



SUSTAINABLE ENERGY DEVELOPMENT
3 ECTS (ELECTIVE)
AGH University of Science and Technology
Course responsible: Dr. Artur Wyrwa

Course overview

The aim of the course is to give the students an enhanced understanding of the concept of Sustainable Energy Development. The course is built of two parts: lectures and project.

The lectures address the issues related to sustainable energy development presenting its definition, origin and importance for economic, social, and environmental elements of development. The existing energy patterns and global energy challenges such as depletion of fossil fuel resources, rising demand for primary and final energy, energy security, GHGs emissions and the role of renewable and alternative energy sources will be discussed. Indicators for Sustainable Development in social, economic and environmental areas will be presented.

The aim of the project is to assess whether development of selected countries is becoming more sustainable with the use Energy Indicators for Sustainable Development. Relevant indicators will address economic, social, and environmental aspects of development. The necessary calculus will be done based on data, mainly of World Bank, British Petroleum, EUROSTAT. The teaching material will be available at the following website: <http://home.agh.edu.pl/~awyrwa>.

Outcome of the course

After this course the student should be able to

- Distinguish economic, social, and environmental aspects of development
- Determine the links between the energy use and environmental damage
- Assess external costs of different energy technologies
- Calculate the Indicators for Sustainable Development of a country in social, economic and environmental areas
- Analyse different energy scenarios in terms of their sustainability

Course coordinator & teachers

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