Sodar for siting and operating of wind energy converters

Fact Sheet

Project Information

SOSOWEC

Grant agreement ID: JOU20424

Project closed

Start date
1 January 1994

End date
31 December 1994

Funded under
Specific research and technological development programme (EEC) in the field of non-nuclear energy, 1990-1994

Total cost
No data

EU contribution
No data

Coordinated by
DEUTSCHES WINDENERGIE - INSTITUT GMBH
Germany

Objective

It is the general aim of the project to introduce the SODAR technique as a tool in the siting and monitoring process for wind turbines. The characterization of sites for large wind turbines in complex terrain and in coastal areas can be achieved by this remote sensing technique measuring wind profiles in the range 20 m to 150 m simultaneously. Acoustic sounding is based on the effect of sound scattering due to density fluctuations in the air. The measuring principle can be briefly described as follows. A short pulse narrow beam acoustic signal is emitted into the atmosphere. The propagating sound undergoes scattering from small scale inhomogeneities in the

acoustic refractive index field, whereas a small fraction of the signal is scatterd back to the earth.

The deliverables of the project will be
- Modification of SODAR systems for site characterization for large wind turbines
- Results from SODAR wind speed measurements at different sites - Results from wake measurements at large wind turbines

SODAR is a remote acoustic sensing technique which can be used for wind speed profile and turbulence measurements. It is a mobile system which is much less cost intensive than high meteorological masts. SODAR is thought to be an appropriate method to yield valuable contributions in the field of wind energy research.

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Fields of science (EuroSciVoc)

engineering and technology > environmental engineering > **remote sensing**

engineering and technology > environmental engineering > energy and fuels > renewable energy > **wind power**

Programme(s)

FP3-JOULE 2 - Specific research and technological development programme (EEC) in the field of non-nuclear energy, 1990-1994

Topic(s)

0302 - Renewable power plants

Call for proposal

Data not available

Funding Scheme

CSC - Cost-sharing contracts

Coordinator

DEUTSCHES WINDENERGIE - INSTITUT GMBH

EU contribution

No data

Total cost

No data

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Total cost

No data

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EU contribution

No data

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Total cost

No data

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EU contribution

No data

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Total cost

No data

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Total cost

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