



# New Insurance Solutions For On- and Offshore Wind Turbines

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- Serial losses in wind turbines
  - Impact and risky gaps
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- Next steps

# Corporate Insurance Partner offers specialized insurance solutions for industrial risks

## Munich RE Group\*

Reinsurance



Munich RE 

Risk Solutions

CIP - Corporate Insurance Partner

Munich Health



Primary insurance

**ERGO**

Asset management **MEAG**

\*This listing is incomplete and provides only examples.

## CIP - Corporate Insurance Partner \*

Within the reinsurance segment Munich RE provides individual risk solutions for medium-sized and large industrial clients.

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# Green Tech Solutions

## The team for innovations in renewable energy

With **Green Tech Solutions**, Corporate Insurance Partner **pools expert resources** and know-how in the field of **renewable energies**.

**Innovative insurance solutions** are developed and offered to all participants along the value chain of renewable projects

Visit our website: <http://www.munichre.com/gts>

### PV Industry



### Wind Industry



### Further solutions



Serial loss cover  
for wind turbines



manufacturers and component  
suppliers

Covers the risk of large technical  
loss in the wind industry

Offshore logistics  
delays



projects developers and  
offshore firms

Delays of offshore projects due to  
adverse weather conditions are  
covered

Lack of wind



project developers and  
investors

Protection against loss of revenues  
in low-wind years

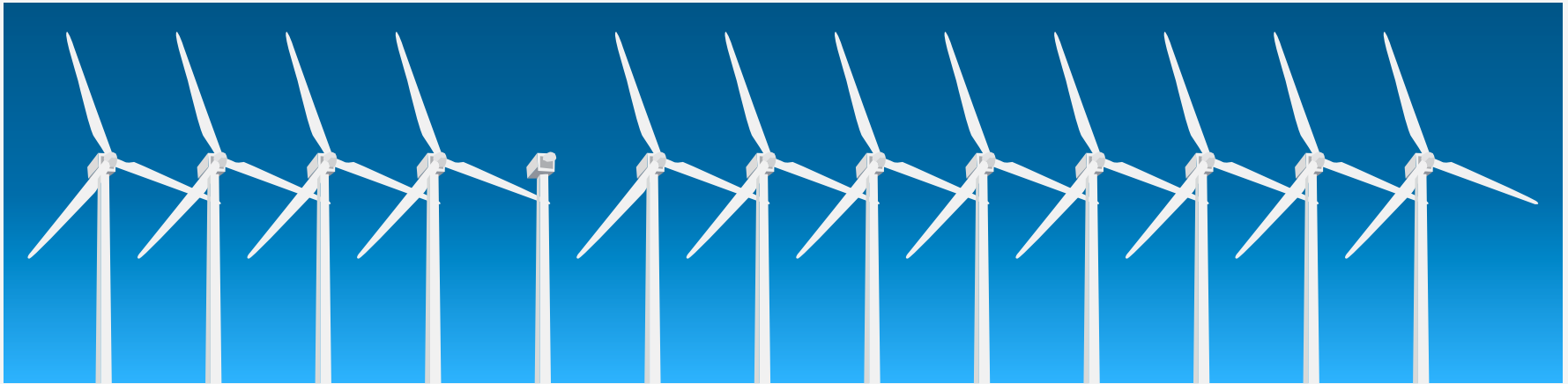


# Serial Losses in wind turbines

## A well known risks becomes insurable



**Investors are looking for comprehensive turbine manufacturer warranties to make their investment safer**



A single problem...

....that could be solved by the manufacturer.

# Why does the wind industry need new insurance solutions?

**Investors are looking for comprehensive turbine manufacturer warranties to make their investment safer**



Three turbines fail.

Manufactures warrantee reserves may be depleted. Insurance provides back-up.



# Why does the wind industry need new insurance solutions?

**Investors are looking for comprehensive turbine manufacturer warranties to make their investment safer**

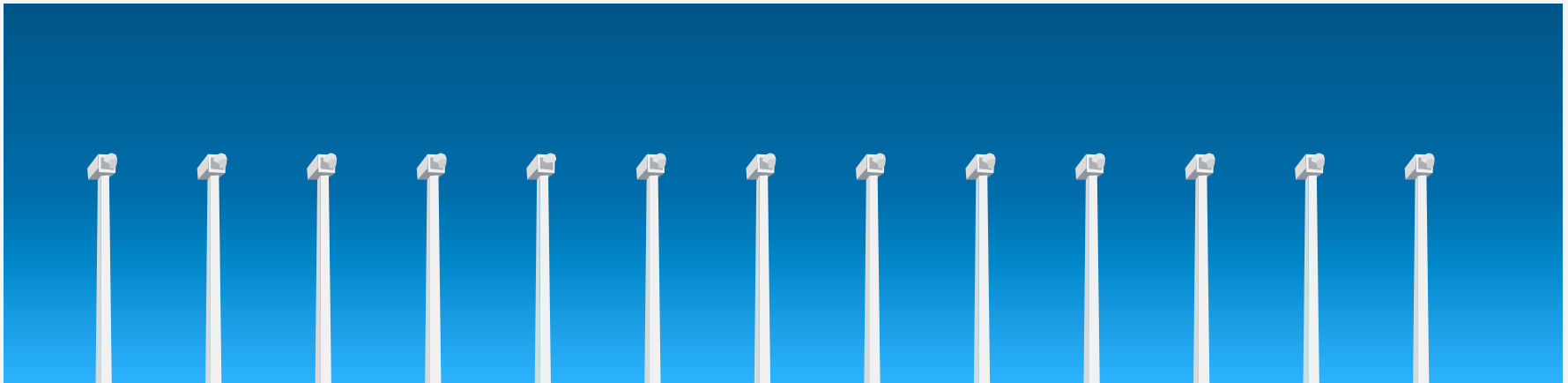


Several malfunctions indicate a systematic failure.

Standard technical insurance might not cover all turbines.

# Why does the wind industry need new insurance solutions?

**Investors are looking for comprehensive turbine manufacturer warranties to make their investment safer**



So the wind industry needs serial loss cover !

A large serial loss can pose a financial threat for manufacturers and wind farm investors.

Conventional **machinery guarantee** covers are

- are designed to **cover individual faults in plant engineering** and construction
- have limitations that mean they **do not fully meet the requirements of the wind industry**:

Physical damages only



No cover for pro-active repairs due to serial defects (retrofits)

Serial loss clause (exclusion)



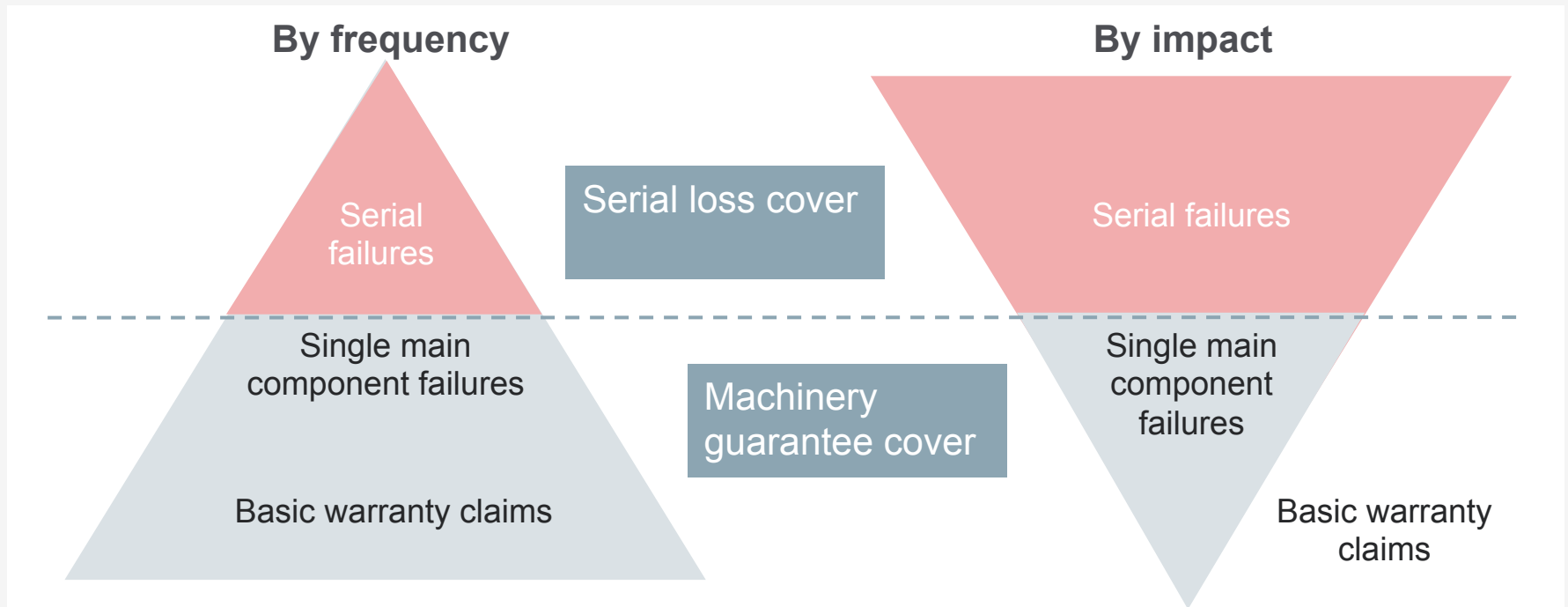
Insufficient cover for large serial failures

Annual renewal (one-year policy period)



Non renewal or cancellation in event of claims

Large serial failures are rare - but they can have serious implications for turbine manufacturers and suppliers



### Optimised risk management strategy for today's wind companies

- Risk transfer to insurance of major threats such as large serial failures
- Stronger companies and improved turbine reliability mean that basic and single failures can be managed in-house or with higher deductibles

# The new tailor-made serial loss cover for the wind industry provides comprehensive coverage

We treat a serial loss as a single insured event.

Most cost items related to a serial loss can be covered

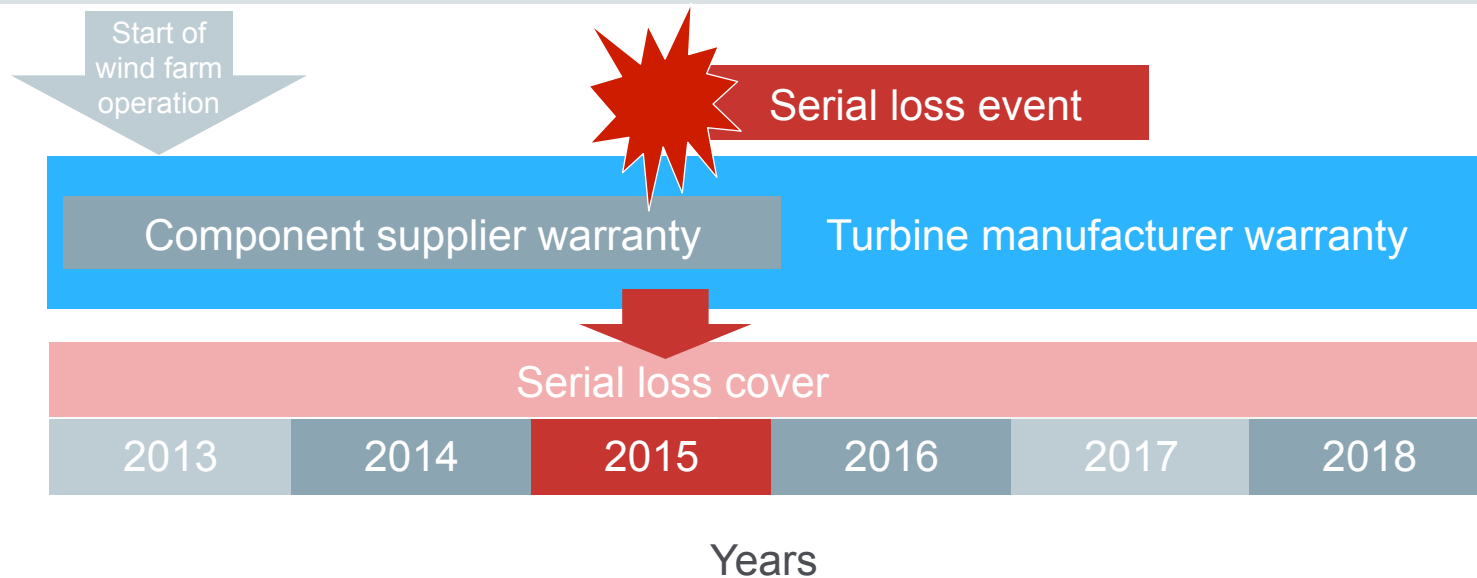
## Serial loss event

The costs of all individual serial failures are aggregated:

### Physical damages

- + **Pro-active repairs** for all **defective** components in the series (retrofits)
- + **Component suppliers' warranty default**
- + **Availability guarantees** (onshore)
- + **Offshore logistics costs**  
(limit per affected turbine)

## Cover structure for settlement of a serial loss claim



### Terms and conditions:

- **Multi-year** cover written for each production year (onshore) or project (offshore)
- Claims do not entitle insurer to **cancel the cover**
- Any **serial loss fully allocated to the year in which the first loss occurs**



# A new opportunity to manage the manufacture's risk and let investors sleep better

## Advantages of the serial loss cover for wind turbine manufacturers

**Covers most of the actual cost** of a serial loss event

**Complements risk management strategy:** major technical threat now insurable

**Secures liquidity** of the insured in event of a major serial loss

**May be possible to reduce warranty reserves** due to optimised insurance covers (to be reviewed by auditors)

**Competitive advantage:** Company warranties backed by strong insurance companies appreciated by wind farm investors and financial institutions

# Next steps: Fill further gaps in insurance for wind projects with our experience gained in other areas



## **Banks, investors and operators become part of the insurance solution:**

Investments are protected against

- **lack of wind** (already available) and
- **manufacturers' warranty defaults** due to insolvency (already developed and offered to the PV industry - PV performance option cover)



**Availability guarantees** for the operation of offshore wind farms are backed up by our insurance covers

- the first milestone needed is the risk assessment of offshore repair times.

We are working on it (Offshore logistics cover)

## Serial losses, offshore logistics cover



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## Lack of wind



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Thank you very much for your attention

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