



December 15, 2006

To Members of the Executive Committee, IEA RD&D Wind, Task 11

INVITATION TO TOPICAL EXPERT MEETING ON WIND AND WAVE MEASUREMENTS AT OFFSHORE LOCATIONS

Dear Colleague,

At the Executive Committee meeting #58 in Adelaide it was decided to arrange a Topical Expert Meeting on “Wind and Wave Measurements at Offshore Locations”. Date and venue for the meeting is as follows:

20th and 21st of February 2007
Technical University Berlin, Germany

The meeting will begin at 09:30 on Tuesday and end around 17:30 on Wednesday.

The Topical Expert Meeting is organized together with Germanischer Lloyd (GL), operator of the German research platform FINO 1 in the North Sea. The meeting takes place in parallel to the “2nd Scientific Conference on the use of Offshore Wind Energy” by the German Federal Ministry for the Environment.

Would you please forward an invitation to 2-4 people from your country who will be able to discuss the subject in detail and give a short presentation relevant to the topic. An introductory note, to the meeting, has been prepared by Gundula Fischer, see attachment.

Proceedings from the meeting will be distributed soon after the symposium. To assist in this the participants are urged to bring along one copy of the material they want to have included in the documentation.

Details on travel and accommodation can be found on the following pages. Contact persons are: Gundula Fischer (GL, Hamburg), E-mail gundula.fischer@gl-group.com and Leena Morkel (TU Berlin), E-mail leena.morkel@tu-berlin.de . Please inform Gundula Fischer and me of the names of the participants from your country as soon as possible.

Best regards

Sven-Erik Thor
E-mail: sven-erik.thor@vattenfall.com

Attachments:

1. IEA Background and meeting format
2. Practical arrangements
3. Introductory note

IEA BACKGROUND AND MEETING FORMAT

The objective of IEA RD&D Wind Task 11 is to promote wind turbine technology through cooperative activities and information exchange on RD&D topics of common interest. The Topical Expert Meetings and Joint Action Symposia are of the workshop type, where information is presented / discussed freely in an open manner. See the following web page for more details: http://www.ieawind.org/Task_11/Task_11_HomePage.html and click on “General description and meeting format”

More information can be obtained from:

IEA RD&D Wind general www.ieawind.org

Annex XI information http://www.ieawind.org/summary_page_xi.html

IEA official home page <http://www.iea.org/>

PRACTICAL ARRANGEMENTS

Date and venue

Date: February 20 – 21, 2007

Meeting place: Technical University Berlin
Main Building
Strasse des 17. Juni 135
10623 Berlin
Germany
Phone: +49/30/314-0
Fax: +49/30/314-23222

Meeting room: Will be announced later

At Tuesday evening a Conference Reception will be arranged.

Hotel accommodation

A block reservation of rooms will be made by the TU Berlin soon.

Further information will be available on the homepage of the “2nd Scientific Conference on the use of Offshore Wind Energy”:

<http://www.tu-berlin.de/~lbp/offshoredays.html>

Travel Instructions

If you need to get to the main campus of the TU Berlin there is convenient access by bus, or by urban and underground railway:

- U-Bahn (underground): Ernst Reuter Platz station, Line U2 (red Line)
- Bus: Lines M45, 245, and X9 (from Tegel Airport) all stop at Ernst Reuter Platz, Lines M45 and 245 stop at Steinplatz
- S-Bahn: Zoologischer Garten station, Lines S5, S7, S75, S9, Tiergarten station, Lines S5, S7, S75, S9

How to get the main campus from outside Berlin

By road

Coming from the north - Hamburg/Rostock (A24 autobahn):

At the motorway junction Oranienburg take the A111 to Berlin Zentrum, and at the motorway junction Charlottenburg turn onto the A 100. Leave at the Kaiserdamm exit, and turn left at the end of the slip road to turn onto the Kaiserdamm boulevard (later Bismarckstrasse). Continue over the traffic island into Strasse des 17 Juni, and the Main Building of the TU Berlin is on your right after 100 yards.

From Hannover (A2) and Leipzig, Nuremberg:

Take the motorway A10 (Berlin Ring) to the Drewitz motorway junction, then the AVUS (A 115) to Berlin-Zentrum. At the Funkturm follow the signs to Wedding, but then take the first exit to Kaiserdamm. Turn left at the end of the slip road to turn onto the Kaiserdamm boulevard (later Bismarckstrasse). Continue over the traffic island into Strasse des 17 Juni, and the Main Building of the TU Berlin is on your right after 100 yards.

Arriving by rail

At Central station take a regional train (RE1, RE2, RE7, RB10, RB14) or S-Bahn (S5, S7, S75, S9) to Zoologischer Garten. The main campus is only a five minute walk from Zoologischer Garten railway station. You can also take a Bus (M45, 245 oder X9) or the U-Bahn (Line 2) to Ernst Reuter Platz. (Or you can stop a taxi and take a fixed rate short ride from Zoologischer Garten).

Arriving by plane (Berlin has three airports)

Tegel:

The airport is very close to the Main Campus. Take the airport shuttle bus (X9) to Ernst-Reuter Platz (15 minutes) or take a taxi (10 minutes).

Schönefeld:

This is across the city, so a taxi is expensive unless you can share the costs. Take a 171 bus to S-Bahnhof Schönefeld, then take a regional train (RE7, destination Dessau) or S-Bahn (Line 9, destination Westkreuz) to Zoologischer Garten. From there you can walk down Hardenbergstrasse (five minutes), take a bus (M45, 245, or X9), or take the U-Bahn (Line 2,

INTRODUCTORY NOTE

IEA TOPICAL EXPERT MEETING 52 & FINO WORKSHOP

ON

WIND AND WAVE MEASUREMENTS AT OFFSHORE LOCATIONS

to be held at Technical University Berlin, February 20-21, 2007

Gundula Fischer, Germanischer Lloyd

THE TOPIC

Electricity from renewable energy sources will make an important contribution to tomorrow's energy policy. In the context of climate protection and the need for a comprehensive change in energy production, wind energy plays an important role. Especially offshore wind (located in the territorial waters and the Exclusive Economic Zones) has an enormous potential to contribute substantially to European and global climate protection.

According to estimations of the European Wind Energy Association (EWEA) 10,000 MW offshore wind power will already be installed within this decade, until 2020 it will be 70,000 MW. At this stage more than 300 wind turbines with a total of 600 MW are installed off the coasts of Denmark, Sweden, UK and Ireland.

Several measuring stations are either planned or already operating in the North and Baltic Seas. They deliver all sorts of technical and environmental data that is required for the planning and approval of offshore wind farms. For manufacturers of wind turbines and foundations, the findings will lead to designs which are better adapted to the offshore conditions. On the basis of measured wind data, banks and investors will make their economic assessments. Institutes, standardization bodies and certification organizations will use the results to cross-check and validate the requirements derived from other fields (onshore wind energy and offshore technology). After all, through the increase in knowledge in the field of offshore wind energy, it will be possible to push forward the development and generation of wind energy at sea.

One of these measuring stations is the German research platform FINO 1 in the North Sea. It was installed in 2003 and has delivered comprehensive series of data since then. One of the main objectives of the FINO project is to improve the available knowledge on the meteorological and oceanographic conditions at sea. Some results are expected to be presented and discussed within this Topical Expert Meeting (TEM) meeting and workshop.

Further points to be presented and discussed are:

- Further research platforms (FINO 2, FINO 3) and measuring stations (Metmast Amrumbank, etc.)
- Experience and results from offshore wind and wave measurements
- New measuring systems (such as LiDAR)
- Analysis of metocean data
- Related research projects
- Research needs
- others

As described the TEM meeting and workshop will concentrate mainly on measurements of winds and waves at offshore locations and R&D in relation to this, the experience gained so far and an outlook towards future measurements. In parallel to this event the “2nd Scientific Conference on the Use of Offshore Wind Energy” will take place, focussing on the environmental aspects of the use of offshore wind energy. However the contents of the two events are closely connected, so that the opening session (09:30 – 12:30 h) of the 2nd Scientific Conference will be held with both conference and workshop/TEM meeting participants.

OBJECTIVES OF THE MEETING

The objective is to report and discuss progress of R&D on all of the above mentioned topics. Since this area of research is relatively new (for offshore wind turbines), many challenges and solutions are still to be discussed and tested. It is expected that the expert meeting will result in new and challenging directions in R&D due to the discussions between experts of different origin.

EXPECTED OUTCOMES

Compilation of the most recent information on the topic.

Input to define IEA Wind R&D's future possible role in this topic.

TENTATIVE AGENDA

Participants in the meeting are expected to discuss the subject in detail and give a short presentation relevant to the topic. Presentation length is usually around 15 minutes, depending on the number of presentations in the meeting.

The tentative agenda covers the following items:

1. Introduction by host
2. Introduction by Operating Agent, Recognition of Participants
3. Collect titles of presentations and compile presentation order
4. Presentation of Introductory Note
5. Individual presentations
6. Discussion
7. Summary of meeting

INTENDED AUDIENCE

The national members will invite potential participants from research institutions, utilities, manufacturers and any other organizations willing to participate in the meeting by means of presenting proposals, studies, achievements, lessons learned, and others. This means that the symposia will be wide open, taking into account that it is the first time that this subject will be discussed within the framework of the IEA Wind RD&D.

Further participants will be German and international parties involved in wind and wave measurements at offshore locations, such as members of the FINO projects and other offshore measuring stations.