|  |
| --- |
| **What is Renewable Energy? How Renewable Energy Works** [**Renewable energy**](http://www.renewable-solarenergy.com/index.html) is basically the energy that comes from natural sources such as wind, sunlight, tides, rain, and [**geothermal heat**](http://www.renewable-solarenergy.com/geothermal-energy.html). Generally **renewable energy projects** are used on a large scale, however, this does not mean that renewable energy cannot be used in smaller areas such as villages or more generally rural areas. |
|  |
| **Renewable energy** is the energy from natural sources and minerals like sun, wind, and tides nuclear and hydroelectric power. The renewable energy is named so because it is environment friendly and it can replace non renewable energies like oil and coal. The world is shifting [**renewable energy sources**](http://www.renewable-solarenergy.com) because of the scarcity of and rising prices of oil and gas.   |  | | --- | | **Forms & Types of Renewable Energy** We will now take a look at the main forms and **types of renewable energy**. The first major **form of renewable energy** that we will look at is wind power. Wind has been an energy source for a very long time. The energy in wind can be used by making a tower which stands high above the sea level with a large propeller at the top. What the wind does is it basically blows the propeller round and round which in turn helps produce electricity. By building not just one but multiple of these towers you can produce more electricity at once. The most suitable area to build these wind turbines would be in coastal areas, tops of hills, open fields or basically anywhere the winds are strong and continuous.  **Advantages and Disadvantages of Renewable Energy** **advantages:**   1. Wind is free, therefore wind power is very cost efficient. 2. It produces no greenhouse gases or waste that could cause harm to the environment. 3. land beneath the tower can still be used for farming since it doesn’t take up a lot of space. 4. wind power is a very good way of providing energy to remote areas. Even though wind is free and can’t be purchased from anywhere this sometimes can be a     **disadvantages:**   1. The wind is not continuous , or example on days when there is no wind all one can do is hope and pray for some wind. 2. Wind farms are usually near the coast, and near the coast means higher land prices. 3. Some people feel that these tall towers destroy the beauty of the land. 4. wind farms are they can affect television reception for people in close proximity to them, they can be noisy, they can kill birds. 5. and lastly the wind cannot always be predicted.   **Other Major Forms & Types of Renewable Energy**  Another **form of renewable energy** is hydropower. Water is about 800 times denser than air and therefore even a small stream of water can produce a reasonable amount of energy. Today there are many hydroelectric power stations in the world and together they are providing about 20% electricity across the globe.  Solar energy is also one of the oldest renewable sources in the world. This energy is taken from the sun in the form of solar radiation. There are basically three ways that we can use the sun’s energy. The first is by solar cells in which photovoltaic or photoelectric cells are used to convert light directly into electricity.  The second is solar water heating in which the heat from the sun is used to warm the water in glass panels on the roof therefore no longer requiring gas or electricity to heat the water.  The third is solar furnaces which use mirrors to capture the sun’s energy into a congested place to produce high temperatures. These solar furnaces can be used to cook food.  Lastly, biomass or in other words energy from organic materials such as wood and other solid wastes can be burnt to provide heat or may be used to make steam for a power station.  **Uses of renewable Energy** Renewable energy is of many **uses** and it can support small as well large applications. **Renewable energy** from wind, sun and geothermal is used to produce electricity and heat for use. The solar power plants are used to generate electricity and steam for industrial projects. The energy form the geothermal heat is used to heat radiators in the homes. Thus the renewable energy sources can viably help users to their heat homes. Some other **applications of renewable energy** sources include heating space, ventilation, day lighting, space cooling, water heating, mechanical energy to cut woods and grinding grains. The renewable energy sources and the technologies associated with them are equally important to households and industry.  **Important Applications for domestic Users** Renewable energy sources are of many uses to domestic users. Let’s start with the application of solar energy. This energy can be utilized without paying any taxes and interests. Solar cookers and solar panels supported with battery are the most popular renewable energy applications for domestic users. Solar cookers can be bought or made at home. The solar cookers re made of silver foil and cardboard mostly. The assembly of these cookers is very easy and the manual is available on the other end. The second basic application is the use of solar panels. **Solar panels** for domestic use are widely available in the market. These solar panels can be attached to the electricity grid or can be used alone. The sunlight can also replace the small power needs like use of electric dryers for drying clothes and making tea. Small wind turbines are also useful way of generating mechanical energy for certain household chores like grinding, wood cutting and crushing animal feed. However the use of windmill is limited to rural areas where there is less population and more barren land to deploy windmills. Geothermal heat can also be directly converted to radiators for heating the entire home. Passive solar heat and day lighting is another way of using solar heat to lower the overall expenditure of home. The homes should be designed so that one can make maximum use of light during day. Moreover the homes should enjoy the comfort of sun in winters and wind in summers. | |  | | **Home Renewable Energy** The awareness about the uses of renewable energy sources has helped man kind to reduce dependence upon fuels and methods which pollute our environment. The use of sunlight and wind as a constant and beneficial energy sources can also help us conserve energy. In order to make your home more energy friendly, Use high performance windows, insulated materials in roof tops and use equipments which consume less electricity. Always try to turn off the lights when you leave a room or any living space. Moreover draw some attention towards your heating and cooling systems. The loss of energy from these sources is due to the leakage of air form door and windows. Caulk is an inexpensive material that can help seal your windows and door hence increasing the efficacy and capacity of your current systems. Thus **home renewable energies** provide very different and unique ways to not conserve electricity and heat but also to cook and heat food. The use of the renewable energy resources can be increased and promoted by giving children small activities for their homework like making solar oven at home. | |