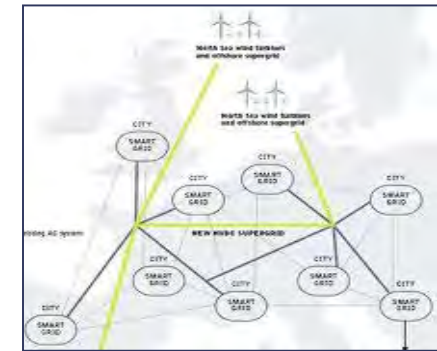
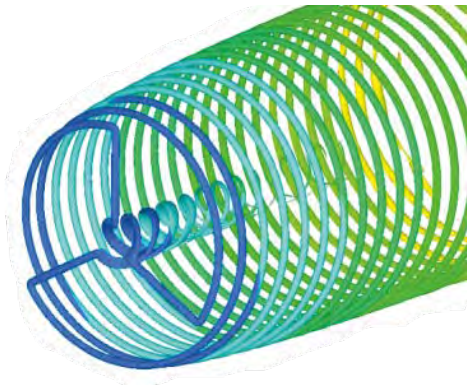




STandUP *for* WIND

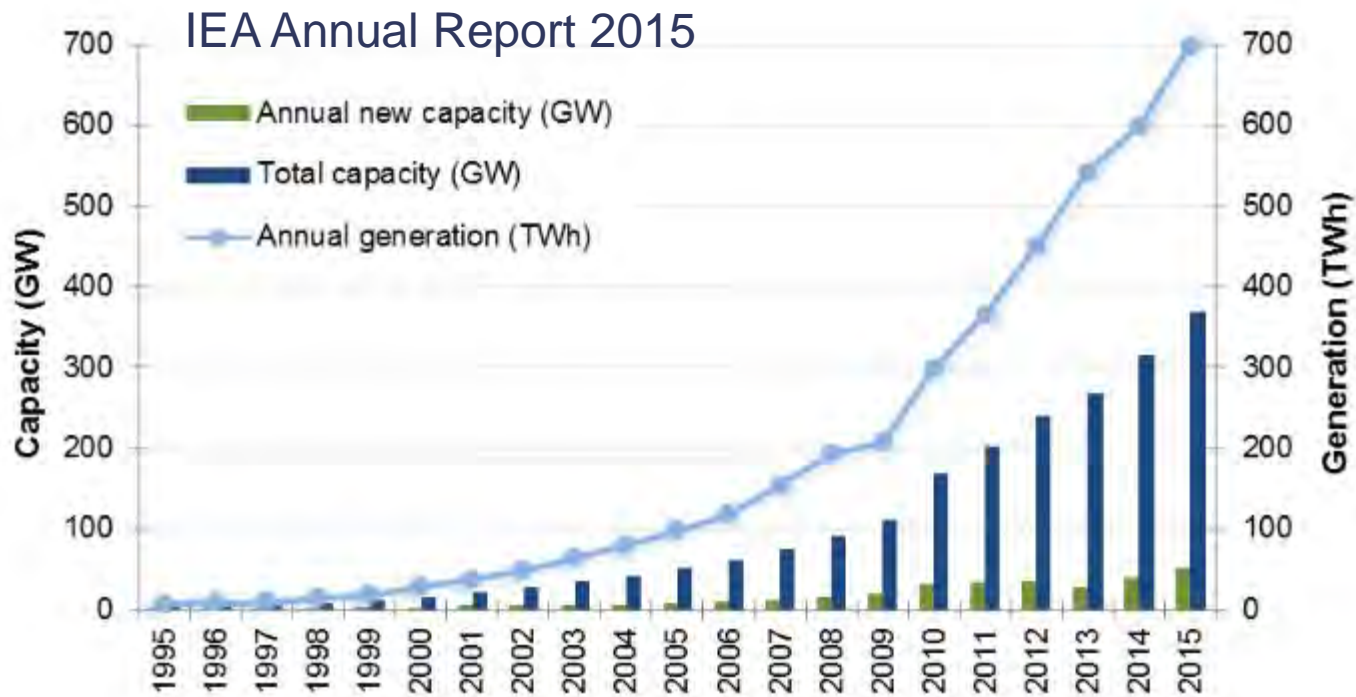


Sven-Erik Thor

Chairman, STandUP for Wind

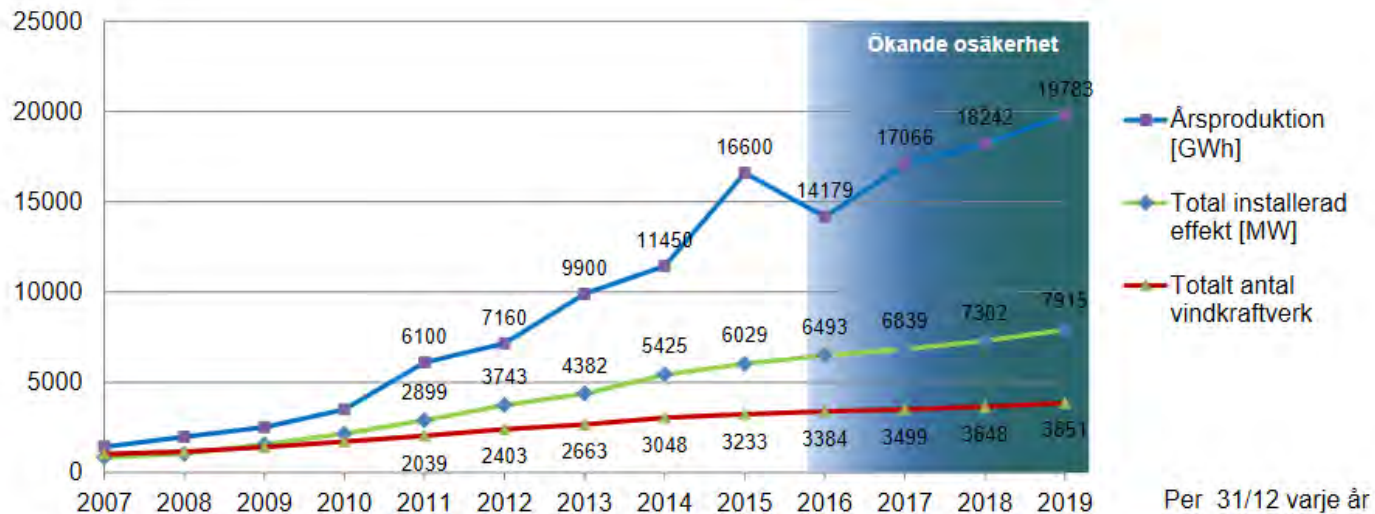
Windpower facts – the World

- 697 TWh generated, 2015 IEA member countries
- 4.8% penetration world wide
- 880 000 job opportunities
- Denmark has 42% wind penetration



Windpower facts - Sweden

- 16.6 TWh in Sweden 2015
- 10% of electricity production
- Forecast 2020 19.8TWH



Basscenariot avspeglar en tänkbar utveckling med hänsyn till vilka projekt som kan förväntas realiseras utifrån en bedömning av nuvarande och framtida marknadsläge. I modellen antas 10 procent av projekten försenas in på nästa år.



UPPSALA
UNIVERSITET

STandUP *for* WIND

<http://standupforwind.se/>



STandUP *for* WIND



Focus on project development and establishment

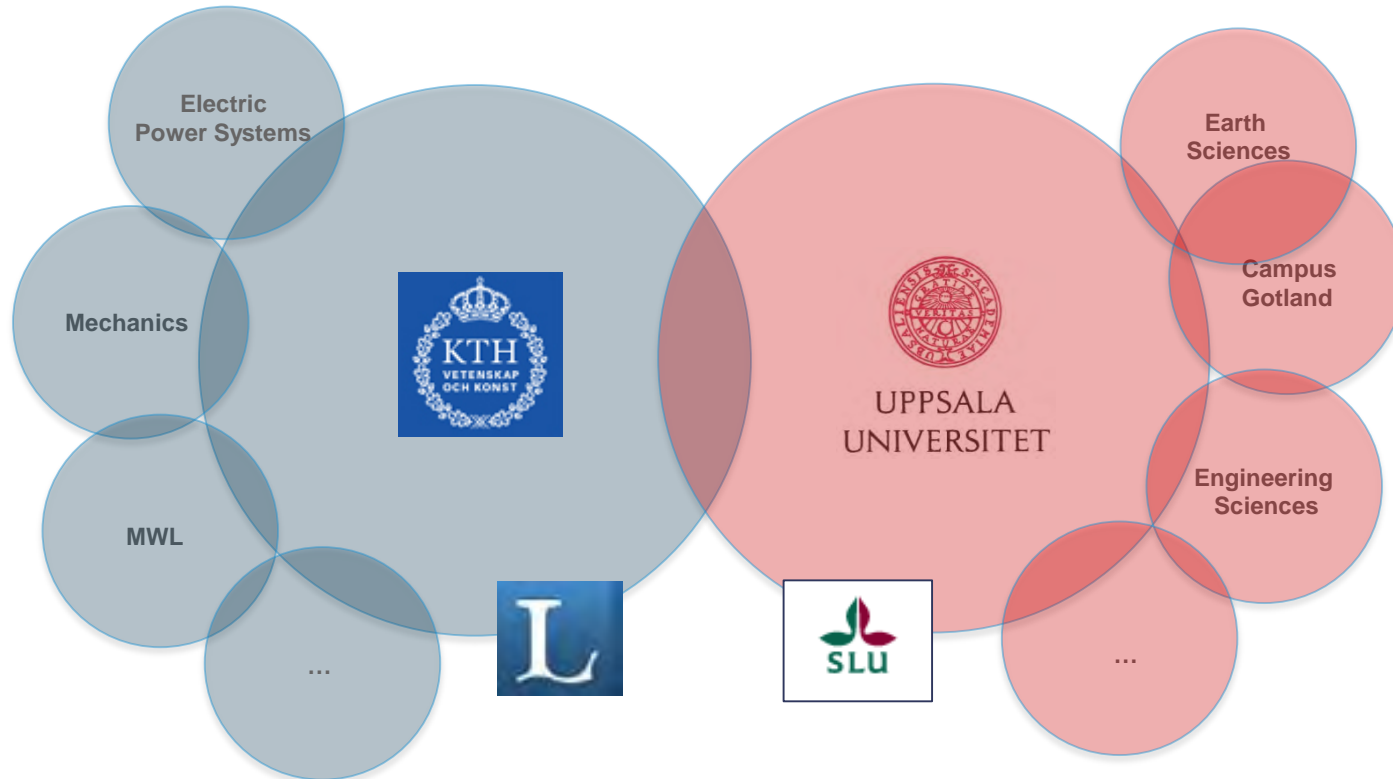
- STandUP for Wind focus on project development and establishment of wind energy to **secure national competences and ability necessary for large scale integration** of wind energy in Nordic conditions.
- The centre is **multidisciplinary** and scopes from wind mapping, wake interaction, planning to grid connections and development of entire turbine concepts etc. and thereby has key knowledge from areas needed from start to finish within wind power project development.



STandUP *for* WIND



A Wind Centre at KTH, Uppsala University, LTU and SLU

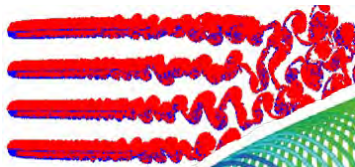


The centre has a turnover of about 40 million Swedish crowns including research, education and communication activities, and involves about 60 persons.

In total 25 PhD students



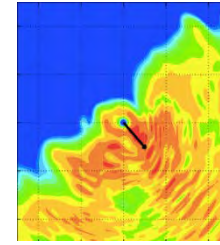
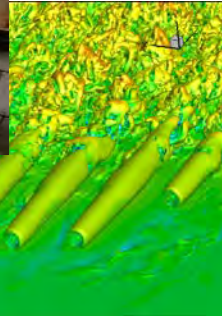
UPPSALA
UNIVERSITET



Wakes

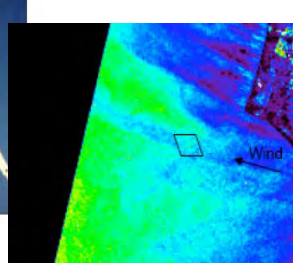


Farm optimization

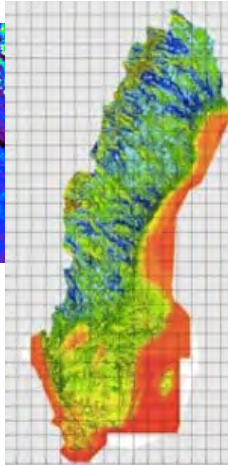


Noise and vibrations

Ice



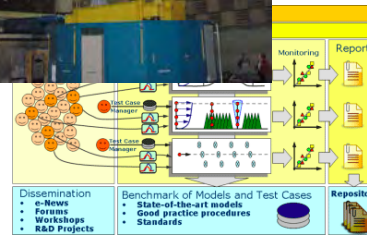
Mesoscale



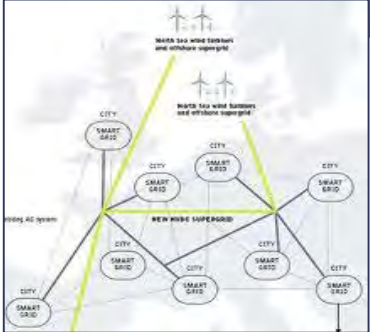
Wind maps



IEA projects...



Generator
Development



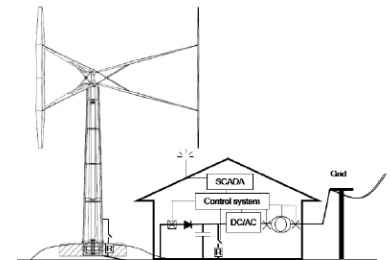
Grid interaction



Forest



Vertical Axis
Wind Turbines



Directly Driven Systems



Windpower is sustainable by nature!

Challenges:

- Cost
- Shortage of sites
- Permitting delays
- Environmental impact
- Social acceptance

A photograph of a wind farm in a field of dry, golden-brown grass. The sky is a bright, hazy yellow, suggesting a sunrise or sunset. Several wind turbines are visible, their dark silhouettes standing against the light background. The turbines are scattered across the field, with some in the foreground and others receding into the distance.

**Thank you for your
attention!**

**www.standupforwind.se
Sven-erik@standupforwind.se**



STandUP *for* WIND




International Collaborations





To mention a few examples...

Listen | Svenska

Search



Start

Research

- Wind surveying and cold climates
- Fluid dynamics for wind turbines
- Electrical systems
- Sound
- Vertical axis wind turbine development
- Generators and control systems
- Landscape and participatory planning
- Operation and maintenance

Organisation

Contact

Our industry contacts

Education


Facts about wind

Outreach

Vindkraftsforskning i fokus konferens 2015

Konferenser med samband till STandUP

Wake Conference 2017



Copyright holder: Vattenfall
Title: Horns Rev 1 Wind Farm
Photographer Christian Stoiness. The Photo was taken the 12th of February 2008 13.00 o'clock

News/Recent Events

[Stefan Sjøkvist will defend his thesis - "Demagnetization and Fault Simulations of Permanent Magnet Generators", 9:15, December 9, 2016, Uppsala University.](#)

[Senad Apelfröjd will defend his thesis - "Grid Connection of Permanent Magnet Generator Based Renewable Energy Systems", 9:00, November 25, 2016, Uppsala university.](#)

[Sound seminar, December 16, 2016, from 13 to 16 at KTH.](#)

[STandUP for Wind annual meeting 2016, October 27-28](#)

[Jon Olauson will defend his thesis, 'Modelling Wind Power for Grid Integration Studies', Friday 2016-11-04 @ 9:15 a.m. \(Uppsala\).](#)

[Stefan Ivanell is also a 'Topic organizer for Aerodynamics and noise' on the Torque 2016 conference.](#)

[Stefan Ivanell is a 'Topic Leader' at WindEurope Summit 2016](#)

[The challenges of distributed and renewable energy sources, Energiforsk seminar - Thursday 7 July, 08.00-12.00, Almedalspaviljongen, Donnersgatan 2, Visby. Register here \(Swedish\).](#)

[Spring StandUp Academy 2016 at Blåsenhus, Uppsala May 26 \(Deadline to register May 17\)](#)

[Seminar from the Swedish Energy Markets Inspectorate: Vilken påverkan har en ökad andel variabel elproduktion? \(in Swedish\)](#)

[Energiforsk livstreaming seminar - Reglering av ett framtida kraftsystem,](#)

Our Research

With our interdisciplinary work we aim to enable more wind power to be placed into electricity networks. We will do this by responding to relevant questions regarding how to plan for wind power in the best ways possible within our research areas.

By cooperating and sharing information between our fields of research we are able to better plan and integrate wind energy. This cooperation allows us to have a clearer understanding of both our specific research topics as well as the bigger picture.

Our various competencies are connected by gathering our areas of research together under a single common platform. This interconnectedness allows us to capitalize on the resulting synergies.

Wind surveying and cold climates

Where and at what height are the favourable wind conditions? How do wind parks affect each other at great distances?

Contact for wind surveying: Matthias Mohr, UU-Geo, matthias.mohr@geo.uu.se

StandUP for Energy Webb



STandUP *for* WIND



A Wind Centre at KTH and Uppsala University

