continuous power generation of electricity is a good option for it taking into consideration of natural balance.

1. INTRODUCTION

Electricity is most needed for our day to day life. Now a day's electrical energy is generated by the conventional energy resources like coal, diesel, and nuclear etc. The main drawback of these sources is that it produces waste like ash in coal power plant, nuclear waste in nuclear power plant and taking care of this wastage is very costly. And it also damages the nature. Soon it will be completely vanishes from the earth so we have to find another way to generate electricity.

In this proposed system solar and wind power is used for generating power. Solar and wind has good advantages than other than any other non-conventional energy sources. Both the energy sources have greater availability in all areas. It needs lower cost. There is no need to find special location to install this system.

2. LITERATURE REVIEW AND OBJECTIVE

Power Generation By Using Highway Vertical Axis Wind Mill By. N. Venkata Subbaiah Kumar, M.L.S Deva (IJCRT 2017). In this project wind turbine uses wind's kinetic energy and converts into mechanical energy. This highway windmill uses wind energy generated by the moving vehicles and converts into mechanical energy. The DC generator converts the mechanical energy into electrical energy. Inverter converts direct current into Alternating current and this is used to drive the home appliances. A careful selection has to be made for the blade profile so that the losses will be minimum and the power generation can be enhanced. Since the wind energy is not constant at all the time so the operation of the wind machine will be intermittent and the power production rate will also vary; the component should be design in such a manner so that the losses should be at minimum.

3. MATERIALS AND METHODS

The goal of our project is to investigate whether the design proposed by Icewind is induce better than the Savonius vertical wind turbine, by the reverse engineering their design from their promotional material model it build it and test it.

We will follow the scientific method in which claims are confirmed or denied based on results obtained from the analysis we will perform.

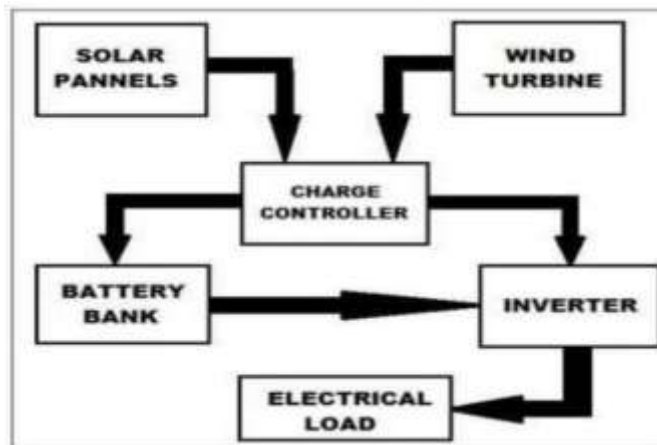


Figure 1: Block diagram of the set-up

4. CONCLUSIONS

Hybrid power generation is good and effective solution for power generation than conventional energy resources. It is highly safe for environment. It also has long life span. Overall it good and affordable solution for electricity generation.

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