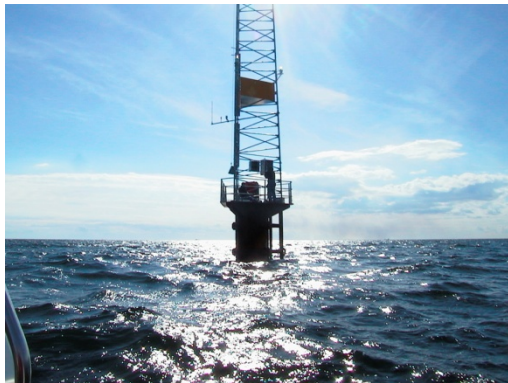


# Offshore Wind Energy: Technical Course

## The offshore wind energy course

The Wind Energy Division at Risø DTU National Laboratory for Sustainable Energy offers a technical course in offshore wind energy. The activities are:

- 2.5 days of lectures/tuition in various aspects of offshore wind energy in pre-planning, planning, and operational stages
- Day visit to Lillgrund offshore wind farm
- Hands-on experience with offshore wind resource assessment using WASP.



## Course details 2009

The 4 day course will take place at Risø DTU National Laboratory for Sustainable Energy, Roskilde, Denmark from 27-30 April 2009. The number of participants will be limited to 24.

## Topics and course programme

- Offshore wind resource assessment
- Remote sensing
- Status, planning and economics
- Offshore wind measurements
- Offshore standards/ project certification
- Load and design requirements
- Environmental impact assessment
- Wind turbine foundations
- Electrical grid and integration/operation
- Wakes in offshore wind farms
- Day trip to Lillgrund offshore wind farm
- Wind farm monitoring, operation and maintenance
- WASP Offshore

## Who should attend?

The course is intended for wind energy developers, engineers, scientists and others, working within the field of offshore wind energy. Aspects of the theories underlying the concepts will be presented, but the course will require some knowledge of meteorology, wind energy conversion technology etc. For the afternoon session on offshore wind resource assessment using WASP, experience in using this program is assumed.

## Course fee

The course fee covers tuition, course materials, lunches and light refreshments, a course dinner and travel (bus/boat) to Lillgrund offshore wind farm. Travel to the course and accommodation are not included. The course fee is €3000.

## Presenters

Rebecca Barthelmie, Niels-Erik Clausen, Charlotte Hasager and other experts from the Risø DTU National Laboratory for Sustainable Energy Wind Energy Division and the wind energy industry including DONG Energy and Vattenfall.



## Language

The course language will be English.

## Registration

To register an interest in this course please email: [offshore.course@risoe.dk](mailto:offshore.course@risoe.dk). A binding registration must be received no later than 13 April 2009. Confirmation, practical details and an invoice will be mailed to you.

## Practical details

Please bring suitable clothing for the visit to Lillgrund. The boat trip is under cover. To participate in the WASP offshore afternoon, please bring a notebook PC with the WASP program installed. No basic WASP training will be given.

## Specific courses and consultancy

Risø DTU offers courses and training specifically tailored to meet the needs of a particular institution, company or wind energy project. In addition we offer consultancy services including offshore wind resource assessment and wind farm development etc. Please contact Hans Jørgensen ([haej@risoe.dtu.dk](mailto:haej@risoe.dtu.dk)) or Niels-Erik Clausen ([necl@risoe.dtu.dk](mailto:necl@risoe.dtu.dk)).

Risø DTU National  
Laboratory for  
Sustainable Energy  
Wind Energy Division  
VEA-118  
DK-4000 Roskilde  
Denmark

Phone +45 46 77 50 97  
Fax +45 46 77 59 70  
[offshore.course@risoe.dk](mailto:offshore.course@risoe.dk)  
[www.risoe.dk/vea](http://www.risoe.dk/vea)