ICETHROWER – ICE THROW EVALUATION AND RISK ANALYSIS TOOLS

WINTERWIND
February 11-13, 2014
Bengt Göransson, Pöyry SwedPower

WHAT IS THE PROBLEM?

1. Wind turbines drop ice pieces occasionally

2a. The emotional conclusion is “often” and “long distance” (km!)

2b. The pragmatic approach is ”now and then” and “within 1D”

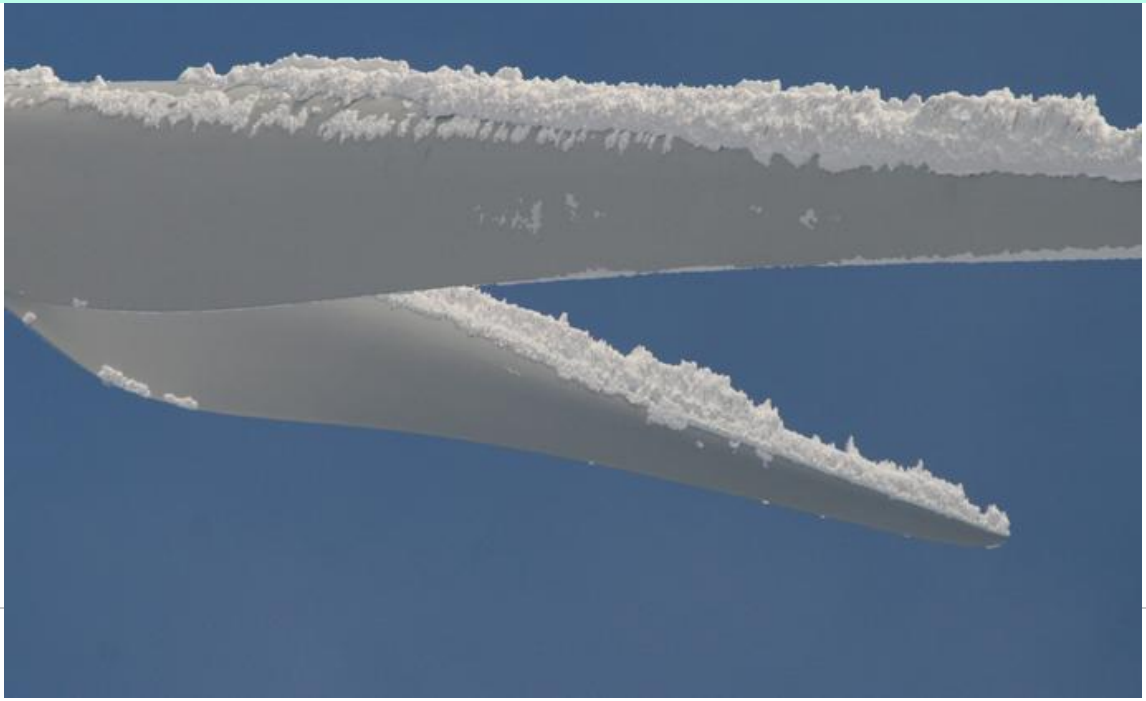
3. Risk level is generally poorly investigated and hard to calculate

IS THERE A SOLUTION TO THE PROBLEM?

Level of confidence can be increased by more observations

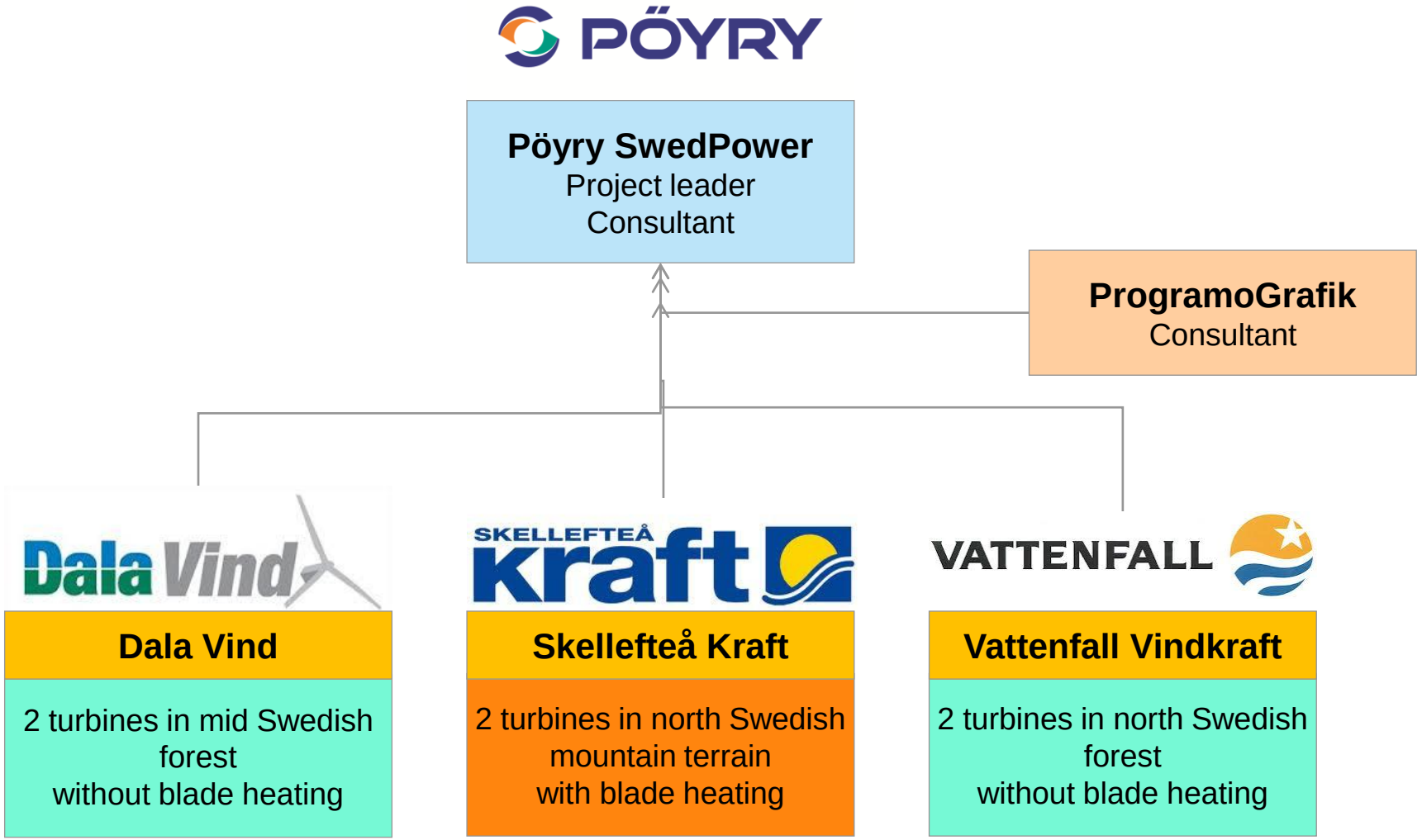
Discrepancies between different turbines can be investigated

A generic tool to increase the possibility to calculate and communicate risk both for service personnel and for the public



WHICH IS OUR APPROACH?

Joint research project within Energimyndigheten's research program "Wind power in cold climate".



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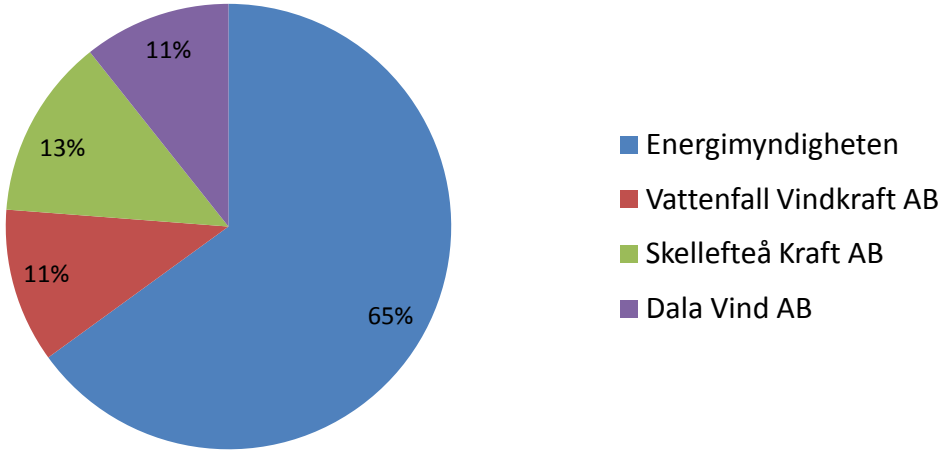
WHICH IS OUR APPROACH?

- To collect data from grounded ice fragments (x,y; weight; photos)
- To create a database for common use
- Develop a usable simulation tool for risk evaluation based on collected data
- Verify and integrate the existing tool KASTIS into a common tool box

Financing

Total budget SEK 982.000



Time schedule

Oct 2013 – Sep 2014

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WHEN WILL WE HAVE RESULTS?

Data collection during winter 2013-2014

Development of models spring 2014

Report Q3 2014

Link from Winterwind web site

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HOW WILL THE RESULTS BE PRESENTED?

Results from exploratory investigations
Data base from observations

Vindkraftverk				X-koordinat		Y-koordinat																
									Koordinatsystem		RT90 2,5 gon V											
Nr	Observation				Kasttid				Vid kasttillfället						Fyndplats			Vikt			Längd	Bredd
	år	månad	dag	tid	år	månad	dag	tid	Driftsmod	Vindstyrka	Riktning	Ber riktn	Temp	Tryck	X-koordinat	Y-koordinat	Istyp	kg	Ursprung	Foto	cm	cm
1																						
2																						
3																						
4																						
5																						
6																						
7																						
8																						

Statistic simulation program module

THANK YOU!

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Engineering balanced sustainability™

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