## Green energy

Since many years there is research for alternatives for fossil fuels. These fossil fuels (oil, coal and natural gas) are used so much that within 50 years the present sources will be gone. More and more people are protesting against the use of these fossil fuels because the transmission from fossil fuels to electricity produces a lot of carbondioxide which is harmful to the environment. These two main reasons where indicators for the research for alternative energy, with other words 'green energy'. The following green energy we will explain.



**Hydro-electric energy**
Using water for the making of hydro-electric energy is a method which is very old. About 30.000 years ago people used water for making energy. They used the fall of water or the fast current in a river. First with very simple things. People build watermills, or wooden weels in the water. Nowadays we use hydro-electric energy still based on the old system. The fast current of falling water sets a kind of screw in action and the water is rotating it. This rotation activates a generator, which generates electricity. This generator can be compared with a huge dynamo just as on your bicycle. How many electricity a hydro-electric station generates depends on the amount of water and the power of the current. The water will always be there and so it is an endless source.

**Wind-energy**
About 30.000 years ago, people already were using the energy of the wind. A simple form of using wind-energy is the sailingboat. But also the precursor of the windmill arises in Perzia about 2.000 years ago. In the twelth century the windmill spread out over the world. Windmills have had a lot of different tasks, they were used for pumping water out of a 'polder' or grinding grain. Nowadays they're using windmills to generate electricity. Generating electricity is almost as cheap as using fossil fuels. In the Netherlands they are already building windmills in sea. The whole system is comparable with a dynamo. The rotation of the rotors of the windmill is converted to energy using a generator.

**Solar-energy**
Solar energy is a very complicated system, sunlight will be transformed into electricity. The suncells (the cells which 'catch' the sunlight) are made of silicium. The suncell has two layers, a positive layer and a negative layer. Through the sunlight there comes a kind of bridge between the layers which causes current. The use of solar-eneryg is not wide spread, it is very expensive for the big electricity authorities. Solar-energy is often used in small systems, like solar cells on the roof of a house.

**Bio-energie**
Bio-energy is not a *very* clean form of making energy. They use the gases out of the refuse-dump of garden-, fruit- and vegetables-wastes. They use the gases for combustion and generate electricity.