MONDAY FEB 3

	OUTSIDE SESSION	SOLSKOG
9:00		**Swedish Windpower Association and RISE** – Workshop on blockage
10:00	**Field Trip**	
11:00		
12:00		
13:00		**Task 19:** Performance warranty guidelines for wind turbines in icing climates workshop at Winterwind 2020
14:00		
15:00		
16:00		
17:00		
18:00	**Registration and Poster Setup**	
19:00		**Introduction to Winterwind 2020** Program and Modern networking
20:00		

TUESDAY FEB 4

	ARENAN	SOLSKOG	SNÖLJUS
8:00	**Registration, Exhibition and networking**		
9:00	**1 Opening session – Welcome!** Moderators: Jenette Lindeblad and Fredrik Lindahl, Swedish Windpower Association **Open Innovation Contest**		
10:00	**Break and networking**		
11:00	**2 Modelling** Chairs: Daniela Roeper, René Cattin	**3 Forecasting** Chairs: Sandra Grauers, Sven-Erik Thor	**4 Icing losses and ice throw** Chairs: Sarah Barber, Anders Wickström
12:00			
12:30	**Lunch and networking**		
13:00			
14:00	**5 Modelling and forecasting** Chairs: Ifrah Mussa, Johan Revstedt	**6 Uncertainties – development, life cycle, end-of-life** Chairs: Helena Wickman, Hamid Sarlak	**7 Testing and innovation** Chairs: Åsa Abel, Rolv Erlend Bredesen
15:00			
15:30	**Break and networking**		
16:00			
16:30	**8 Structural monitoring** Chairs: Tanja Tränkle, Till Beckford	**9 Ice detection** Chairs: Frida Godet, Øyvind Byrkjedal	**10 Ice Protection Systems I** Chairs: Jenny Longworth, Finn Daugaard Madsen
17:00			
18:00 – 19:30	**Mingle, poster presentations in Exhibition Hall and networking**		
19:30 – 24:00	**Dinner and entertainment**		

WEDNESDAY FEB 5

	ARENAN	SOLSKOG	SNÖLJUS
9:00	**11** O&M Chairs: N.N, Martin de Maré"		
10:00	**Break and networking**		
11:00	**12** Manufacturers Chairs: N.N, Martin de Maré	**13** Ice protection systems II Chairs: Emilie C. Iversen, Jan-Åke Dahlberg"	**14** O&M activities and strategies Chairs: Liselotte Aldén, Lars Jacobsson "
12:00			
12:30	**Lunch and networking**		
13:00			
13:30	**15** What do we need now? Summary of Conference **Final words – Fredrik Lindahl**		
14:00			
15:00			

TOPICS AND LECTURERS

1 Welcome!

Moderators: Jenette Lindeblad and Fredrik Lindahl, Swedish Windpower Association

A short introduction – Göran Ronsten, Program coordinator

A European Outlook on the prospect of Onshore Wind - Global importance with regional benefits – Sandra Grauers, Vattenfall

Open Innovation Contest – Tanja Tränkle, RISE (50)

2 Modelling

Chairs: Daniela Roeper, René Cattin

Large Eddy Simulation of Icing Conditions Impacting Wind Farms in Heterogeneous Land Use – Erik Janzon, Department of Earth Sciences, Uppsala Universitet, Sweden

Predicting production loss due to ice accretion – Johan Revstedt, Dept. of Energy Sciences, Lund University, SE

Parametric analysis of wind turbine icing in cold regions – Ifrah Mussa, Kingston University, United Kingdom

Improved flow modelling at cold climate sites through novel land-surface data from satellite sources – Morten Lybech Thøgersen, EMD International A/S, DK

3 Forecasting

Chairs: Sandra Grauers, Sven-Erik Thor

Improvements to the WRF microphysics – Emilie C. Iversen, Kjeller Vindteknikk

Forecasting of icing for wind energy applications – Øyvind Byrkjedal, Kjeller Vindteknikk, NO

How might climate change affect repowering? – Charles Godreau, Nergica, CA

TOPICS AND LECTURERS

Riskminimera med egen strategi för biologisk mångfald – Åsa Abel, Ecogain, Sverige

4 Icing losses and ice throw

Chairs: Sarah Barber, Anders Wickström

The impact of liquid water content on thermal ice protection systems efficiency – André Bégin-Drolet, Université Laval

Task19 – Ice Loss Tool, Timo Karlsson, VTT

windThrow: an open source toolbox for ice throw simulations – Hamid Sarlak, Denmark

On the communication of the ice throw hazard to the public – Rolv Erlend Bredesen, Kjeller Vindteknikk, NO

5 Modelling and forecasting

Chairs: Ifrah Mussa, Johan Revstedt

Validation of turbine specific modelled ice losses – Stefan Söderberg, DNV GL, SE

Validation of, and findings from, the IceLoss 2.0-project – Johannes Lindvall, Kjeller Vindteknikk, SE

A CFD benchmark study of ice accretion on a wind turbine blade and a comparison to the ice accretion of a rotating blade cylinder model – Johannes Lindvall, Kjeller vindteknikk, SE

Offshore wind farm at icy conditions – Tahkoluoto, Jaakko Kleemola, Suomen Hyötytuuli Oy, FI

6 Uncertainties – development, life cycle, end-of-life

Chairs: Helena Wickman, Hamid Sarlak

Cost of uncertainty in project development – Jenny Longworth, Kjeller Vindteknikk AB

Circular streams from GFRP composite waste – Richard Sott, RISE

Improve Wind Project Lifecycle Cost of Energy in Cold Climates – Albert Bosch, VORTEX FdC, SL

Wind farm blockage onshore: what drives the loss? – Till Beckford, DNV GL, UK

7 Testing and innovation

Chairs: Åsa Abel, Rolv Erlend Bredesen

Climatic chamber testing and verification in cold climate – Mattias Viktorsson, RISE

Pile Foundation Prototype Execution and Applicability for Scandinavia –Miguel Turullols, Nabrawind Technologies SL, ES

Ice and snow management innovations for critical infrastructure – Ville Kaikkonen, University of Oulu

Storage of electricity in molecules – Finn Daugaard Madsen, Siemens Gamesa Renewable Energy A/S

8 Structural monitoring

Chairs: Tanja Tränkle, Till Beckford

Blade defect forecasting – Anders Røpke, Wind Power LAB

Towards tracing a rotor surface's 3D trajectory over time – Michael Moser, eologix sensor technology gmbh

Effect of heavy rotor blade icing to life-time consumption of tower and foundation – Carsten Ebert, Woelfel Wind Systems

Siemens Gamesa effective blade repair solution at cold temperatures – Mert Satir, Siemens Gamesa Renewabe Energy, Ireland

9 Ice detection

Chairs: Frida Godet, Øyvind Byrkjedal

Icing intensity and ice removal algorithms for automatic turbine restart – Jarkko Latonen, Labkotec Oy, FI

The impact of light ice masses on expected wind power production – Florian Rieger, fos4X GmbH (21)

Blade based ice detection IDD.Blade – efficient operation in cold climate – Timo Klaas, Wölfel Wind Systems GmbH

Optimizing Windturbine heaters with blade based ice detection Systems – Nils Lesmann, Phoenix Contact, GER

10 Ice Protection Systems I

Chairs: Jenny Longworth, Finn Daugaard Madsen

Experimental investigation of an infrared de-icing system for wind power application in cold climate – Sofia Sollén, Luleå University of Technology

Performance Maps for Ice Mitigation Operational Strategies – Dimitar Stoyanov, Coventry University

PhD project on Durable Icephobic coatings on wind turbine blades – Kenth Johansson, RISE, Surface Process and Formulation, SE

Case study; Controlled environment in up-tower blade repairs – Ville Karkkolainen, Bladefence, FI

11 O&M

Chairs: N.N, Martin de Maré

Slowly, slowly, we'll reach our goal! – Sébastien Trudel, EDF Renewables, Canada

Highlights from CanWEA's operations and maintenance summit 2020 – Charles Godreau, Nergica, CA

12 Manufacturers

Chairs: Åsa Elmqvist, Stefan Söderberg

Vestas Cold Climate solutions – Karl Gregory, Vestas Wind Systems A/S, DK

Evaluation of Vestas De-icing System, – Alexander Stökl, Energiewerkstatt e.V.

Siemens Gamesa ice accretion modelling and its impact on the aerodynamic performance and AEP – Esteban Belmonte, Siemens Gamesa Renewable Energy, SP

Nordex advanced Anti-Icing System for N149 wind turbines – Konrad Sachse, Nordex Energy GmbH, DE

13 Ice protection systems II

Chairs: Emilie C. Iversen, Jan-Åke Dahlberg

Megaterends in blade heating – Petteri Antikainen, Wicetec, Fi

A new type of anti icing system – development/application/demonstration – Sven-Erik Thor, Lindskog Innovation AB

Installation of Retrofit Hot Air De-icing Systems – Daniela Roeper, Borealis Wind, Canada

Ice protection systems and retrofits: Performance and experiences – Charles Godreau, Nergica, CA

14 O&M activities and strategies

Chairs: Liselotte Aldén, Lars Jacobsson

Wind turbine operations in northern Siberia –Masafumi Yamazaki, Kanagawa Institute of Technology, Japan

Control of tower bolt connections and the challenges related to cold climate conditions – Anders Wickström, RISE Research Institutes of Sweden (20)

From Open Innovation Contest

Advanced operational analytics with machine learning – Sarah Barber, DNV GL, UK

15 What do we need now?

Moderator:

Should I heat or should I not? – Smart operation of wind turbines in Cold Climate, René Cattin, Meteotest, CH

Summary of Conference

Final words – Fredrik Lindahl