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**FINAL REPORT OF FINAL PROJECT**

**PROJECT TITLE**

**SOLAR ENERGY POWER  
(SOURCE)**

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“POWER SUPPLY (SOURCE PART-SOLAR ENERGY POWER)” on the given time although we have same problems to complete it of successful.

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## ABSTRACT

You've probably seen calculators that have solar cells -- calculators that never need batteries, and in some cases don't even have an off button. As long as you have enough light, they seem to work forever. You may have seen larger solar panels -- on emergency road signs or call boxes, on buoys, even in parking lots to power lights. Although these larger panels aren't as common as solar powered calculators, they're out there and not that hard to spot if you know where to look. There are solar cell arrays on satellites, where they are used to power the electrical systems.

You have probably also been hearing about the "solar revolution" for the last 20 years -- the idea that one day we will all use free electricity from the sun. This is a seductive promise: On a bright, sunny day, the sun shines approximately 1,000 watts of energy per square meter of the planet's surface, and if we could collect all of that energy we could easily power our homes and offices for free.

In this project, we will examine solar cells to learn how they convert the sun's energy directly into electricity. In the process, you will learn why we are getting closer to using the sun's energy on a daily basis, and why we still have more research to do before the process becomes cost effective.

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# CHAPTER 1

## INTRODUCTION

### 1.1 Background

Just think of the many ways we could use the electricity generated by solar power! We can bring power to a shed, workshop or summerhouse for lighting, tools or an alarm system power to electric gates and fences – without running cables across our garden or through our home. Solar energy is a tried and tested power source that is already being used around the world for numerous commercial, industrial, government and domestic applications. It is powering water pumps in African villages, weather stations in the Antarctic and satellites in space!

It would be hard to find a more environmentally friendly power supply. Clean and green, solar power is a renewable, sustainable and non-polluting source of energy. It is easy to see the appeal of solar power for domestic use. Low maintenance and long lasting, it is a highly cost-effective and reliable energy supply. It works by transforming the energy from the sun into a reusable form of electricity, a process known as Photovoltaic (PV). Solar Panel acts as a collecting tray, helping catch the sun's rays. The big solar panel means more energy that can be collected.

The energy collected is stored for our future use in a battery. Sometimes we collect more energy than we actually need so with larger panels a voltage regulator should be fitted to control the flow of energy and prevent battery damage. In fact, we are so confident of their quality that all Solar panels come with a 10 years guarantee and a 20 years performance guarantee on the cells. The right size of panel will depend on variables such as the power required by the appliance, the length of time we want to use it and how much sunshine we get at the time of year.

There are several different methods of harnessing the sun's energy with Solar panels. Like anything else, it is important to buy a quality product from a reputable supplier. The finest is polycrystalline silicon technology, which is more efficient than amorphous or other thin film technologies, particularly in low light conditions.