Renewable Energies: Hydro or water power Energy

Classes 4A and 4I: Vocational Course of Hygiene and Safety at Workplace and Environment Technician
Renewable energies are alternative energies due to their availability in the present and in the future.

- Solar energy;
- Wind power energy;
- Wave power energy;
- Biomass energy;
- Geothermic energy;
- **Hydro/Water power energy.**
Hydro power energy is the most used form of energy in Portugal. This energy can be obtained through the water. It results from the transformation of the potential energy of the water mass into kinetic energy, through the rotation of the hydraulic turbine. This, in turn, is transformed into electrical energy, in dams.
Alqueva dam is Portugal’s biggest dam
Advantages

• It’s a renewable energy so it is unlimited;
• It’s viable;
• It doesn’t pollute the environment;
• It provides development of villages around it;
• It allows a form of local water supply for irrigation.
Disadvantages

- It erodes the soil and consequently affects local plants;
- Their construct demands the formation of large reservatories of water, which will cause deep alterations in the ecosystems;
- It has high costs of instalation and deactivation;
- They occupy large areas of food production and forest.
Currently, there are 72 dams in Portugal. They are located mostly in the north and center of the country.
Conclusion

In recent years the average production of energy in Portugal accounted for 6.1% of the total energy consumption and 48.6% of primary energy available for final consumption. Portugal is the country with the highest percentage of electricity produced by hydropower in the European Union.

The first hydroelectric plant to become operational in Portugal, was Biel, located in Vila Real (north of the country) in 1894.