



## ***Course on renewable energy sources***



### ***Rostock (Germany)***

- Duration:** 4 weeks
- Costs:** on request
- Including:** study material, services covering all aspects of the training, supply of internet and technical literature, organization of the transport between airport Berlin/Hamburg and Rostock
- Not including:** board and lodging, insurance and flight

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**Module A: Introduction**

- Overview of the sources of renewable energies - definition, strategies, outlook and success conditions
- Energy policy - legislation e.g. Europe, Germany, International know-how transfer
- Instruments for promoting of renewable energies

**Module B: Wind energy**

- Utilization of wind power - the wind energy market
- Economics and feasibility
- Wind energy - distribution of wind speed, grid management, capacity factor
- Wind power plants - types and state of the art
- Offshore wind farms
- Planning of wind parks - Environmental effects
- Efficient management of wind parks

**Module C: Solar energy**

- Energy from the sun - Economics and feasibility
- Applications of solar energy technology (solar electricity, solar thermal, solar lighting, solar chemical, solar vehicles) - case studies
- Energy storage methods

**Module D: Biofuels**

- Overview of bio fuels - production, environmental aspects, fuel properties and quality
- Biodiesel and bioethanol
- Vegetable oil - use in decentralized plants
- Methane from biogas, Synthetic Biofuels (BtL)
- Quality control - Quality standards, technical specifications
- Economics and feasibility

**Module E: Geothermal power**

- Technical solutions - advantages and disadvantages
- Development around the world - economics and feasibility

**Module F: Biomass**

- Processing and uses, biogas, wood
- Environmental impact