



Advantages and disadvantages of renewable energy sources

The exploitation of renewable energy sources has rapidly increased in the recent years mainly because of the growth of oil and natural gas prices and the pollution generated by non-renewable fuels.

Sunlight, wind, water, geothermal heat and biomass are renewable sources which are converted into energy (in the form of electricity, heating, etc.) thanks to innovative technologies and modern power plants.

Renewable energy has some relevant advantages. First of all, renewable sources are inexhaustible. Secondly, they don't produce carbon dioxide or other greenhouse emissions, generating a clean form of energy with minimal environmental impact. Renewable energy production has also important social implications as it helps the economy of developing countries, whose geological and climatic features make them perfectly suitable to host large power plants building projects.

In spite of all these positive consequences,

renewable energy has its disadvantages, too. Renewable sources are not always available; for example, on a cloudy or rainy day the power produced by solar energy can be obviously very low. Furthermore, clean sources seem to be free of any costs but this is not so true. Sources may be costless but building and maintaining plants can be very expensive. Governments usually try to overcome this issue by granting incentives to encourage public and private businesses in the investment in renewables.

Another crucial aspect about these forms of energy is that generator systems need large areas to be built on and to work adequately, and they often have a significant visual impact that may disturb someone (e.g. wind turbines and hydroelectric systems, which are criticized for their influence on the aquatic life, too). However, engineering is developing new projects to improve power plants environmental impact.



ACTIVITIES

- 1 *The text claims that renewable energy helps the economy of developing countries. In what manner? Do you think this may have negative implications, too? Discuss in class.*
- 2 *Search the web to find which renewable sources are mainly used in Italy.*
- 3 *Choose one of the renewable sources mentioned in the text and write a paragraph about its specific pros and cons.*