

Winterwind 2015 program

MONDAY 2 FEBRUARY

09.00–11.00

Starting location Hotel Nordkalotten, Luleå
Study visit to SSAB steel mill or SKF
Morning arrivals



11.00–12.30

Lunch at Hotel Nordkalotten The bus departs to Markbygden as soon as lunch is complete, at the latest 12.30 p.m.

12.30–17.00

Study visit to Markbygden wind farm

17.00–18.00

Arrival to Pite Havsbad

18.00–19.30

Winterwind registration
Study visit to Piteå Concert Hall Sponsor: Foyen Law Firm

TUESDAY 3 FEBRUARY

08.00–11.00

Registration



09.00–10.30 **SESSION 1**

TROMBONEN

Study visit presentations SKF, SSAB Steel mill, Markbygden wind farm
Chairs: Staffan Engström (Ågir konsult), Jakob Van den Broecke (Delft University of Technology)

10.30–11.00 **BREAK**

11.00–12.30 **SESSION 2 – GRAND OPENING**

KONGRESSHALLEN

Inauguration and keynote presentations

Chairs: Johanna Olesen (Chairman of the board, Swedish Windpower Association), Göran Ronsten (WindREN)

- 01. R&D as a prerequisite for successfully utilising the cold climate wind energy market opportunities** — Jos Beurskens, SET Analysis, NL
- 02. A proposed standardised blade inspection method** — Orla Sørensen, Blade Care Consulting, DK
- 03. With a little help from my friends** — Alberto Méndez Rebollo, Head of Vattenfall Wind Power Nordic, SE

12.30 – 14.00 **LUNCH**

13.30 – 14.00 **POSTER SESSION**

- 01. Combitech - when it comes to monitoring** — Björn Ollars, Combitech AB, SE
- 02. Lidar as ice detector** — Timo Karlsson, VTT – Technical Research Centre of Finland, FI
- 03. Efficiency and influence of heating device on wind turbine blades** — Jan-Olov Aidanpää, Luleå University of Technology, SE

14.00–15.30 **SESSION 3**

KONGRESSHALLEN
R&D programs

Chairs: Angelica Pettersson (Swedish Energy Agency) and Sven-Erik Thor (Wind for Energy)

- **De-icing of windpower blades using microwaves and CNTcoatings**
Joachim Karthäuser, Re-Turn AS, NO
- **Airborne de-icing solution for wind turbines**
Hans Gedda, H Gedda Consulting, SE
- **Vindforsk IV - update of ongoing projects**
Göran Dalén, Vindforsk, SE
- **Ultrasonic guided waves approach for ice detection on wind turbines**
Siavash Shoja, Chalmers University of Technology, SE

TROMBONEN
Energy production

Chairs: Richard Hann (Richard Hann Consulting), Kristina Lindgren (OX2)

- **Quantification of energy losses caused by blade icing and the development of an energy loss climatology using SCADA data from Scandinavian wind farms**
Staffan Lindahl, DNV GL Energy, UK
- **Estimating energy losses caused by blade icing from preconstruction wind data and DNV GL Energy's experience analysing scada data from Scandinavian wind farms**
Till Beckford, DNV GL Energy, UK
- **Power production losses due to icing and their relation to icing conditions and operation mode**
Silke Dierer, Meteotest, CH

VIOLINEN
Finance, risk

Chairs: Rebecka Klintström (Meventus) and Matthew Wadham Gagnon (TechnoCentre éolien)

- **Challenges and possibilities of handling more windpower in the power system – conclusions from Denmark**
Jens Tang, Neas Energy, DK
- **Challenges with financing windpower in cold climate**
Paul Stormoen, OX2, SE
- **Insurability of cold weather risk and damages**
Anders Orebrandt, Marsh, SE

15.30–16.00 **POSTER SESSION**

04. Detection of different phases of water on a wind turbine blade using NIR camera

— Lavan Kumar Eppanapelli, Luleå university of Technology, SE

05. Experiences from blade-mounted ice detector development

— Tatu Muukkonen, Labkotec Oy, FI

06. Breaking the ice using passive anti-icing coatings

— Lessons learned from the Nordic TopNANO research project

— Agne Swerin, SP Technical Research Institute of Sweden, SE

16.00–17.30 **SESSION 4**

KONGRESSHALLEN
De-/anti-icing

Chairs: René Cattin (Meteotest), Helena Wickman (Meventus)

- **1,500 years of Icing on wind turbines – a long term study**
Dietmar Tilch, Bosch Rexroth Monitoring Systems GmbH, DE
- **Icing monitoring for R&D projects**
Dominic Bolduc, TechnoCentre Éolien (TCE), CA
- **On the variability of temperature and icing status over the blades of a wind turbine**
Michael Moser, eologix, AT
- **Experiences with different ice-detections**
Kimmo Palmu, WestWind, FI

TROMBONEN
Noise

Chairs: Jos Beurskens (SET Analysis), Jennie Persson Söderman (Uppsala University)

- **Benchmark of ice noise modelling**
Max Muckermann, E.ON Climate & Renewables, DE
- **Long-term online sound monitoring in wind parks**
Antti R. Leskinen, APL Systems Ltd, FI
- **Simulating iced wind turbine noise**
Richard Hann,
Richard Hann Consulting, DE

VIOLINEN
Resource

Chairs: Øyvind Byrkjedal (Kjeller Vindteknikk), Beatrice Brailey (DNV GL Energy)

- **Case study of Lidar measurements in southeast Finland – Lidar performance and wind conditions in cold climate and complex terrain**
Katja Hynynen, Lappeenranta University of Technology (LUT), FI
- **Wind tunnel ice growth on a blade profile and representative cylinders**
Neil Davis, DTU Wind Energy, DK
- **Towards an increased understanding of icing conditions within a wind farm through visualisation of SCADA data in a topographic context**
Magnus Baltscheffsky, WeatherTech Scandinavia, SE

17.30–19.00 **MINGLE IN EXHIBITION HALL**

Sponsored by Svenska Vindkraftkonsulterna, Advise Risk & Försäkring and Neas Energy

WEDNESDAY 4 FEB

08.30–10.00 SESSION 5



KONGRESSHALLEN Icewind

Chairs: Niels-Erik Clausen (DTU), Benjamin Martinez (Vattenfall)

- **Investigation of nacelle temperature measurements**
Neil Davis, DTU Wind Energy, DK
- **Analysis of spatial and temporal variability in icing conditions and production losses due to icing using a new long-term icing climate database**
Stefan Söderberg, WeatherTech Scandinavia, SE
- **Validation of icing and windpower forecasts at cold climate sites**
Øyvind Byrkjedal, Kjeller Vindteknikk, NO
- **On the influences of icing on regional forecast errors**
Jari Miettinen, VTT - Technical Research Centre of Finland, FI

TROMBONEN Health, safety and environment

Chairs: Dag Haaheim (Statkraft), Saara Kaija (VTT)

- **Methods for evaluating risk caused by ice throw from wind turbines**
Helge Ausland Refsum, Lloyd's Register Consulting, NO
- **Influence of wind conditions under icing conditions on the result of a risk assessment**
Felix Storck, TÜV NORD SysTec GmbH & Ko. KG, DE
- **Operation of wind parks under icing conditions — a balancing act between production and safety**
René Cattin, Meteotest, CH

VIOLINEN Wind potential & de-icing performance

Chairs: Jan Olov Aidanpää (LTU), Till Beckford (DNV GL Energy)

- **High resolution forecast maps of production loss due to icing**
Esbjörn Olsson, SMHI, SE
- **Performance assessment of ice protection systems for wind turbines**
Esa Peltola, VTT Technical Research Centre of Finland, FI
- **Windpower Icing Atlas (WiceAtlas) — icing map of the world**
Simo Rissanen, VTT Technical Research Centre of Finland, FI

10.00–10.30 POSTER SESSION

- 07. Influence of ice accretion on the noise generated by an airfoil section** — Robert Szasz, Lund University, SE
- 08. Assessment of ice throw and ice fall risks nearby wind energy installations** — Michaela Kaposvari, TÜV SÜD Industrie Service GmbH, DE
- 09. Three-dimensional numerical simulation of a model wind turbine, Narges Tabatabaei** — Luleå University of Technology, SE

10.30–12.00 SESSION 6

KONGRESSHALLEN Forecasting

Chairs: Måns Håkansson (Statkraft), Elina Heed (Foreca)

- **Validation of new model for short-term forecasting of turbine icing**
Jonathan Collins, DNV GL Energy, GB
- **Probabilistic forecasting of icing and production losses**
Jennie Persson Söderman, Uppsala University, SE
- **A generic model for ice growth and ice decrease process**
Saara Kaija, VTT, FI
- **Measuring air liquid water content by shadowgraph image analysis for wind turbine icing detection**
Staffan Rydholm, Mid Sweden University, SE

TROMBONEN IEA TASK 19 Cold climate workshop

Chairs: Carla Ribeiro (DNV GL Energy), Ville Lehtomäki (VTT)

- **Ice throw guidelines**
Matthew Wadham-Gagnon, TechnoCentre Žolien, CA
- **IEA Task 19: Standardized method to evaluate production losses due to icing using only SCADA data**
Ville Lehtomäki, VTT Technical Research Centre of Finland, FI

VIOLINEN Inspection and repair

Chairs: Brian Domino (OX2), Jenny Longworth (Vattenfall)

- **Why performing climatic chamber testing on wind turbine applications?**
Pieter Jan Jordaens, SIRRIS - OWI-Lab, BE
- **Blade heat system repair**
Greger Nilsson, Blade Solutions, SE
- **New approaches on rotor blade repairs in winter conditions**
Ville Karkkolainen, Bladefence, FI

12.00–13.30 LUNCH

13.30–15.00

SESSION 7 – MANUFACTURERS' VIEW – ASK & SHARE

KONGRESSHALLEN

Plenary session

Chairs: Göran Dalén (Dalén Power AB), Åsa Elmqvist (Arwen konsult)

— **Siemens turbines in cold climate**

Bo Birkemose, Siemens Windpower, DK

— **Anti-icing system on Nordex wind turbines — lightning protection and operating experience**

Jochen Birkemeyer, Nordex Energy GmbH, DE

— **ENERCON rotor blade heating system (RBHS) and icing measurement campaign**

Alexander Winter, Enercon GmbH, DE

— **GAMESA solutions for cold climate conditions**

Erik Åslund, GAMESA Wind, SE

— **Vestas cold climate offerings**

Brian Daugbjerg Nielsen, Vestas Wind Systems, DK

FINAL CONCLUSIONS: SVEN-ERIK THOR (WIND FOR ENERGY), JOS BEURSKENS (SET ANALYSIS)