



23 - 25 March 2004, Berlin

**Scientific Forum of the
Federal Ministry for the
Environment, Nature
Conservation and Nuclear
Safety (BMU) on Offshore
Wind Energy Utilisation**



Bundesministerium
für Umwelt, Naturschutz
und Reaktorsicherheit



Projektträger Jülich
Forschungszentrum Jülich GmbH

dena
Deutsche Energie Agentur

SCIENTIFIC FORUM OF THE FEDERAL MINISTRY FOR THE ENVIRONMENT, NATURE CONSERVATION AND NUCLEAR SAFETY (BMU) ON OFFSHORE WIND ENERGY UTILISATION

For the implementation of international climate protection agreements and European Union objectives, the Federal Republic of Germany has committed itself to substantially reduce its carbon dioxide emissions and to increase the share of renewable energies. The increased use of wind energy is a key element for achieving these goals. On land, wind energy installations already cover over 4% of Germany's electricity consumption. Worldwide, more than 30,000 megawatts of wind capacity are connected to the grid, over a third of this in Germany.

In the mid-term, the utilisation of offshore wind energy holds the largest potential for increasing the share of renewables in Germany's electricity supply. From the point of view of economics policy, the German coastal Länder especially have high expectations of offshore expansion, also with regard to developing exportable technologies. In order to use this growth potential in an environmentally sound and nature-friendly way, in 2002 the German Government adopted the strategy for wind energy utilisation off-shore: through gradual development, around 15% of Germany's electricity needs will be met by offshore wind energy by 2030. By 2010 wind parks will be installed in the North and Baltic Seas with a total capacity of around 3,000 megawatts.

With the construction and operation of the first 4.5 megawatt wind energy turbine on shore and the establishment of the research platform FINO 1 for wind energy utilisation in the North Sea, there has recently been important progress in research and development. In the framework of the German Government's Future Investment Programme, the Federal Environment Ministry supports, i.a. ecological research projects, which take precautions to avoid conflicts between climate protection and protection of marine ecosystems.

The Scientific Forum of the **Federal Environment Ministry** on Offshore Wind Energy Utilisation, jointly organised by the Federal Environment Ministry, the **Research Centre Jülich**, Project Management Organization **PTJ**, and the **German Energy Agency GmbH**, is aimed at presenting an overview of the status of offshore wind energy utilisation in Germany and Europe and the accompanying research to experts and representatives from governmental and political institutions.

Tuesday, 23 March 2004

Development of Offshore Wind Energy Utilisation in Germany – Current Status

Moderation: *Udo Paschedag, Head of Division for Hydropower and Wind Energy, Federal Environment Ministry (BMU)*

10:00 – 10:20 am Strategy of the German Government on the utilisation of offshore wind energy
Jürgen Trittin, Federal Environment Minister (BMU)

10:20 – 10:30 am Energy industry and the societal aspects of offshore wind energy utilisation in the future energy market
Stephan Kohler, Managing Director German Energy Agency (dena)

Discussion

10:50 – 11:00 am Offshore wind energy utilisation – opportunities for Germany and its coastal Länder
Wilfried Voigt, Under-State Secretary, Economics Ministry, Schleswig-Holstein

Discussion

11:00 – 11:10 am Development of offshore wind energy utilisation from the viewpoint of Lower Saxony
Hans-Heinrich Sander, Minister of the Environment, Lower-Saxony

11:10 – 11:20 am Development of offshore wind energy utilisation from the viewpoint of the Land Mecklenburg-Western Pomerania
Prof. Dr. Wolfgang Methling, Minister of the Environment, Mecklenburg-Western Pomerania

11:20 – 11:30 am Development of offshore wind energy utilisation from the viewpoint of the Land Bremen
Jens Eckhoff, Senator for Building and Environment, Freie Hansestadt Bremen

Discussion

12:00 - 1:00 pm **Lunch Break**

Environmental Impact Assessments and Monitoring in the German Exclusive Economic Zone

Moderation: *Prof. Dr. Johann Köppel, Technical University Berlin, Institute for Landscape and Environmental Planning*

- 1:00 – 1:20 pm** Status of the permit procedures and the standard investigation concept of the Federal Maritime and Hydrographic Agency
Christian Dahlke, Federal Maritime and Hydrographic Agency
- 1:20 – 1:40 pm** Spatial aspects of environmental surveys for offshore wind energy planning
Frank Richert, Association for Energy and Ecology mbH (GEO), Offshore Forum Windenergie
- 1:40 – 2:00 pm** Ecological surveys of Status Quo analyses
Prof. Holmer Sordyl, Institute for Applied Ecology, Wirtschaftsverband Windkraftwerke

Discussion

Research results from projects promoted by the German Environment Ministry

Moderation: *Albrecht Tiedemann, German Energy Agency (dena)*

- 2:20 – 2:30 pm** German Environment Ministry's funding of research on offshore wind energy utilisation in the North and Baltic Seas
Dr. Norbert Stump, Research Centre Jülich GmbH, Head of Renewable Energies Section of the Project Management Organization Jülich (PTJ)
- 2:30 – 2:50 pm** BMU research platform FINO 1 – experience gained in the construction and measuring operations
Gundula Fischer, Germanischer Lloyd WindEnergie GmbH
- 2:50 – 3:10 pm** Development of large wind power plants with a rated power of 4.5 MW
Aloys Wobben, Enercon GmbH
- 3:10 – 3:30 pm** Integration of large offshore power capacities in the electrical power supply system
Dr. Martin Hoppe-Kilpper, Institute for Solar Power Supply (ISET)

Discussion

- 3:50 – 4:10 pm** **Coffee Break**

Offshore Development in a European Framework

Moderation: *Rainer Hinrichs-Rahlwes, Director-General, Federal Environment Ministry (BMU)*

4:10 – 4:30 pm Overview of the development of offshore wind energy utilisation in Europe – Results of the EU COD project (Concerted Action for Offshore Wind Energy Development)
Ruud de Bruijne, Novem, Netherlands

4:30 – 4:50 pm Swedish programme to promote wind energy
Anders Björck, Swedish Energy Agency

Discussion

4:50 – 5:10 pm Offshore wind parks in Great Britain and the project Collaborative Offshore Wind Research into the Environment (COWRIE)
Adrian Judd, Cefas, Great Britain

5:00 – 5:20 pm Environmental monitoring in Danish offshore wind parks
Per Hjelmssted Pedersen, ENERGIE E2, Denmark

Discussion

followed by: **Get together and refreshments at the DAZ**

Wednesday, 24 March 2004

**Research results from projects funded by the German Environment Ministry:
Nature Protection and Planning Instruments, Staging and Migratory Birds**

Moderation *Prof. Hartmut Vogtmann, Federal Agency for Nature Conservation (BfN)*

9:00 – 9.20 am Natura 2000 protected areas in the German Exclusive Economic Zone
Jochen Flasbarth, Director-General, Federal Environment Ministry (BMU)

9:20 – 9:40 am Consideration of environmental impacts on the marine environment in the planning and licensing of wind parks in the EEZ
Dr. Wolfgang Peters, Technical University Berlin, Institute for Landscape and Environmental Planning

9:40 – 10:00 am Marine warm-blooded animals in the North and Baltic Seas (research project MINOS) – seabirds and offshore wind energy utilisation: Analysis of potential conflicts
Dr. Stefan Garthe, University of Kiel, Institute for Research and Technology (FTZ Büsum)

10:00 – 10:20 am Ecological Research on Platforms in the North and Baltic Seas (research project: BEOFINO) - migratory birds over the North and Baltic Seas, initial results from research platform FINO 1
Dr. Ommo Hüppop, Institute for Research on Birds, "Vogelwarte Helgoland"

Discussion

10:40 – 11:00 am **Coffee Break**

Research results from projects promoted by the German Environment Ministry: Marine Mammals

Moderation: *Dr. Joachim Kutscher, Research Centre Jülich GmbH (PTJ)*

11:00 – 11:20 am MINOS – Seals in the German North Sea and the Wadden Sea: distribution and behaviour
Prof. Dr. Dieter Adelung, University of Kiel, Leibniz Institute for Marine Sciences

11:20 – 11:50 am MINOS – Research on harbour porpoise populations and their habitat use in the German North and Baltic Seas and acoustic aspects of offshore wind turbines
Dr. Karl-Hermann Kock et.al. Federal Research Centre for Fisheries, Institute for Research and Technology (FTZ Büsum), Deutsches Meeresmuseum Stralsund, Ruhr University Bochum

Discussion

12:00 – 1:00 pm **Lunch Break**

Research results from projects funded by the German Environment Ministry: Foundation Structures and Risk Analyses

Moderation *Jens Peter Molly, director of the German Wind Energy Institute (DEWI)*

1:00 – 1:20 pm Foundations und support structures of deep-water offshore wind energy turbines / GIGAWIND
Prof. Dr. Peter Schaumann, University of Hanover, Institute for Steel Constructions

1:20 – 1:40 pm Ship collisions and offshore wind energy turbines: calculation and evaluation
Florian Biehl, Technical University Hamburg-Harburg, Ship Structural Design and Analysis

1:40 – 2:00 pm Risk assessment and precautionary measures for offshore wind parks
Dr. Ulrich Kremser, Federal Environmental Agency (requested)

Discussion

Research results from projects funded by the German Environment Ministry: Environmental impacts

Moderation: *Prof. Dr. Schöttler, Research Centre Jülich GmbH (PTJ)*

- 2:20 – 2:40 pm** Noise impact during the construction and operating phase of offshore wind installations
Wolf-Jürgen Gerasch, University of Hanover, Curt-Risch Institute
- 2:40 – 3:00 pm** Initial results of benthic studies on platform FINO 1 and results of studies on the impact of magnetic fields on marine organisms (BEOFINO)
Dr. Rainer Knust, Alfred-Wegener-Institut für Meeres- und Polarforschung
- 3:00 – 3:20 pm** Prevention of negative ecological impacts of the grid connection of offshore wind turbines
Dr. Matthias Schreiber, Schreiber Environmental Planning
- Discussion**
- 3:40 – 4:00 pm** Perspectives for the Federal Government's future energy research programme
Christof Stein, Federal Environment Ministry (BMU)

End around 4:30 pm

Thursday, 25 March 2004

- Optional:** Excursion to SKET-MAB/ Enercon GmbH Magdeburg
Visit to the production plant and the 4.5 MW Wind Turbine E 112, in Egelin near Magdeburg.
(fee for participation 16 €)
- Approx 9:00 am** Bus departs Berlin (departure point will be announced at the Forum)
- Approx 5:00 pm** Arrival in Berlin

www.bmu.de
www.erneuerbare-energien.de
www.fz-juelich.de/ptj
www.offshore-wind.de

Organisers:

Federal Ministry for the Environment, Nature Conservation and Nuclear Safety
Research Centre Jülich GmbH, project manager Jülich PTJ
Deutsche Energie-Agentur GmbH

Venue:

Deutsches Architekturzentrum (DAZ), Köpenicker Straße 48/49, 10179 Berlin (Mitte), Germany

Public transport:

S-Bahn: stations Ostbahnhof, Jannowitzbrücke
U-Bahn: Line 8, station Heinrich-Heine-Straße

Registration:

The number of participants is limited. Registrations will be accepted in order of arrival. Please use the enclosed fax form to register. If you have not received a form, you can download it at www.renewable-energies.de.

The deadline for registration is *27 February 2004*.

Participation fee:

The participation fee is *30 euros*. This includes the conference folder, conference documentation, lunch, evening refreshments and drinks. The participation fee must be transferred to the following account by *12 March 2004*:

Recipient: iserundschmidt GmbH, Account No.: 100 214 Bank: Stadtparkasse Bad Honnef, Bank Code 380 512 90. Please specify "Tagungsgebühr" as the use.

We regret that the fee cannot be refunded should you be unable to participate.

Organisation and information

iserundschmidt
Kreativagentur für
PublicRelations GmbH
Hauptstraße 20a
D-53604 Bad Honnef
Tel.: +49 22 24 95 195 0
Fax: +49 22 24 95 195 19
info@iserundschmidt.de
Programme may be changed