

# DEVELOPMENT OF A HYBRID SOLAR-WIND POWER GENERATING SYSTEM

Design Project

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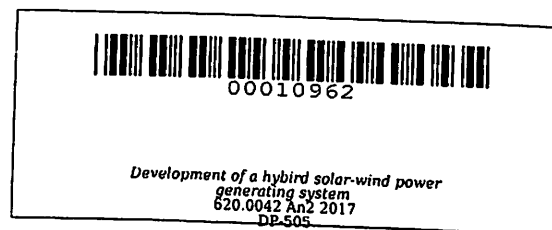
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**DEVELOPMENT OF A HYBRID SOLAR –WIND POWER  
GENERATING SYSTEM**

Undergraduate Design Project  
Submitted to the Faculty of the  
College of Engineering and Information Technology  
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Indang, Cavite

In partial fulfilment  
of the requirements for the degree  
Bachelor of Industrial Technology  
Major in Electrical Technology



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## **ABSTRACT**

**GARRY MAYA ANOLE and MALSON ANDAJA Design and Development of a Hybrid Solar-Wind Power Generating System.** Bachelor of Industrial Technology major in Electrical Technology in Cavite State University, Indang Cavite in April 2017. Adviser: Ma .Fatima B Zuniga.

This study was conducted to develop a hybrid solar-wind power generating system intended for the instructors and students of Bachelor of Industrial Technology. The design considered the intermittent natural energy resources for photovoltaic-wind hybrid electrical power supply system. The hybrid solar-wind generating system accommodated and satisfied the needs of people living in remote locations where a conventional grid connection is inconvenient and expensive.

Hybrid solar and wind power generating system simply means to generate an electricity from two or more power sources. It rely on two or more sources of energy for electrical generation and are configured so that the loads can be served directly or indirectly by one or more of these sources.

The project was tested using the multi tester and electrical load such as light bulbs with 6 watts, 9 watts 12, watts and industrial fans in front of the participants.

During the evaluation, thirty (30) participants were chosen randomly to evaluate the questionnaires using the criteria of functionality, workability, safety, durability, sale ability and aesthetic of the study. The participants were students, employees of (PPS) and professors of the Department of Industrial Engineering and Technology.

Based on the evaluation, the total means average was 4.6 which was higher than the numerical rating of very satisfactory .Therefore, the project of hybrid solar - wind power generating systems was excellent.

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# **DEVELOPMENT OF A HYBRID SOLAR-WIND POWER GENERATING SYSTEM**

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## **INTRODUCTION**

Energy is essential to our society to ensure our quality of life and to underpin all other elements of our economy. The escalation in cost and environmental concerns involving conventional electrical energy sources have been increased interest in renewable energy sources. Many societies across the world in which we live have developed a large appetite for electrical energy.

This appetite has been stimulated by the relative ease with which electricity can be generated, distributed, and utilized, and by the great variety of its applications. *(International Journal of Advanced Research in Electrical, Electronics and Instrumentation Engineering (An ISO 3297: 2007 Certified Organization) Vol. 2, Issue 11, November 2013)*

The possible hazards of nuclear power have been much publicized, particularly those concerning the storage and military use of nuclear waste material. Wind- solar power generating are visible options for future power generating. Besides being free, they are free of recurring costs.