

# Insurability of cold weather risks and damages

## MARSH

3<sup>rd</sup> February 2015

**Ralf Skowronnek Marsh Europe**  
**Anders Orebrandt Marsh Stockholm**

# Windenergy in cold climates

## Agenda

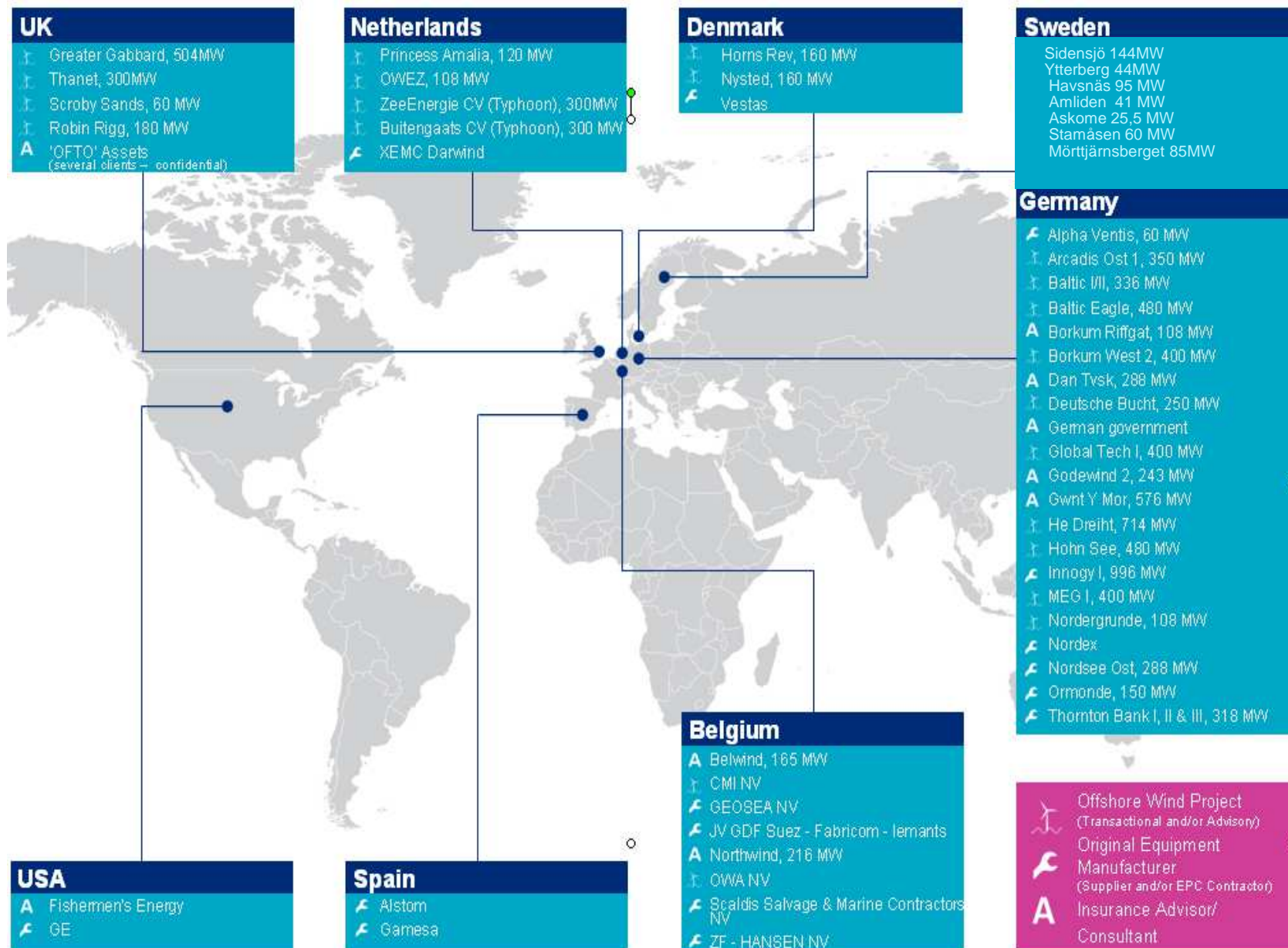
- General information about Marsh Renewables
- Insurability
- Claims investigation Scandinavia
- Full O&M Contract and ice
- Summary



# MARSH Renewables Practice General

# Windenergy in cold climates

## MARSH HH Offshore Wind Experience



# Windenergy in cold climates

## MARSH Onshore Wind Experience



MARSH



10 000 MW Onshore Windfarms  
trust in our experience.

Marsh GmbH  
Martin Grentzinger  
Senior Client Executive  
Cremon 3  
20457 Hamburg  
Telefon: +49 (0)40 3 7692-251  
martin.grentzinger@marsh.com

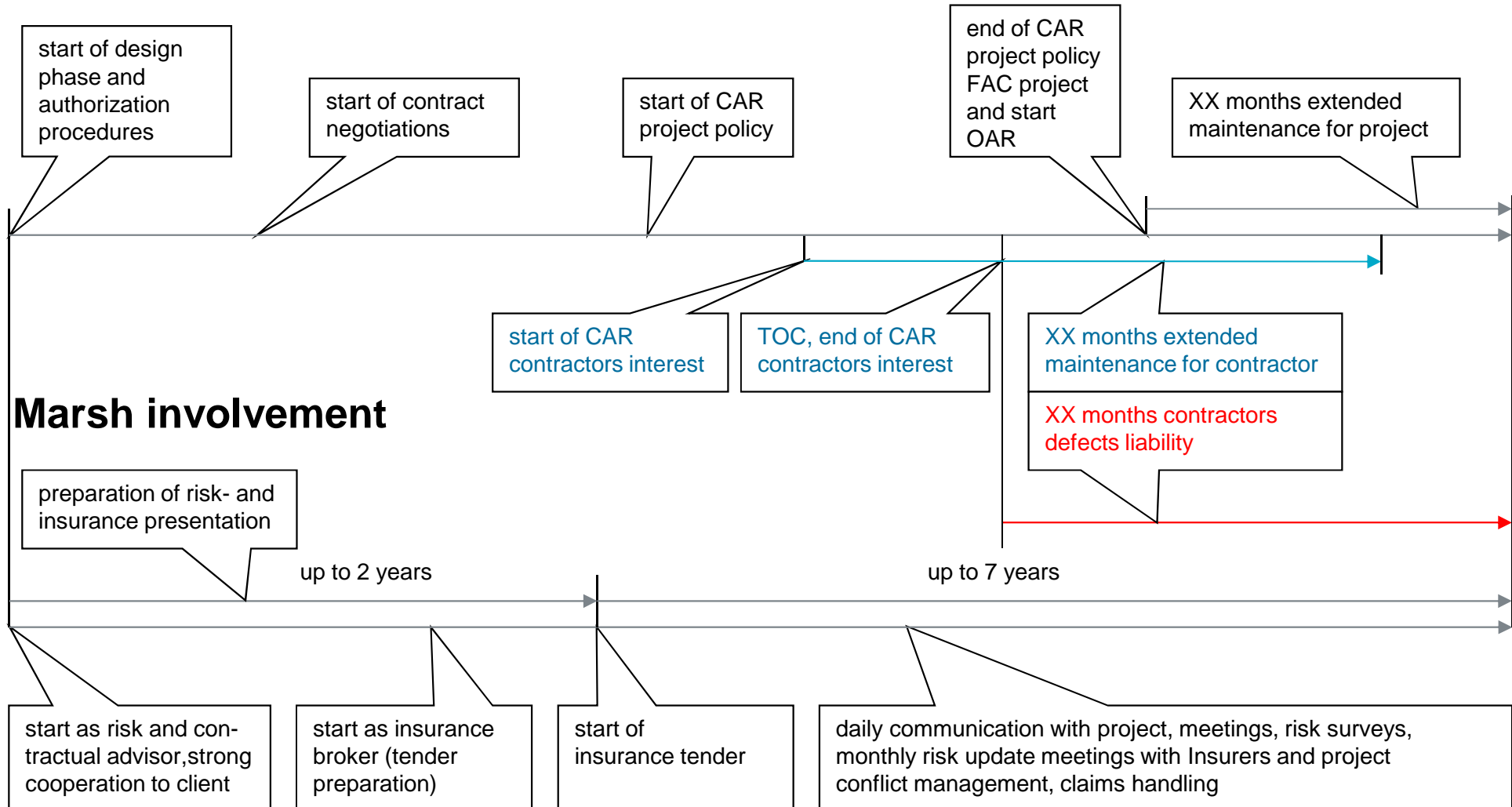
[www.marsh.de](http://www.marsh.de)

- Alstom/GE (manufacturer)
- Gamesa (manufacturer)
- Nordex SE (manufacturer)
- Vestas (manufacturer)
- Availon GmbH (service-provider)
- Energiekontor AG (developer and operator)
- ABO Wind AG (developer and operator)
- REETEC GmbH (service-provider)
- Theolia Holding (operator Wind-Portfolio)
- Juwi AG (developer and operator)
- EnBW Onshore (utility)
- Breeze Two Energy (operator wind-portfolio)
- Denker & Wulf AG (developer and operator)

-  
-  
-  
-  
-

+ 20.000 MW Continental Europe  
+ 20.000 MW Rest of World

### Project Timeline



# Insurability of Losses or damages due to ice

# Windenergy in cold climates

## Insurability of losses or damages due to ice

- Insurance policies cover:
  - physical loss of or damage to WTGs due to ice
  - business interruption due to physical damage to WTG due to ice
  - third party liability due to ice damaging third party property or personal injury
  
- Insurance policies do not cover:
  - shutdown of the WTGs caused by icing but without resulting physical damage
  
- Insurance policies do not automatically cover losses or damages due to
  - blade modifications
    - de-icing systems
    - anti-icing systems
    - argument: prototypical character
  - late shutdown of the WTG being operated over the limit (when is this exceeded?)



# Windenergy in cold climates

## Marsh investigations with Scandinavian insurers



Few claims due to ice are reported to the Scandinavian insurers

Reported claims are:

- ice peelings from one blade damaging the other blades.(very rare)
- cracks in blades due to ice(rare)

Most claims that reports to the insurers fall in the scope of maintenance and service agreement with the WTG manufacturer.

- most claims did not happen unforeseeable or accidentally (only this would be insured)
- turbines had shutdowns before the claim occurred and were restarted regularly

Summary= Ice is not a problem for the Scandinavian insurers

# Full O&M contracts and ice

# Windenergy in cold climates

## Can full O&M contracts provide coverage ?

- Important to adapt the O&M contract to cold climate
- Important to have blade inspections done regularly
  - Helps identifying when a claim has occurred
- Example of availability clause:
  - “Each de-icing cycle shall lead to a maximum WTG stop time of xx hours in order to be deemed to be an **Assumed Availability Period**. De-icing cycle stop time in excess of xx hours shall be considered **Unavailable Period**.”
- The WTG industry is developing new and more effective anti-icing and de-icing systems
  - to reduce the risks of non availability and/or resulting physical damage

# Summary

# Windenergy in cold climates

## Summary



- Ice is not a real problem for the insurers because O&M contracts are primary
- Ice has to be considered in the turbine supply and maintenance contracts from the beginning.
- Chose a turbine suited and tested and approved for cold climates
- Important with SCADA system that is identifying ice build up and shuts down turbine at an early stage.
- Adapt the insurance policy to the maintenance and service agreement
  - e.g to implement an operational limit in the insurance policy where the turbine has to be stopped.
  - to implement the same operational limit in the O& M contract.

# Windenergy in cold climates

## Thank you for the attention



Anders Orebrandt  
Renewable Energy Practice Leader  
Sweden

Marsh AB, Klara Norra Kyrkogata 29  
111 22 Stockholm  
Tel. +46 73 77 42 88  
anders.orebrandt@marsh.com



Ralf Skowronnek  
(Dipl.-Ing./Dipl.-Wirt.-Ing.)  
Head of Renewable Energy  
Continental Europe

Marsh GmbH, Brandstwiete 1  
20457 Hamburg  
Tel. +49 40 37692259  
ralf.skowronnek@marsh.com



Registered in England Number: 1507274, Registered Office: 1 Tower Place West, Tower Place, London EC3R 5BU

Marsh Ltd is authorised and regulated by the Financial Services Authority for insurance mediation activities only. Marsh Ltd conducts its general insurance activities on terms that are set out in the document "Our Business Principles and Practices". This may be viewed on our website <http://uk.marsh.com/AboutUs/AboutMarsh/articleType/ArticleView/articleId/2375/Governance.aspx>