

**UNIVERSITI TEKNOLOGI MARA**

**DESIGN OF SOLAR POWERED  
LIGHT FOR REMOTE COUNTRY  
WITH POOR LIGHTING**

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## **ABSTRACT**

A Solar panel is a panel that use renewable resources to create energy that helps a lot of people by providing electricity. This is a green technology because it does not produce any emission of any kind of smoke. It creates energy by using photovoltaic module or more known as solar panel that depends on irradiance that reach the solar cells and charge the battery for certain projects. Many factors contribute the parameters which directly affect the solar panel. Solar panel utilization is a very practical way to produce electricity for many applications. Off-grid living means living in a location that is not serviced by the main electric conventional source of electricity energy, people need to pay high-cost fees for installation but not in this case. Because we only use a small portion of solar panel to utilize it and it only use a basic circuit that could help how the solar panel works. The method that are used to fabricate this prototype is Solidworks 2017 to show how it going to look like and how it is going to work and to attract any investor that would help in this prototype. In conclusion, it is not too late for us to convert from using coal power to solar power by introducing this product to everyone. This product can be improvised by professional helps and it also a helps earth from global warming by reducing the emission of coal power plant or any type of power plant that exist and the recommendation for this prototype is for this project, I would recommend for it to able to turn it off automatically by using some sort of sensor or apps that could be applied. We can use a Li-ion Battery to save up some of the solar power that were stored. So, this product could be help if more knowledge or research were made and there should not be a problem when doing this project

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# CHAPTER ONE

## INTRODUCTION

### 1.1 BACKGROUND OF STUDY

Sun is a source of all life on Earth. It helps and useful to mankind in many ways included cure certain diseases. Sun creates two main types of energy which are light and heat. Solar light and solar electricity are several of the solar energy application. Solar is a power that are generated by the sun where the solar radiation is light also known as electromagnetic radiation that is emitted by the sun. While every location on Earth receives some sunlight over a year, the amount of solar radiation that reaches any one spot on the Earth's surface varies. Solar technologies capture this radiation and turn it into useful forms of energy

As known, the most familiar of solar power system is Photovoltaics Basic (PV), which is utilized in solar panels. When the sun shines onto a solar panel, energy from the sunlight is absorbed by the PV cells in the panel. This energy creates electrical charges that move in response to an internal electrical field in the cell, causing electricity flow.

A solar cell is a basic building block of a solar module. Solar module can have any number of solar cells. Basically, for a large commercial and utility scale, a solar system developed. By increasing several solar cells, the module voltage wattage increases. Figure 1.1 shows the difference among solar cell, solar module, and solar system.