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What are Alternative Energy Sources?

Alternative energy encompasses all those things that do not consume fossil fuel. They are widely available and environment friendly. They cause little or almost no pollution. There have been several alternative energy projects running in various countries to reduce our dependence on traditional fossil fuels. There are many impressive options that you can take into consideration such as solar tankless water heater reviews. Here in you will learn more about alternative energy sources that you can take into consideration.

Solar Energy

Solar energy is one the alternative energy source that is used most widely across the globe. About 70% of the sunlight gets reflected back into the space and we have only 30% of sunlight to meet up our energy demands. While solar energy is used for producing solar energy, it is also used for drying clothes, used by plants during the process of photosynthesis and also used by human beings during winter seasons to make their body temperature warm. Solar energy can be extracted either by Solar Thermal or using Photovoltaic (PV) Cells.

Solar energy does not create any pollution and is widely used by many countries. It is renewable source of power since sun will continue to produce sunlight all the years. Solar panels, which are required to harness this energy can be used for long time and require little or no maintenance. Solar energy proves to be ineffective in colder regions which don't receive good sunlight. Solar energy advantages are much more than its disadvantages .

Geothermal energy

'Geo' means Earth and 'thermal' means energy. Geothermal energy means energy drawn or harnessed from beneath the earth. It is completely clean and renewable. Geothermal energy has been in used since last several years. The earth contains a

molten rock called magma. Heat is continuously produced from there. The temperature increases about 3 degrees Celsius, for every 100 meters you go below ground. Below, 10,000 meters the temperature is so high, that it can be used to boil water. Water makes its way deep inside the earth and hot rock boils that water. The boiling water then produces steam which is captured by geothermal heat pumps. The steam turns the turbines which in turn activates generators. Geothermal energy produces no pollution, reduces our alliance on fossil fuels.

Hydroelectric Energy

Hydroelectric power stations capture the kinetic energy of moving water and give mechanical energy to turbines. The moving turbines then convert mechanical energy into electrical energy through generators. Dams around the world have been built for this purpose only. Hydropower is the largest producer of alternative energy in the world.

There are different types of hydropower plants. The selection of hydropower plant depends on many volume and flow of water. Hydropower is renewable, constant, predictable and controllable source of energy. They emit no greenhouse gases and are environment friendly. On the negative side, they may cause adverse effect on aquatic life, reduce flow of water which may affect agriculture, require huge costs to build and may cause havoc if they get breakdown.

Biomass Energy

This is the process by which an alternative energy is generated through conversion of biological materials and wastes into forms that can be used as energy sources for heating, power generation and transportation. Those carbon based substances or materials converted over a long period of time to fossil fuels are not regarded as biomass. However, in their original state they are regarded as biomass. This is because of the separation of the carbon they previously contained from the carbon cycle. This makes them figure differently affecting carbon dioxide levels in air. Biomass is renewable source of energy as we would be able to produce it as long as crops, plants and waste exist. Another advantage of biomass is that it helps to reduce landfills. Biomass is comparatively ineffective as compared to fossil fuels. They

release methane gases which can be harmful to the environment.

Ocean Energy

The waves produced by the ocean and tides that hit the sea shore has enormous potential in them. If they are harnessed with full capacity they can go a long way in reducing world's energy problems. There are 3 ways i.e. Tidal energy, Wave energy and Ocean thermal energy conversion (OTEC) via which ocean energy can be harnessed. Tidal power basically involves using kinetic energy from the incoming and outgoing tides. The difference in high tides and low tides are also important in this respect. The rise and fall of ocean tides are captured by tidal energy generators which turn turbines.

Hydrogen Energy

Hydrogen is the most abundant element available on earth but it is rarely alone. Even water contains two third of hydrogen. It is usually available with other elements and have to separated before we can make use of it. Hydrogen has tremendous potential and can be used to power up homes, vehicles and even space rockets. It takes a lot of energy to separate hydrogen from other elements and therefore it proves to quite expensive to extract it.

The main benefit of hydrogen energy is that it is clean source of fuel and does not leave any waste elements behind except water. There are no harmful emissions and is environment friendly. It is completely renewable and can be produced over and over again on demand. Dependency on fossil fuels still remains as we need them to extract hydrogen from other elements. These are some of the alternative energy sources that can be taken into consideration when planning your energy production and usage.

Literature:

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