### Skills to be acquired in this module

By the end of this module, students should be able to display a clear understanding of the different laws and economic regulations ruling distributed generation in liberalised electric markets. Also, they should be able to identify boundaries and opportunities in those markets. At the completion of this module, the student will:

- become familiar with the basic rules of electric markets
- get know the standards for RE
- know the smart grid installations from the economical point of view

**Engineering practice:**
Graduates will possess a comprehensive understanding of the structure and regulations of local and international electric markets. The economics of distributed generation systems. The state of the art in standards and regulations ruling distributed generation in liberalised electric markets.

**Transferable skills:**
Graduates will be able to work effectively as a professional and team member in the resolution of technical problems related to integration of RE in electric grids. Also, graduates will demonstrate their abilities to communicate effectively with the engineering community in national and international contexts. They are able to demonstrate awareness of the legal issues and responsibilities of the engineering practice.

### Module contents

- The electricity sector: structures and models
- Cost-benefit analysis of investment in RES
- Calculation of tariffs considering quality costs
- Socio-economic impact of Smart Grids
- Impact of high penetration of RES in the electricity market
- Specific regulations for renewable energy

### Reader’s advisory


### Links

- Language of instruction: English
- Duration (semesters): 1 Semester
- Module frequency: jährlich
- Module capacity: unlimited
- Modullevel: MM (Mastermodul)
- Modulart: Pflicht
- Lern-/Lehrform / Type of program: Lecture, Laboratory, Excursion, Tutorials

### Examination

**Final exam of module**
- Time of examination: After end of lectures of module
- Type of examination: Written exam (50%): 2 hours
  Presentation (50%): 20 minutes (developed topic)

### Course type

Seminar

### SWS

- Frequency
- Workload attendance: 0 h