WAsP courses and training

The Meteorology Programme at Risø National Laboratory • DTU offers courses and training in wind resource assessment, site characterisation and the use of the WAsP software and the wind atlas methodology. The activities are:

- Standard WAsP courses
- Specific WAsP courses and training
- Project supervision and QA

Standard WAsP course

Recent investigations, as well as the experience gained by many developers over the last decades, suggest that realistic assessment of the wind resource is the key parameter in any wind energy project – large or small. The course aims at providing practical experience and confidence in wind data analysis, wind climate estimation and power production calculations using the WAsP program, a state-of-the art collection of PC tools developed specifically for these purposes.

Topics and course programme

- Test of PC's and software
- Introduction & theory
- The WAsP program and User's Guide
- Terrain description and the Map Editor
- WAsP and SRTM-derived maps
- Terrain roughness and roughness change
- Shelter from buildings and natural obstacles
- Flow over hills and flow modelling
- Complex terrain and other issues
- Analysis of meteorological data
- WAsP analysis: Wind atlas generation
- WAsP application: wind resource predictions
- Wind power calculations and wind farms
- Case study – the participants carry out a complete analysis/application example
- Presentation and discussion of case study
- WAsP work in the field and in the office
- Q & A session, evaluation of course

The standard WAsP course is scheduled for 3 days and is held several times a year, at Risø and abroad. The number of participants is usually about 10 to 20.

Who should attend?

The course is intended for engineers, scientists and others, primarily working within the field of wind energy, who require a working knowledge of the WAsP program. Aspects of the theories underlying the program will be presented, but the course will stress practical experience and examples on the use of WAsP. Although the course requires no prior knowledge of meteorology or wind energy conversion technology, some familiarity with one of these areas, as well as basic knowledge of PC's and Windows would be advisable prerequisites. The course also covers the WAsP Map Editor and the WAsP OWC Wizard or Climate Analyst.

Course fee

The course fee covers tuition, course materials, three lunches, one dinner, light refreshments etc. Travel and accommodation are not included.

Presenters

Niels G. Mortensen and Ole Rathmann, Wind Energy Department, Risø National Laboratory, Technical University of Denmark.

Language

The language on all courses will be English.

Registration

A binding registration must be received no later than two weeks before the course. Confirmation, practical details pertaining to the course in question and an invoice will subsequently be faxed/mailed by Risø.

Hardware

Since practical experience is essential, the participant(s) from each company or institution should preferably bring their own notebook PC with the WAsP programs and User's Guide installed. Please advise us well ahead of the course, should this not be feasible.

Q & A session

The course will contain a Q & A session where questions raised by the participants will be answered. Questions or issues that you would like to be treated in this session, without reference to the person or company posing the question, can be mailed or faxed directly to Risø before the course.

Specific WAsP courses and training

In addition to the standard WAsP course, Risø offers courses and training specifically tailored to meet the needs of a particular institution, company or wind energy project. Such training is usually carried out at the premises of the client and may further include training in e.g. siting of wind-monitoring stations, met. station analysis, site characterisation, and reporting of the wind resource assessment activities. Please contact the WAsP team, wasp@risoe.dk for more information.

Project supervision and QA

For the experienced WAsP user, Risø can offer to review the data and results of any wind resource assessment project – whether wind atlas, wind resource map, wind farm production calculation, or tender document – in order to assure the quality of the work. This transfers the latest knowledge and further builds the capacity of your institution/company. Please contact the WAsP team, wasp@risoe.dk, for more information.

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