AK2209 Energy Systems in Society 6.0 credits

Energisystem i samhället

This is a translation of the Swedish, legally binding, course syllabus.

If the course is discontinued, students may request to be examined during the following two academic years

Establishment

Course syllabus for AK2209 valid from Autumn 2014

Grading scale

A, B, C, D, E, FX, F

Education cycle

Second cycle

Main field of study

Built Environment

Specific prerequisites

MJ1145 Energy system

AE1503 Environmental system analysis for teacher

Language of instruction

The language of instruction is specified in the course offering information in the course catalogue.

Intended learning outcomes

On completion of the course, you should be able to:

- account for how the energy systems in Sweden and in the world have been developed to today
- define, explain and use the theoretical concepts presented in the course
- formulate a social sciences research question, dispose a study, search material and write an essay where question and study relate to one another
- give constructive criticism on texts written by fellow students

Course contents

A starting point for this course is that to understand energy system in the society one must regard them as socio-technical systems that in addition to the technical components also consist of organisations that build, run and maintain them and of institutional frames in the form of formal and informal regulatory frameworks for what different actors may and not may make. These regulatory frameworks influence in turn structures of ownership and organizational forms. The socio-technical design of energy system differs considerably between different countries. For example the USA energy system has often been controlled by private companies while municipal and government funded companies have played an emerging role in many European countries. It differs also between different energy systems within a country, and change over time. In many countries, a so called deregulation of important energy systems has been carried out during the two latest decades.

The aim of the course is to teach the students to analyse energy systems as socio-technical systems, how they have been established, developed and changed in the past and how they may be changed in the future. The Swedish innovation system within the energy field will be analysed particularly. Also the interplay between energy systems in the form of both competition and cooperation will be analysed.

Many energy systems have had a transnational nature and large emphasis will also places on the entanglement and the coordintaion over nation borders. Further, geopolitical consequences of transnational energy systems will be studied, for example the conflicts around Europe's gas supply and its depending on Russian (earlier Soviet) gas delivery.

An additional aim is to analyse energy systems at the local level and not least how the energy is use, particularly in household, has changed over time.

Disposition

The course is given in the form of lectures and seminars. Furthermore, text reflections and an essay are included. AK2209 is largely coordinated with AK2207, but AK2209 includes fewer written assignments and seminars.

Course literature

Kompendium med artiklar

Examination

- INL1 - Assignment, 4.0 credits, grading scale: A, B, C, D, E, FX, F
- INL2 - Assignment, 2.0 credits, grading scale: P, F

Based on recommendation from KTH's coordinator for disabilities, the examiner will decide how to adapt an examination for students with documented disability.

The examiner may apply another examination format when re-examining individual students.

Other requirements for final grade

Written assignments and essay

Ethical approach

- All members of a group are responsible for the group's work.
- In any assessment, every student shall honestly disclose any help received and sources used.
- In an oral assessment, every student shall be able to present and answer questions about the entire assignment and solution.