Microscale wind simulations and wind resource assessment
Microscale wind simulations using Reynolds Averaged Navier-Stokes (RANS) and Large-Eddy Simulation (LES) turbulence models are key tools for wind energy applications. These simulations are used for wind resource assessment, wind farm modelling, and operational forecast of high-resolution winds in complex terrains. The coupling of mesoscale meteorological models (WRF) with Computational Fluid Dynamics (CFD) approaches allows for enhanced accuracy in predicting wind behavior on complex terrains.

Objectives:
- Wind resource assessment
- Wind farm modelling
- Operational forecast of high-resolution winds in complex terrains

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