



Advanced Course

The advanced windPRO course is for the experienced windPRO user who wants to go deeper into windPRO and may have accumulated questions on its use.

This is also a good way to get introduced to the new features of windPRO 3.3.

Day 1

Advanced wind energy calculations in windPRO

- Advanced treatment of wind data
- Model validation
- WASP CFD
- MCP
- Mesoscale data
- AEP calculations in the time domain

Day 2

windPRO tools for site suitability and performance check analysis

- SITE COMPLIANCE (IEC 61400-1)
- LOAD RESPONSE and Life Time Extension
- PERFORMANCE CHECK: SCADA data analysis and post-construction AEP assessment

Day 1: Wind modelling

The wind model is one of the most critical and complex elements of a wind turbine project. The course goes beyond the simple wind model of the basic course and focuses on three vital phases:

- The advanced treatment and analysis of the wind data, including data patching and substitution
- The validation of the wind model. Is the model you have created correct and how can you verify it using cross-predictions, wind profile analysis and reference turbines? We will see how and when WASP-CFD can be used to improve the results in complex terrain
- Long-term correction of the measurements, the methodologies and the plethora of reference data available including the EMD mesoscale datasets

We also introduce the time-domain energy calculation which runs parallel to the traditional method. During the day it will also be possible to discuss specific site issues the participants face in their daily work.

Day 2: Suitability and Performance

The second day is all about designing the wind farm. Is it the right turbines for the site? Will the wind farm comply with their design criteria for turbulence, extreme wind, loads etc.? When the turbines are finally running, how well are they performing? And can we use this information to improve our wind model?

This day is aimed at developers, operators and turbine suppliers who need to evaluate wind farm layouts before and after commission.