An International Multidisciplinary Double-Blind Peer-reviewed Research Journal

Harnessing Renewable Energy: Used in Replenishment of Sources

Anitha Sheelam, Assistant Professor, St. Martin's Engineering College, Telangana, India

Abstract: Renewable energy sources are disruptive asterisms of all energy system for tapping of widely available sources. The major challenge of renewable energy, non-sustainable energy transition at the time of 1st half of the 21st century. Renewable and non-renewable energy sources are depleting due to growing population of the world and unlimited demands. Renewable energy sources supplies depend on factors, technological innovation, instrument policy and cost & technologies, in turns to lead in market prize. In this paper several applications are related to solar energy, different techniques are exploring in solar energy resources. The present the present status will be valuable to renewable source scientists.

Keywords: Geo-thermal, solar energy, hydropower, renewable, biomass, wind power

Introduction:

1.) Renewable resources:

A resource is replaced naturally by using repeatedly. This energy almost never runout.

Types of renewable- energy sources:

- Hydro-power
- Solar-energy
- Wind-energy
- Geo-thermal
- Bio mass
- Tidal-energy

People have used renewable sources of energy to survive. For example: Preparation of food by heating wood, solar energy for lighting fires and electricity.

2.) **Non-renewable resources**:

these are the sources once used up cannot be replaced .

Types of non-renewable sources:

- Oil
- Coal
- Nuclear energy
- Natural gas

These resources are found inside the earth they will take millions of years to form.

Renewable energy sources based on coal, fuel, wood and fossil –fuel. these are extensively used for the manufacturing industries like generation of electricity. Growing population increased demand of non-renewable energy resources are depleting and recognition of scientific reason on the climate change in the global community. Find the alternative energy resources transition from fossil fuels.

1.) **Geo Thermal Energy**:

This energy generated by primarily comes from earth due to the decay of naturally occurring radioactive-isotopes and heat reacting of greenhouse effect due to the climate change in the environment.

2.) **Wind-Power:**

Wind-power is the energy that is obtained by harnessing the energy of wind with the help of wind mills and wind turbines produce electric power & wind mills produce the mechanical power.

3.) **Hydro-Power:**

Energy from flowing water into electricity, this turbine is connected in to an electromagnetic generator. When the turbine spins which produce electricity.

4.) **BIO-MASS:**

These energy is organic material that comes from plants and animals. Biomass contains stored energy from the sun. Plants absorb the sun's energy in this process it is called photosynthesis.

Bio-mass is released heat by burning of plants in chemical energy.

Background:

Energy from the sun is very important to the surface, Ocean and atmosphere this energy to the atom of the primary drivers our weather.

Our climate is also strongly affected by the mount of solar received at earth, Heat transfer form the sun earth by radiation, conduction, convection and advection. Alternative path ways for solar energy on its way through the troposphere to earth.

Summer:

The Highest solar generation during the usually from 11am to 4 PM. These days are longer in summer and shorter in winter. In the same location with the seasons.

Winter:

This means solar systems will be running for the less time each day therefore produce less average energy per day. The effect of shorter day is the fact that the sun angle changes dramatically in the winter.

Rainy Season:

The Fact of the matter the sun is covered by the clouds. The sun is doesn't stop the light and it reduces the solar power. Can produce more power a sunny day edge of cloud-effect?. The sun passes over the outer edge of a cloud magnifying the sunlight. The intense light causes the solar system to boost power temporarily. When the sunlight reflected of snow or water.

Conclusion:

The Incident solar-energy at the top the atmosphere is sent back out of space. In this process 70% absorbed by the atmosphere and 30% reflected back to the space considered as loss-energy. Using solar panel to generate electricity wire replace the way of our natural resources cloud- cover relative humidity in atmosphere and heat buildup are effected the solar power efficiency of solar panel mounting. Solar system will reduce the gas emission that result of air pollution from burning of fossil fuel as coal. This will improve the quality of earth and create a stronger ozone layer in the process. The main source of electricity with in our daily life. SAR use full for mapping of minerals to solar energy. Solar energy protects by remote sensing technology, known as Heliostat which is dealt with atmosphere, cloud extinction separately. The roof top photovoltaic panel installation in urban areas.

References:

Ellabban, O,; Abu-Rub, H,; Blaabjerg, F. Renewable Energy Resources: Current Status, Future Prospects and Their Enabling Technology. *Renewable and Sustainable Energy Reviews* 2014, 39, 748-764.

Avatar, R; Tripathi, S.; Aggarwal, A.K. Assessment of Energy-Population – Urbanization. Nexus with Charging Energy Industry Scenario in India. *Land* 2019, 8, 124.