

Wind resource assessment using the WAsP software



Course purpose

The fundamentals of wind resource and energy yield assessments, employing the WAsP software. The course provides a systematic and complete introduction to the WAsP software and the wind atlas methodology. At the end of the course, the student will know how to avoid the most common pitfalls in wind resource and energy yield assessments, and will have a basic understanding of the biases and uncertainties of the wind atlas methodology.

Course objectives

The course focuses on wind resource and energy yield assessments using the WAsP software, i.e.:

- wind farm production
- wind farm efficiency
- micro-siting of wind turbines
- power production of wind turbines
- wind resource mapping
- wind atlas generation
- wind climate estimation
- best practice and uncertainty

In addition, WAsP tools for wind data analysis, map digitisation and editing, and power and thrust curve editing are introduced.

Who should attend

The 3-day WAsP course is intended for engineers, scientists and others, primarily working within the field of wind energy, who require a working knowledge of the WAsP software.

Description of working sessions

Aspects of the theories underlying the programs will be presented, but the course will stress practical experience, best practice and examples on the use of WAsP.

The lecturers

The course will be presented by experienced members of DTU Wind Energy faculty.

Prices and information

3000€ per participant incl. VAT. This includes tuition, course materials, certificate of participation, lunch and light refreshments during the day.

Venue

22-24 November 2016, DTU, Risø Campus, Denmark

Enrollment

Please go to www.wasp.dk/Courses-and-Certification

| Time | Day 1 | Day 2 | Day 3 |
|---------------|---|---|--|
| 09:00 – 10:30 | Welcome to course | Welcome to Day 2 | Welcome to Day 3 |
| | Introduction and theory | Terrain elevation and flow modelling Complex terrain, RIX and CFD | Case study: participants carry out a complete example of WAsP analysis and application |
| 11:00 – 12:30 | Terrain description and the WAsP Map Editor | Wind measurements, analysis of wind data and the WAsP Climate Analyst | Case study, continued |
| 12:30 – 13:30 | Lunch | Lunch | Lunch |
| 13:30 – 15:00 | Land cover, terrain roughness and wind profiles | WAsP analysis: Wind atlas generation | Case study, continued |
| | | WAsP application: Wind resource prediction | Presentation and discussion of case study |
| 15:30 – 17:00 | Shelter from buildings and natural obstacles | Wind farm calculations | Best practice and uncertainties |
| | WAsP and SRTM maps | | WAsP Engineering, WAT, Fuga Q & A session |
| | | | Course evaluation + certificates |