



KUNGL. TEKNISKA HÖGSKOLAN
Royal Institute of Technology

Second International Workshop on Transmission Networks for Offshore Wind Farms

March 29 – 30, 2001

Royal Institute of Technology, Stockholm, Sweden

Preliminary Program

(Version 1.8, March 4, 2001)

Thursday 29 March 2001

8:00-9:00 Registration

9:00 - 9:10 Welcome and Introduction, Thomas Ackermann, KTH

9:10-10:45 Session 1: World-Wide Offshore Resources and Potential

9:10-10:10 Presentations:

- **Ralf Leutz, A. Akisawa, T. Kashiwagi/ Tokyo University of Agriculture and Technology & Thomas Ackermann/ Royal Institute of Technology & A. Suzuki/ UNESCO:** *World-Wide Offshore Wind Energy Potential;*
- **Kevin J. Smith/ Global Energy Concepts & George Hagerman/ Center for Energy and the Global Environment, Virginia Tech Alexandria Research Institute (USA):** *The Potential for Offshore Wind Development in the United States;*
- **James Manwell/ University of Massachusetts (USA):** *Status of Offshore Wind Energy Development in the United States;*

10:10-10:45 Discussions

10:45-11:00 Coffee break

11:00-13:00 Session 2: Offshore Experiences and Projects

11:00-12:40 Presentations:

- **Paul Gardner/ Garrad Hassan (UK):** *Introduction to Offshore Wind;*
- **Thomas Stalin/ Enron Wind (Sweden):** *Utgrunden Offshore Wind Energy Project, Sweden;*
- **Ingo de Buhr/ Prokon Nord (Germany):** *Borkum West Offshore Wind Park Project;*
- **Peter Clibbon/ NEG Micon (UK) & Andreas Wickman/ Vindkompaniet (Sweden):** *Offshore Project Sweden*
- **Göran Loman/ Eurowind (Sweden):** *Offshore Project Lillgrund*

12:40-13:15 Discussions

13:15-14:15 Lunch

14:15-17:00 Session 3: DC Solutions for Offshore Wind Projects

14.15-14.55 Presentations:

- **K. Burges, E.J. van Zuylen/ Ecofys & J. Morren, S.W.H. de Haan/ Delft University of Technology (Netherlands):** *DC Transmission for Offshore Wind Farms – Concepts and Components;*
- **Jacques Courault/ Alstom (France):** *Energy Collection on Large Offshore Wind Farms – DC Applications (Preliminary title);*

14:55-15:15 Discussions

15:15-15:30 Coffee break

15.30-16.10 Presentations:

- **Anna-Karin Skytt, Per Holmberg, Lars-Erik Juhlin/ ABB Power Systems (Sweden):** *HVDC Light for Connection of Wind Farms*
- **Fredrik Owman/ ABB Distribution (Sweden):** *WINDFORMER - An Integrated System Solution for Medium and Large Scale Wind Farms;*

16:10-17:00 Discussions

19:30 Dinner

Friday 30 March 2001

08:30-10:30 Session 4: Monitoring and Prediction

8:30-9.50 Presentations:

- **Teolan Tomson/ Estonian Energy Research Institute:** *Wind Velocity and Power Dynamics in the Coastal Zone of Estonia;*
- **Gunnar Böhm/ GEO (Germany):** *Improved Prediction of Wind Power Production;*
- **Kurt Rohrig/ ISET (Germany):** *Online-Supervision and Prediction of 2,700 MW Wind Power;*
- **Brent Brobak, Lawrence Jones/ ALSTOM ESCA (USA):** *SCADA Systems for Wind Farms (Preliminary title);*

9.50-10.30 Discussions

10:30-10:50 Coffee break

10:50-13:00 Session 5: Network Integration - I

10:50-12.10 Presentations:

- **G. J. Gerdes/ Deutsche WindGuard & F. Santjer, L.-H. Sobek/ DEWI (Germany):** *Influence of the Electrical Design of Offshore Wind Farms and of Transmission Lines on Efficiency;*
- **Peter Christiansen, Jesper Runge Kristoffersen, Ole Holmstrøm (Tech-Wise) & Henning Palmelund, Hans Abildgaard (Eltra), (Denmark):** *New Requirements for Grid Connection of Wind Farms to the Transmission Grid in Denmark;*
- **Peter Borre Eriksen, Jens Pedersen, Bjarne Fogh Schougaard/ ELTRA (Denmark):** *Large-Scale Integration of Wind Power into the Eltra System;*
- **Siegfried Heier/ ISET Kassel (Germany):** *Grid Control with Wind Energy Converters;*

12:10-13:00 Discussions

13:00-14:00 Lunch

14:00-15:10 Session 6: AC Solutions for Offshore Wind Projects

14.00-14.40 Presentations:

- **Thorsten Schütte, Bo Gustavsson, Mikael Ström/ Balfour Beatty Rail (Sweden):** *The Use of Low Frequency AC for Offshore Wind Power;*
- **Werner Siepmann/ Alstom (Germany):** *Use of AC Transmission for Offshore Wind Farms (Preliminary title);*

14:40-15:10 Discussions

15:10-15:30 Coffee break

15:30-16:30 Session 7: Network Integration - II

15.30-16.30 Presentations:

- **Vladislav Akhmatov, Hans Knudsen/ NESA (Denmark) & Arne Hejde Nielsen, J Kaas Pedersen/ ELTEK TUD & Niels Kjolstad Poulsen/ IMM TUD:** *Modelling and Transient Stability of Wind Farms;*
- **J. G. Slootweg, S.W.H. de Haan, H. Polinder, W. L. Kling/ Delft University of Technology (Netherlands):** *Voltage Control Capabilities of Various Wind Turbine Concepts;*
- **Toshihisa Funabashi, Takayuki Tanabe/ Meidensha Corporation (Japan):** *A Study on Re-closing a Power Island with Wind Turbine Generators;*

16:30-17:10 Discussions

17:10 –17.30 Final Discussions

17:30-17.40 Closing Remarks, Lawrence Jones, ALSTOM ESCA (USA)