

Vak: Overview Energy Transition and Context

credits: 5

Vakcode	ESVM19ETC	Werkvormen	Werkvorm 1
Naam	Overview Energy Transition and Context	Toetsen	Assignment - Overige toetsing
Studiejaar	2020-2021		
ECTS credits	5		
Taal	Engels		
Coördinator	J.H. Assies-Kroon		

Leeruitkomsten

After completion of the module the student will:
be able to:

1. Draw up perspectives on future developments

have demonstrated knowledge and understanding of

- 1) The different aspects of energy transition
- 2) The alternative energy sources
- 3) The role of Human Factors in energy transition
- 4) The energy system as a whole
- 5) The experiences of Energy Transition
- 6) The role of policy & agreements in geopolitical and economic framework of a safe sustainable energy transition (see for an elaboration sub module Geopolitics and Socio Economic Issues

Inhoud

Despite the fact that the international energy transition process is partly driven by spontaneous technology developments, changing trends in behavioral patterns and changes in the economic structure (e.g. larger share of production in regions with lower energy efficiency levels, or a larger share of services in overall production), still policy-induced incentives have a major role to play in trying to accelerate raising the share of renewables and levels of energy efficiency worldwide. In order to be able to fully appreciate and understand the possible future role of renewables in the energy system internationally, nationally and locally, it is therefore crucial to have a deep understanding : of the various incentives schemes that emerged or may emerge to enhance the role of renewables; of the political processes underlying the various policies and measures to create such incentives; of the complexity to coordinate policymaking at the international and national level; of the interaction of policies and measures; of the interaction between climate policies and policies and measures focused on other targets (e.g. energy policies or innovation policies); of the efficiency and effectiveness of policies and measures; of public acceptance of policies and measures, and of the way in which policies and measures impact upon behavior of the relevant stakeholders.

Systematically put the role of renewables in the context of relevant policymaking, and will therefore argue that the future development of renewables is not an autonomous but typically policy driven process, dealing with investment, saving and consumption decisions of people and companies, and determined by the complex interplay of various stakeholder interests, international policy coordination (or lack of that), and acceptance in society.

In the first part an overview is given of Energy Transition. Shell scenarios will be used to present and discuss possible scenarios for the future and the concept of scenario planning & tools is introduced. In the second part the role of human factors in energy transition is illustrated.

Opgenomen in opleiding(en)

Energy for Society

School(s)

Instituut voor Engineering