

## First steps to build a wind farm: finding suitable sites

The first step in wind farm development is to identify potential sites for a wind farm, which feature a good wind potential, but also suits other needs like grid connection and road access. A search area procedure can identify potential sites:

### Procedure

- Wind simulation with the 3D mesoscale flow model FITNAH
- Determination of relevant location factors (grid structure, accessibility, restrictions)
- Integration and overlaying of these information layers in a GIS
- Identification of the areas with high potential for wind farm development
- Ranking of identified areas

### Results

Maps displaying search areas with

- high wind potential
- few or no restrictions
- good infrastructure, grid structure, accessibility and other parameters

### Next steps

- identifying representative locations for wind measurement
- choosing suitable measurement equipment
- setting up a wind measurement campaign
- calculating the predicted energy yield according to international standards (IEC 61400-12, MEASNET, TR6)
- finding investors with a bankable energy yield study

### GEO-NET ...

**... Has an interdisciplinary team of 30 experts and provides consultancy services in the field of wind energy since 1999 for**

- + wind energy
- + environmental meteorology
- + environmental planning

**... Holds an internationally accepted and bankable accreditation according to DIN EN ISO/IEC**

**17025:2005 for**

- + Conduction of wind measurement campaigns
- + Wind potential studies
- + Calculation of Energy yield for wind farms

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... has been working in the wind industry since 6 years. He has a strong experience in wind measurement campaigns and international markets. At GEO-NET he is working as sales and project manager in international markets. He holds a diploma in geography with a specialisation in international markets and international relationship.



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STEUER-NR. 25/204/02568