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Perspective

Renewable energy and its sources

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INTRODUCTION

Renewable energy sources are of different types. Each source is reviewed in detail. The most popular major sources of renewable energy are:

- Solar energy
- Geothermal energy
- Hydro energy
- Wind energy
- Biomass energy
- Tidal energy

SOLAR ENERGY

Energy that is obtained from the sun is called solar energy. Cells transform sunlight into electricity and give power supply to anything from the entire neighborhood to the smallest garden light. Solar farms and community projects use mirrors to concentrate the sunlight and create much larger supplies, whereas rooftop panel provides power to the home, while. Solar energy is used as either passive solar or active solar. Active solar can be consumed in activities such as warming of air and drying clothes. To utilize this abundant resource, technology has provided a number of ways. Whereas this renewable solar energy resource system is also a clean energy source because it doesn't produce greenhouse gases or air pollutants. If the solar energy panels are manufactured and responsibly sited then they are also counted as green energy as they don't have an adverse environmental impact. Solar farms can also be created in water bodies, called 'floatovoltaics'.

GEOTHERMAL ENERGY

Geothermal energy is stored in the earth's core. It is developed by the slow decay of radioactive particles at the center of the planet in rocks. The availability of geothermal

energy is closely near to the geographical locations, places such as Iceland. Geothermal energy can be used to generate electricity or heat homes directly, geothermal energy is of negligible importance in the drilling wells, and we are able to bring up highly heated water to the top which is used as a hydrothermal resource to create electricity.

HYDRO-POWER

This energy source is a major renewable energy source used all over the world today to produce electricity, often reliable than solar or wind power, and also allows electricity to be stored for future use when demand is at a peak. Hydro energy is not a green energy source. Hydroelectric power and wind power works in a similar manner and it is used to spin a generator's turbine blades to create electricity. In the United States, it is presently the largest renewable energy source. Larger 'mega-dams divert natural water sources, which represents a negative impact for human populations and animals due to restricted access to the water source. If carefully handled, smaller hydroelectric power plants do not have such a catastrophic effect on the local environment.

WIND ENERGY

Wind energy is a source of clean energy. Wind energy works much like old-fashioned windmills did, by using the power of the wind to turn a blade. Wind farms are an increasingly familiar sight in the UK with wind power in ancient times, wind energy was used to move ships by impacting on the sails. Wind turbines need to be placed in areas with high winds, such as plains, open fields, and hilltops. From wind energy to obtain electricity, turbines are used to drive generators.

BIOMASS ENERGY

Biomass energy uses organic material from plants and animals, including crops, trees, and waste wood, waste plants. This is the conversion of solid fuel made from plant materials

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into electricity this is a much cleaner and more energy-efficient process. By converting agricultural, industrial and domestic waste into solid, liquid and gas fuel, biomass generates power at a much lower economic and environmental cost. From forests can produce higher carbon emissions than fossil fuels, this biomass is burned to create heat which powers a steam turbine and generates electricity. Biomass while also have an adverse impact on biodiversity despite this, some forms of biomass do offer a low-carbon.

TIDAL POWER

This is another form of hydro energy that uses twice-daily tidal currents to drive turbine generators Tidal power offers a renewable power supply option since the tide is controlled by the constant gravitational pull of the moon. The power that can be generated by the tide may not be constant, but it is reliable however care needs to be taken with regard to tidal power, to the environmental impact as dam-like structures and tidal barrages can harm wildlife.