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MEC 299

WIRELESS SOLAR POWER BANK

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ABSTRACT

Nowadays, electricity is used for domestic, commercial and industrial purposes. Solar energy is one of the alternative methods to replace the conventional energy resources like coal, petroleum, oil, etc. If we use a regular power bank, we need to charged it using electricity. In this study, a feasibility study was conducted to determine how to fabricate a wireless solar power bank, as well as to investigate the efficiency of wireless solar power bank used when away from electricity. The literature is reviewed to understand how wireless solar power bank works, its advantages compared to regular power bank. A lot of information is documented from literature review. The efficiency of the power bank depends on availability of solar radiation, temperature requirement and also the geographical condition around it.

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CHAPTER 1

INTRODUCTION

1.0 Introduction

1.1 Background of Study

Solar energy is one of the energy-saving resources. The sun's energy can be transformed into either thermal or electrical energy. It all relies on what we want to do with it. We can manage solar energy by employing technologies that have been created over time. For example, it was utilized to generate electricity and provide light for domestic, commercial, or industrial purposes.

For my research, I'd like to learn how the wireless solar power bank functions during a disaster. A few facts I know about this system are that it is dependent on a few elements that can boost its efficiency, such as the weather and the amount of solar radiation. On the following topic, this element will be discussed and expanded upon.

1.2 Problem Statement

Charging electronic use a lot of electricity consumption, so I need to come up with a new solutions to deal with the problems by making it more effective to conserve energy during emergency. In order to do that, wireless solar power bank can be used because it is one of the most technology nowadays that can help conserve energy. However some of the phones nowadays are not suitable because of it's type of charger. Therefore, this research should be done to obtain the best result to find what is the most suitable wireless solar power bank that can be installed.

1.3 Objectives

The main objectives of this project are:

1. Design a multi compatible wireless solar power bank
2. Fabricate the wireless solar power bank
3. Determined the functionality and reliability of the power bank

1.4 Scope of Work

The scope of work is about how to build and fabricate a multi compatible wireless solar power bank. The dimension for the power bank is 168mm x 85mm x 35mm.

1.5 Expected Results

By researching the weather and demographic of Kemaman, I was able to see the efficiency charging phone using solar power bank as an replacement for ordinary power bank. Also, I know what the main components in the solar collector that can effectively collect the sun ray. After the data has been documented the location of the residence are important factors to consider when using solar power bank.



Figure 1: solar power bank