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A Review on Application of Sustainable Energy or Renewable Energy

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***Abstract*: Solar energy is one of the popular renewable sources of sustainable energy. In this generation the usage of electricity has increased rapidly and this demand is increasing day by day. In order to fulfill the required demand of electricity we use solar energy for generating the electricity using solar panel. This paper implements and efficient way to power generation system. Using solar power panel solar energy system is used to collect the maximum power from sun. In this paper we present the various application of solar energy similarly we want to present the different solar methodologies which have been already the applied for some application with suitable case studies. This proposal is to use solar panel implemented in this project more efficiently. Design of perfect solar panel increases performance of panel. It consumes less space compare to general solar panel. In recent year the government of India focusing on using renewable source of energy. The paper we have review about the solar energy from sunlight and discussed about their future trends and aspect. Paper also tries to discuss working solar panel types various application and method to implement the solar energy.**

***Keywords*: Renewable energy, solar energy, solar panel etc.**

1. Introduction

Solar energy is the viable source of renewable energy. It is used to variety of fields such as industries domestic purpose, energy is used to collect the maximum power from sun and convert it into the electric energy or power. On 30th June 2008 the prime minister of India dr. Manmohan Singh, promulgate the national plan per climate change. This compromise national solar mission to significantly increase the share of energy in the total resources. The dust and ministry for new renewable energy have taken prelude to encourage work on solar power generation project.

It is definitely said to become economical in the coming year and growing better technology in the term of both cost and application. Everyday earth receive sunlight (1360 approximately). This is an unlimited source of energy which is available at no cost major benefit of solar energy over other conventional power generation is that the sunlight can be directly converted into the solar energy with use of smallest photovoltaic (PV) solar cell.

An increase need of energy due to demanding by industry domestic use etc. It could not be fulfilled by only conventional resource therefore the demand of alternative energy resources also increase. To fulfill this demand solar energy is important energy. Maximum efficiency of solar panel increases form thermoelectric cooling technique. The sun is a major source of in exhaustive free energy (solar energy) for the planet earth. Currently new technologies are being employed to generate the electricity from harvested solar energy.

2. Objectives

1. Improve the quality of life alleviate ruler poverty in the u energized and off area by providing the four basic needs such as alive education entertainment and communication to affordable and reliable source energy solar.
2. Promote the use of sustainable, economic and lease cost decentralized, electrification, solution for area not feasible for grid connection or extension in partnership with the local government units, semi private and private sector.
3. Increase productivity promotes live hood and social interaction in the community by extending their time at night.
4. Apply solar energy technology as the enabling technology for sustainable development.

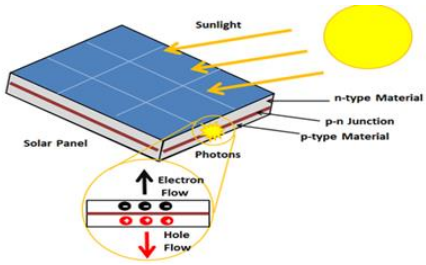

Fig. 1. Details of radiation energy to electrical energy conversion

3. Solar

There are three primary technologies by which solar energy is harnessed.

- Photovoltaic (PV), which directly convert light to electricity.

- Concentrating Solar Power (CSP), which uses heat from the sun to drive utility electric turbine.
- Solar Heating and Cooling System (SMC), which collect thermal energy to provide hot water and air heating.

Photovoltaic:

The PV effect was observed as early as 1985 by Alexander Becquerel. 1954 bell labs in the US introduced the first solar PV device that produce a useable amount of electricity, and by 1958 solar cell where being used in a variety of a small scale.

Due to the growing demand for renewable source of energy. The manufacture of solar cell and photovoltaic cell expanded dramatically in recent year.

Every year the production of photovoltaic is doubling every 2 year increasing by an average of 48% each year since 2002 making it world's fastest growing energy technology.

Types of solar cell available There are three main type of commercially available PV cell.

1. Monocrystalline silicon PV.
2. Polycrystalline silicon PV.
3. Thin film amorphous silicon PV.

There are other type of solar cell are also available but they are less in use.

4. Site

A suitable location for solar panel can be survey the area that might fall on proposed solar during daytime with maximum sun typically 9:00 a.m. To 4:00 p.m. visibility viability user requirement also take in consideration.

How to colleges in our premises and we wanted to the put the terrace area to good use. The system has been operational for more than a year and the college has saved thousands of rupees.

The project serve multiply purpose.

- First project tends to reduce the overall cost of energy technology mainly electricity.
- Second project are serving as test platform for large scale of solar energy.
- Third this project is engaging the academic institution in long-term solar energy research development and pedagogical activity.
- Fourth increase the awareness of solar energy among the people.
- It provides tearing and training opportunities for student.

Increases in energy demand with population on its clean limited technologies option best technologies for generating the electricity also solar based fuel the most important area for current development. As for the Kyoto protocol under the United Nations praying for conviction on climate change dad, instead dude is the co2 emission solar PV project that replace electricity consumption and taking benefit of solar cell.

5. Environmental protection

Before implementation of any new energy resource we need to look at its impact on environment solar technology we need to worry about impact on environment during production, installation and disposal there is no issue is related to air and water pollution.

In 2011 the nation energy agency said that the development of affordable inexhaustible and clean solar energy technology will have hug longer-term benefit. It will increase energy security through reliance on an indigenous inexhaustible and mostly important, independent resource enhance stability reduce population. Now a day the in India there is a fast developing solar power industry. The country solar installed capacity reached 30.07 GW for 2020.As we study so many are put in case study about solar energy maria solar energy required considerably lower manpower expensive congressional energy production technology. It's a up to 20% of energy call Steve can install easily no any wire cards are required. It can be stored in rooftops neither so nor any new space is required. It has no moving bad and not requires any additional fuel. Other than sunlight to produce power.

6. Conclusion

From solar energy is one of the important and major renewable sources of energy and has also proven it useful in functioning of application.

There it's so much potential energy to be gain from using solar energy. The amount of solar energy that reaches our planet surface is so abundant in a year. The supply is unlimited so it's really depending on how much of it we want to use. It saves so many electricity so throughout the campus if we use this concept then it will have eliminated the energy crisis to a large content. It is eco-friendly and utilizes the renewable source of energy very well.

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