## **Cold Climate Experiences - StorRotliden**

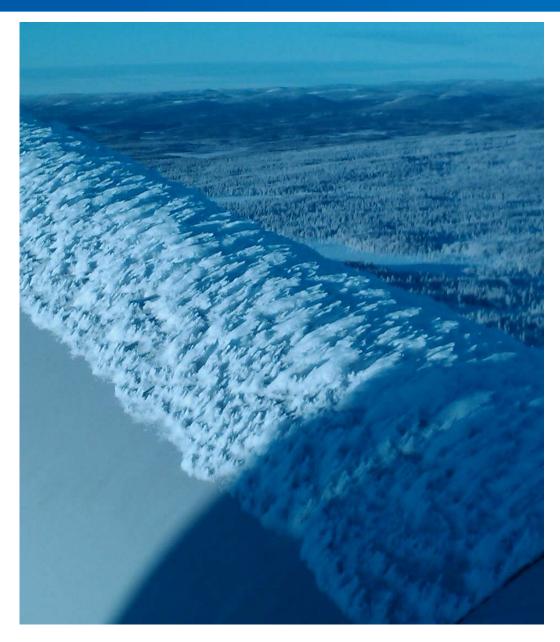


#### **Basics**

- Installed capacity 78MW
- Number of turbines 40
- Supplier Vestas V90 1.8 (11) and 2.0 MW (29)
- Expected annual production 229GWh
- Investment cost 1.5bSEK
- Building and Construction spring 2009 to fall 2010
- Last machine was grid connected November 16th
- Located in Åsele Community
- No de/anti icing equipment
- Equipment to detect vibrations
- Ice sensors will be mounted

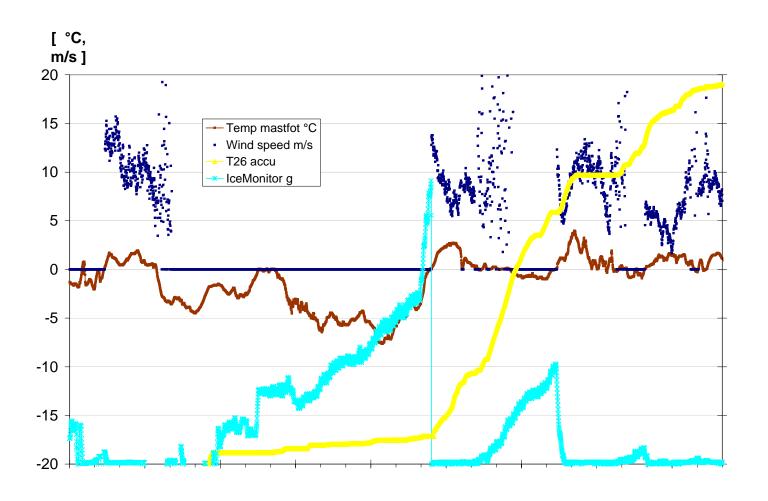


# **Challenges**



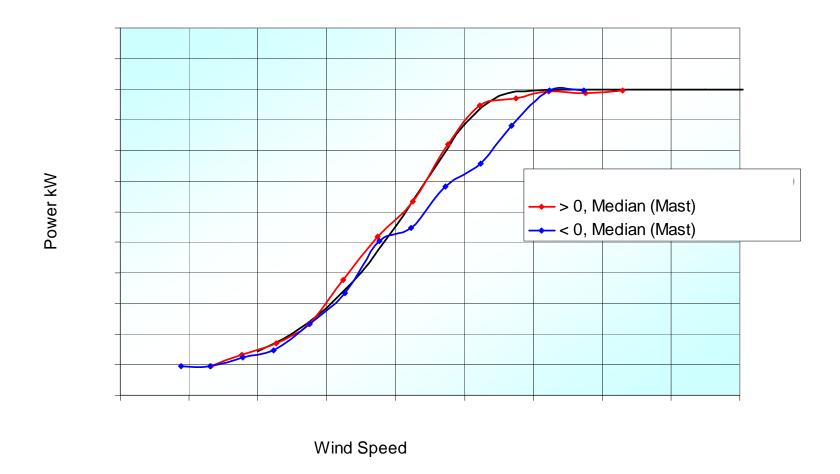


#### Difficult to detect icing situations





### An example of performance in CC



# Requirements for safe end economic utilization of wind power in CC

- More reliable "Ice maps"
- Cost effective and Reliable -Anti/deicing equipment
- Better ice sensors suitable for use in wind power



