

PROCEEDINGS

9th International Workshop on Large-Scale Integration of Wind Power into Power Systems as well as on Transmission Networks for Offshore Wind Power Plants

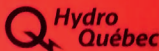


18 - 19 October 2010
Québec City, Québec, Canada

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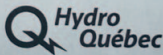
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9th International Workshop on Large-Scale Integration
of Wind Power into Power Systems
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Edited by Uta Betancourt / Thomas Ackermann

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Welcome to the 9th International Workshop on Large-Scale Integration of Wind Power into Power Systems as well as on Transmission Networks for Offshore Wind Power Plants

It is a great pleasure to welcome you to the 9th *International Workshop on Large-Scale Integration of Wind Power into Power Systems as well as on Transmission Networks for Offshore Wind Power Plants* in Québec City, Québec, Canada.

This year, the workshop is held for the first time outside of Europe, in Québec City, Québec, Canada. Nowadays, North America faces similar challenges in integrating increasing shares of wind power into the power system as Europe, hence it became an obvious choice to move the event also across the Atlantic. The organization of the event was not without challenges, but I really hope that the effort of setting up this workshop will strengthen the cooperation between North America and Europe in the area of grid integration of wind power and will help to facilitate the discussion on both sides of the Atlantic.

The purpose of this workshop is to get researchers, economists and practicing engineers from different fields relating to wind power and transmission systems to exchange their knowledge and discuss their experience in the area of large-scale integration of wind power into power systems and transmission networks for offshore wind farms. This was already the vision of the first workshop, held in the year 2000 in Stockholm, Sweden. Nowadays, the topics are of world-wide interest – and therefore experts in wind energy technology, power transmission technology power systems and market operation from more than 25 countries will meet and discuss new insights. The emphasis of this workshop is again on both theoretical discussion and practical applications.

In addition to the workshop programme, this year's Windintegration Workshop is embedded into a number of related events such as the regular *UWIG Fall Technical Workshop* (October 14-15, 2010), the *Fourth Workshop on Best Practice in the Use of Short-term Forecasting of Wind Power* (October 16th, 2010), *Tutorials on Wind Turbine Modeling* (October 16th, 2010) and a field trip (October 16th, 2010).

This workshop would not be possible without our sponsors and we like to thank them for their support. Our Gigasponsors this year are: **Hydro-Québec** (Canada) as well as the wind turbine manufacturers **Repower** (Germany) and **Vestas** (Denmark). In addition, the workshop was sponsored by **Siemens Wind** (Denmark), the engineering company **ALSTOM Grid**, the consulting and software company **DIGSILENT** (Germany), the **ISO New England**, the Utility Wind Integration Group **UWIG** (USA) as well as **Woodward SEG** (USA/Germany). Furthermore, we would like to thank the Canada wide research network **WESNet** for its general support.

We would also like to thank all those who supported the organizers of this workshop: Uta Betancourt and Jörg Braun (all energynautics, Germany), Nathalie Raymond and André Robitaille (both Hydro-Québec, Canada) and the International Advisory Committee.

Have an inspiring stay in Québec City and a fruitful workshop!

Thomas Ackermann
energynautics

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H. Zhang, D. Wong, R. Boulton, E. Torres, W. Kwasnicki (AltaLink, Canada), D. Shield (Alberta Electric System Operator, Canada)

WT Modelling with DFIG for Transient Analysis Focusing in UMEC Model of Power Transformer

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Generic Solutions for Substation Automation in Wind Energy Applications

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Adaptation of 12-bus System for Wind Power Integration Studies

A. Adamczyk, R. Teodorescu (Aalborg University, Denmark), P. Rodriguez (University of Catalonia, Spain)

Transient Stability and Control of Wind Turbine Generation Based on Hamiltonian Surface Shaping and Power Flow Control

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Workshop Participants

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Workshop Information

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