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JUJHAR SINGH MEMORIAL COLLEGE,  
BELA, RUPNAGAR, PUNJAB**

**RENEWABLE ENERGY COMMITTEE  
REPORT**



**SESSION 2019-20**

# **RENEWABLE ENERGY COMMITTEE**

- 1. Asst. Prof. Gagandeep Kaur**(Department of English)
- 2. Asst. Prof. Taranjeet Kaur**(Department of Computer Science)
- 3. Asst. Prof. Sanjivani** (Department of Mathematics)
- 4. Asst. Prof. Jaspreet Kaur**(Department of Physics)
- 5. Asst. Prof. Neha Chouhan**(Department of Physics)

## Introduction

**Renewable energy** is the energy that is collected from renewable resources, which is naturally replenished in a human timescale, such as sunlight, wind, rain, tides, waves, and geothermal heat renewable energy often provides energy in four important areas: electricity generation, air and water heating/cooling, transportation, and rural(off-grid) energy services.

Renewable energy is produced from sources that do not deplete or can be replenished within a human's life time. The most common examples include wind, solar, geothermal, biomass, and hydropower. This is in contrast to non-renewable sources such as fuels.



### Types of renewable energy

#### **Solar:-**

Solar power is one of the most popular, and fastest-growing, sources of alternating energy. Here, the process involves solar cells (usually made from slices of crystalline silicon) that rely on the photovoltaic (PV) of effect to absorb photons and convert them to electrons. Meanwhile, solar thermal power (another form of solar power) relies on mirrors or lenses

to concentrate a large area of sunlight, or solar thermal energy (STE) onto a small area (.i.e. a solar cell)

### **Wind power:-**

Wind power has been used for thousand years to push sails, power windmills, or to generate pressure for water pumps. Harnessing the wind to generate electricity has been subject of research since the late 19<sup>th</sup> century. However, it was only with the major efforts to find alternative sources of power in the 20<sup>th</sup> century that wind power has become the focal point of considerable research and development.

### **Biomass:-**

The most widely used form of renewable energy is biomass. Biomass simply refers to the use of organic materials and converting them into other forms of energy that can be used. Although some forms of biomass have been used for centuries- such as burning wood – other, newer method are focused on methods that don't produce carbon dioxide.

### **Objectives of Renewable Energy**

- Improve energy efficiency from source to use.
- Reduce energy and carbon dioxide.
- Minimize the impact of the energy sector to use.
- Ensure that energy production, conversion and use is not competitive.
- Enhance cast effective attainment environment goals through.
  - technology, including cost effective renewable energy and carbon capture and storage.
  - raised full cost awareness.
  - increased capacity.

# REPORT

## First meeting

**Date:- 18/07/2019**

**Agenda :-** To reduce the carbon dioxide content in campus.

## Minutes :

- To record emission of  $\text{CO}_2$  from two and four wheelers in campus.
- Performa designed for recording the data of vehicles entering in the campus

In the first meeting of the committee it is decided to work on the carbon footprints in the college campus from various sources. At the first step the vehicles were monitored entering the campus by designing Performa and collecting the required information.

**Carbon footprint** is defined as: The total amount of greenhouse gases produced to directly and indirectly support human activities, usually expressed in equivalent tons of **carbon** dioxide ( $\text{CO}_2$ ). ... When you heat oil, gas or coal, then you also generate  $\text{CO}_2$ .

