

Chairs	Subject	Title	Authors/Presenter	Affiliation	Country and co-op
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Registration and coffee 09.00 – 10.00

10.00	Jan-Åke Jacobson	Welcome to Norrköping	Working closely with the elements	Tord Kvick	SMHI	SE
10.15		Conference background	Why cold climate sites will matter	Jan-Åke Jacobson	SVIF	SE
10.30		Policy statement	Cold climate in a global perspective	Jos Beurskens	EWEA, TPWind	EU, NL
11.00		Mapping of icing	Regional mapping of icing conditions from meso-scale model data	Øyvind Byrkjedal, Knut Harstveit and Erik Berge	Kjeller Vindteknikk	NO, COST
11.30		Icing model development	On the use of the Weather Research and Forecasting (WRF) Atmospheric Model to Predict Explicitly the Potential for Icing	Gregory Thompson	NCAR	US

Lunch 12.00 – 13.00

13.10	Lars Tallhaug and Stefan Skarp	Research overview	IEA WIND RD&D Task 19 - Wind Energy in Cold Climates	Esa Peltola et al	VTT	FI, IEA
13.30		Developer data	The Effects of Rime Ice Conditions on Wind Development in Alaska and Discussion of Development of a Rime Ice Location Indicator Tool	Doug Vaught et al	V3 Energy	US
14.00		Developer data	Understanding Icing Losses and the Risk of Ice Throw at Operating Wind Farms	Duncan T., LeBlanc M., Morgan C., Landberg L.	Garrad Hassan and Partners	CA, UK

Exhibition and poster session 14.30 – 15.30


15.30	Gregory Thompson and Joakim Langner	Anti-icing	Electro Thermal Wind Turbine Ice Protection System	Erik Pederson and Hans Gedda	Kelly Aerospace and MW-Innovation	US, SE
16.00		Anti-icing	Icephobic coating for prevention of secondary icing	Shigeo Kimura et al	Kanagawa Institute of Technology	JP, COST
16.30		Developer data	Ice data from Sveg processed by SMHI	Mikael Magnusson and Esbjörn Olsson	SMHI	SE, COST
16.45		Winter wind forecast capabilities at SMHI	Ulf Andrae and Per Undén	SMHI	SE	

Visit posters and exhibition, Visit to SMHI 17.00 – 18.30

Dinner 19.30 – 01.00



Wednesday, December 10

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08.30	You don't want to miss this event. Please all be seated by 08.35. The doors will be closed by 08.37 and not opened until 08.55					
						
09.00	Ian Baring-Gould and Matthias Rapp	Developer	An experienced wind energy developer's view on cold climate issues	Staffan Niklasson	Vindkompaniet SE	
09.30		Manufacturer	Challenge Cold Climate: Different requirements for dry and icing climate	Rüdiger Gawrisch	REpower DE	
09.50		Production forecasting	Variability of wind energy outputs in relation with the weather and climate impacts in Bulgaria	Dimitar Nikolov, Petar Ivanov, Emil Moraliiski	National Institute of Meteorology and Hydrology – Bulgarian Academy of Sciences	BG, COST
10.10			Wind power forecast accuracy under icing conditions	Michael Durstewitz	ISET	DE, IEA

Break Exhibition and poster session 10.30 – 11.00

11.00	Lars Landberg and Erik Pederson	Wind-diesel	Wind-diesel power systems in cold climates: a review of the technology, performance, and market	Ian Baring-Gould and Martina Dabo	NREL & Alaska Energy Authority	US, Antarctica, IEA
11.30		Small turbine	Selecting a Small Wind Turbine for the South African Antarctic Research Base, SANAE IV	Johan Stander	Stellenbosch University	ZA (South Africa)
11.50		Research overview	COST-727 Action: Icing on structures	Alain Heimo	Meteotest	CH, COST
12.10			Icing and wind turbines – Swiss activities	René Cattin, Silke Dierler et al	Meteotest	CH, COST

Lunch 12.30 – 13.30

13.30	Sven-Erik Thor	Rotor Monitoring System	Rotor Monitoring System including Ice Detection for Maximising Turbine Performance	Kieran Campbell	Insensys	UK
13.45		Ice detection	Monitoring icing events	Per-Erik Persson, Patrik Jonsson, Lars Sahlin	Saab Security	SE, COST
14.00		Research overview	Cold Climate Issues and Related R&D Regarding Wind Energy in Canada"	Antoine Lacroix	Natural Resources Canada	CA, IEA

Short break 14.20 – 14.30

14.30	Anders Björck	Manufacturers, short presentations and panel discussion Panel discussion: REpower, Enercon, Nordex, WinWinD, Kenersys and ScanWind (+ hopefully also Vestas, Siemens, Fuhrländer, Gamesa, Suzlon, GE, Harakosan, LM and Euros)			DE, SE, FI
15.45		Concluding remarks	Where do we go from here?	Jos Beurskens	EWEA, TPWind

Conference ends 16.00



Poster	Subject	Title	Authors	Affiliation	Country
1	Ice detection	Icing on a wind power plant in Härnösand northern Sweden. Power losses and other hazards due to icing measured.	Rolf Westerlund	HoloOptics	SE
2	Icing model verification	Comparison of cloud water content, and meteorological parameters at Pujio tower, Kuopio, Finland	Knut Harstveit and Jarkko Hirvonen	Kjeller Vindteknikk and FMI	NO ,FI, COST
3	Icing model development	Estimating icing using 'higher-order turbulence closure' models	Hans Bergström and Stefan Söderberg	Uppsala University and WeatherTech Scandinavia	SE
4	Mapping of icing	Spatial structure of synoptic icing observations in central Europe and their applicability	Jiri Hosek	Institute of Atmospheric Physics, Prague	CZ, COST
5	Mapping of icing	Simulation of the January 2008 icing event in central Europe	Bjørn Egil Kringelbotn Nygaard	Norwegian Meteorological Institute	NO, COST
6	Blade characteristics and icing	The relationship between chord length and rime icing on wind turbines	Mathew C. Homola, Tomas Wallenius, Lasse Makkonen et al	Narvik University College and VTT	NO, FI, IEA, COST
7	De-icing	De-icing of wings – what is possible and what is not –	Lars Bååth	Halmstad University	SE
8	Production losses	A corrector for wind power estimation and its usage in estimating icing losses	Mathew C. Homola et al	Narvik University College and VTT	NO, COST
9	Wind energy research policy proposal	Wind Energy in Cold Climates as a Bridge Between Onshore and Offshore	Göran Ronsten	WindREN	SE, COST, IEA
10	Research overview	Pioneering arctic wind power - 15 years ahead	Timo Laakso and Esa Peltola	Pöyry and VTT	FI, IEA
11	Research overview	Wind Power Development in the Swiss alps, 10 years of experiences, lessons learned and new projects	Robert Horbaty	ENCO Energie-Consulting AG and Suisse Eole	CH, IEA
12	History, present and future	From EU-"Icing of wind turbines" project to COST 727 and beyond	Bengt Tammelin	FMI	FI, COST
13	WT and Overhead Tower Lines	Interaction between wind turbines and overhead tower lines in iced and non-iced conditions	Brian Wareing	Brian Wareing.Tech Ltd	UK, COST
14	Wind resource estimation	The new Finnish wind atlas	Bengt Tammelin	FMI	FI, COST

