



Concept of Hybrid Solar Windmill by using Solar Concrete Segment

Anandkumar J. Yadav¹, Gorakh S.Rathod², Ravi L.Pandit³, Aarti S.Rathi⁴, Vijaya G. Marathe⁵
BE Student^{1, 2,3,4,5}

Department of Civil Engineering
J.E.S.I.T.M.R Nashik, Maharashtra, India

Abstract:

In this the combination of two energy resources is takes place i.e. wind and solar energy. Furthermore this process makes possible the electricity generation at least production cost. In the designed model, solar Nano film module fix in wind tower and wind turbine that generate hybrid energy along all the season. A key objective of the project is to improve the living standards in remote villages by increasing the uptake of alternative energy technology. An integrated solar concrete segment has been designed, prototyped, and validated. The integrated solar concrete segment target mid infrared wavelengths, where Nano film solar cells are efficient and wind turbines are used for converting wind energy into electricity.

Keywords: Solar Nano film, wind Tower, Concrete Segment

I. INTRODUCTION

The aim of this work is to design and implement a Hybrid power generation system using wind energy-solar energy- solar energy with integrated solar concrete segment. An integrated solar concrete segment has been designed, prototyped, and validated. The integrated solar concrete segment target mid infrared wavelengths, where newly solar Nano film solar cells are efficient and where there is an Abundance of solar energy. Now a day's electricity is most needed facility for the human being. All the conventional energy resources are depleting day by day. So we have to shift from conventional to non-conventional energy resources. In this the combination of two energy resources is takes place i.e. wind and solar energy. This process reviles the sustainable energy resources without damaging the nature. We can give uninterrupted power by using hybrid energy system. This electrical power can utilize for various purpose. Generation of electricity will be takes place at affordable cost. Hybrid energy system is the combination of two energy sources for giving power to the load. In other word it can denned as Energy system which is fabricated or designed to extract power by using two energy sources is called as the hybrid energy system. Hybrid energy system has good reliability, efficiency, less emission, and lower cost. 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.

II. LITERATURE SURVEY

This work is a development of an indigenous technology [1] hybrid Solar Wind Power system that harnesses the renewable energies in Sun and Wind to generate electricity. In this work the collection of the solar Nano film was enhanced by from that of the single panel with the help of reflectors and tracking. Further energy obtained using the windmill with addition of dedicated

wind sensor and altered design together adds to an increase in the efficiency by an overall margin of above 50 percent. In this the combination of two energy resources is takes place i.e. wind and solar energy. This process reviles the sustainable energy resources without damaging the nature.[2] We can give uninterrupted power by using hybrid energy system. Basically this system involves the integration of two energy system that will give continuous power. Solar panels are used for converting solar energy and wind turbines are used for converting wind energy into electricity. This electrical power can utilize for various purpose. Generation of electricity will be takes place at adorable cost. The graphics will stay in the "second" column, but you can drag them to the first column. Make the graphic wider to push out any text that may try to fill in next to the graphic. This Integration [3] of renewal Energy source will be highly effective in all places, especially in commercial areas where need of electricity is more. It causes no effect on nature i.e. pollution free, at the same time not proneness any kind of accident due to lightning. It is also useful to minimize power supply load i.e. cut short power charge. By using this system, we can save electricity charge because very less Maintenance charge to this equipment is required. The designing of this equipment is done in such a way that it is very compact and acts as user friendly. When it is manufactured in a large scale, cost of this integrated natural resources power generation system is affordable. This proposed design highly increases the service time and reduces the dependence on traditional sources.

III. PROBLEM STATEMENT

Different from a generator which is too heavy, too loud and requires fuel these companies are focusing on small hybrid systems that use only the sun and the wind to generate electricity. Unlike a generator, a hybrid system uses clean energy, runs quietly and can be easily transported when compared to standard systems. If any phrase were to be used to describe the time in which we are living, it would be renewable energy. For decades

now, this term has caused many businesses to design and manufacture products in efforts of promoting this phrase. In order for this system to become more attractive to the public, we need to design and develop a product which will benefit their pockets.

IV. CONCRETE SEGMENT

This concrete segment use by the construction companies to construct wind mill tower. The concrete units are manufactured in precast plants so that high quality and short processing times can be achieved. The diameter of 4-6 meter and solar energy plant construct the over large area. That high diameters wind tower able to generate the electricity if solar Nano film is used over concrete segment.



Figure 1.1. Concrete Segment

V. INTEGRATED SOLAR CONCRETE SEGMENT

This concept is at an intermediate stage and may take years to bring to fruition and into the market. We encourage the scientific community to consider this technology along with others when contemplating efforts and resources for solar energy. The feasible solutions to harvest energy from renewable energy resources. That's why by using hybrid concrete segments for construction of windmill will be feasible to reduce the use of land and generate more electricity by combination of both wind as well as solar. Then from our concept we design newly solar film attach solar concrete segment for the construction of the wind mill tower. The designing of this equipment is done in such a way that it is very compact and acts as user friendly. When it is manufactured in a large scale, cost of this integrated natural resources power generation system is affordable.

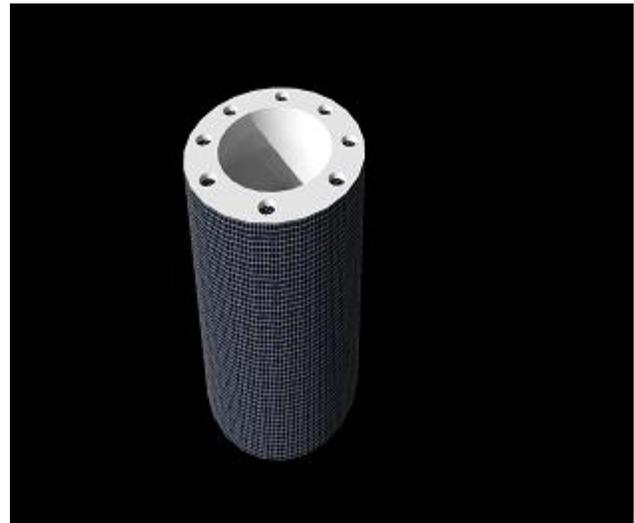


Figure 1.2: Integrated Solar Concrete Segment

VI. CONCLUSION

The integrated solar segment reduce the demand of land require for the solar plant and increase the economy in plant development. With the wind turbine and solar film generate the energy simultaneously

VII. REFERENCES

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