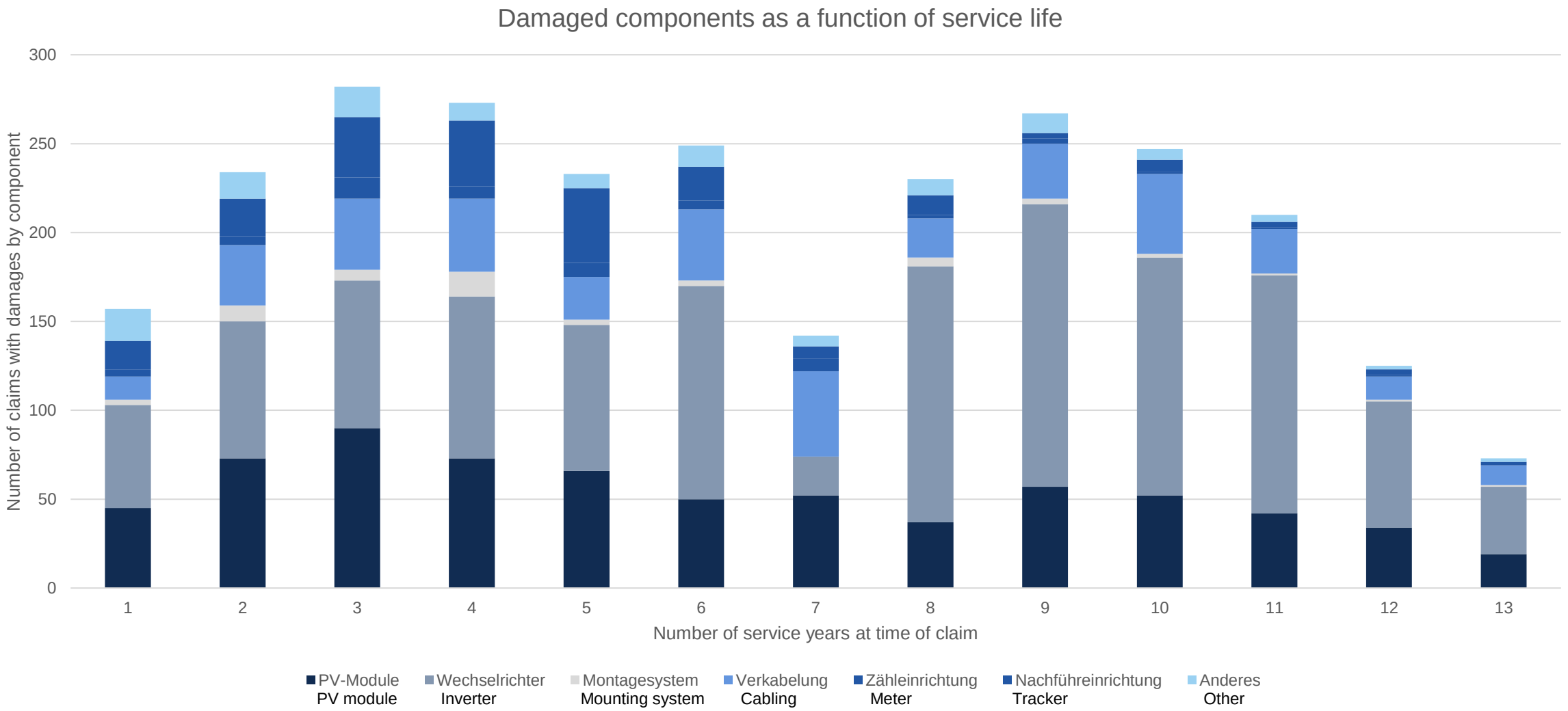
Snapshot on insurance claim case study

pv magazine Roundtables Europe

Online • 5 December 2024

Internal damages on inverters and modules lead the statistic, followed by cables (incl. connectors) and trackers



Source: EXXERGY analysis of >3.600 insurance claim cases

Imprint

Thomas C. Sauer

tcs.iecre@exxergy.de

EXXERGY GmbH
Am Wasserbogen 28
D 82166 Gräfelfing, Germany
T +49 89 579545-30
F +49 89 579545-31

TEXXECURE Rating Foundation gGmbH
Dillenburger Str. 33
D 60439 Frankfurt am Main, Germany
T +49 69 9510319-20
F +49 69 9510319-10

Internet www.exxergy.com

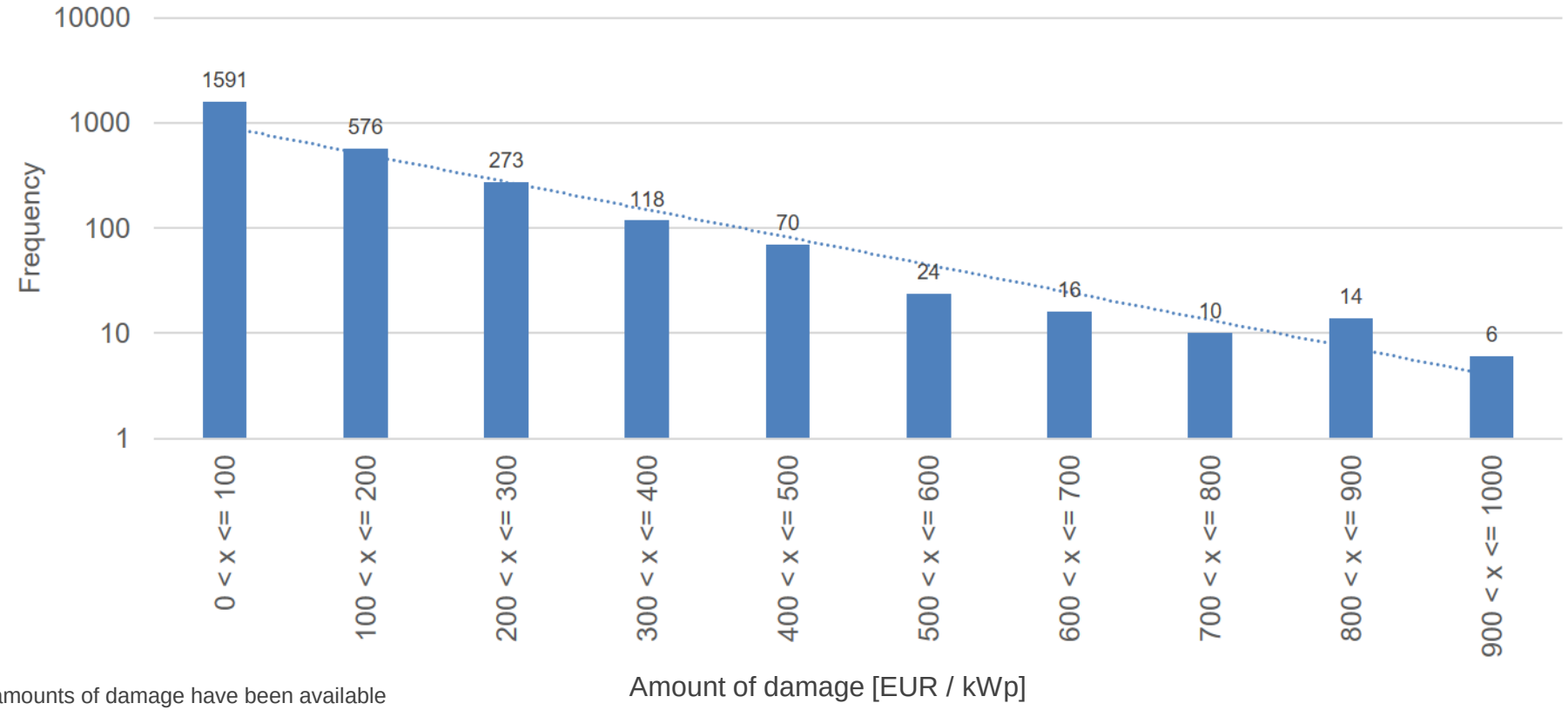
Frankfurt • Munich • St. Gallen • New York • San Diego • Washington • Hong Kong • Shanghai

Studies from the field:
An insurance claim cases study identifies damage amounts …

~40% of all cases shows a damage > 100 EUR / kWp

Putting the relative amounts damage into perspective:
On a 20 MWp PV power plant, a damage of 100 EUR/kWp = 2 M EUR – that is 20% of the EPC cost of a new PV power plant !

- More than 3.600 insurance claim cases have been analyzed in total
- Generally, the relative amount of loss trends to decline with increasing system size
- The mainstream amounts of loss spreads over 2 orders of magnitude
- Outliers range up to 3.500 EUR / kWp (incl. consequential damage)

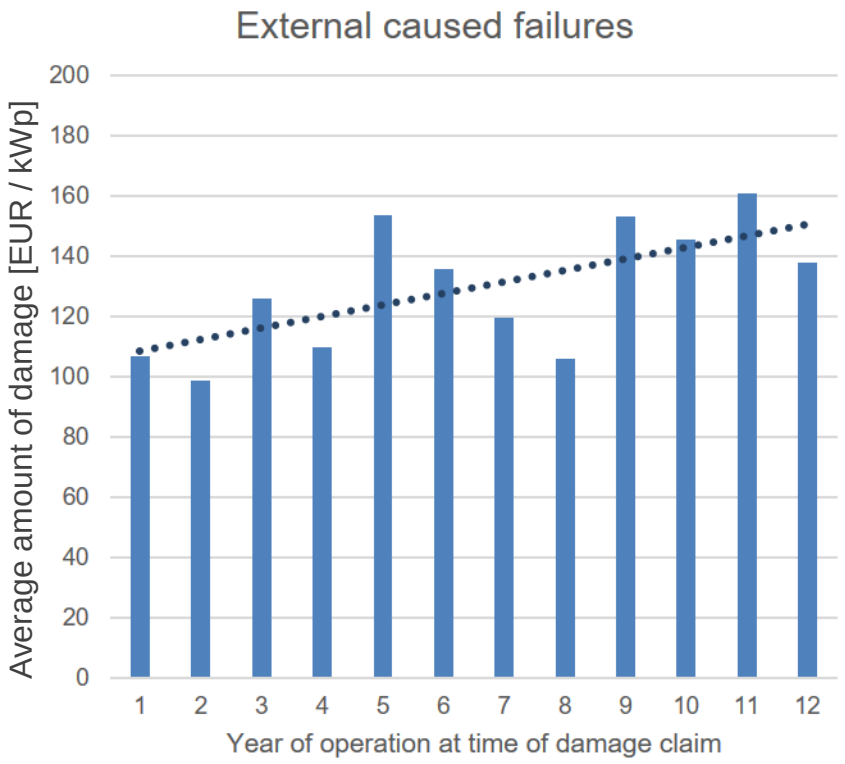


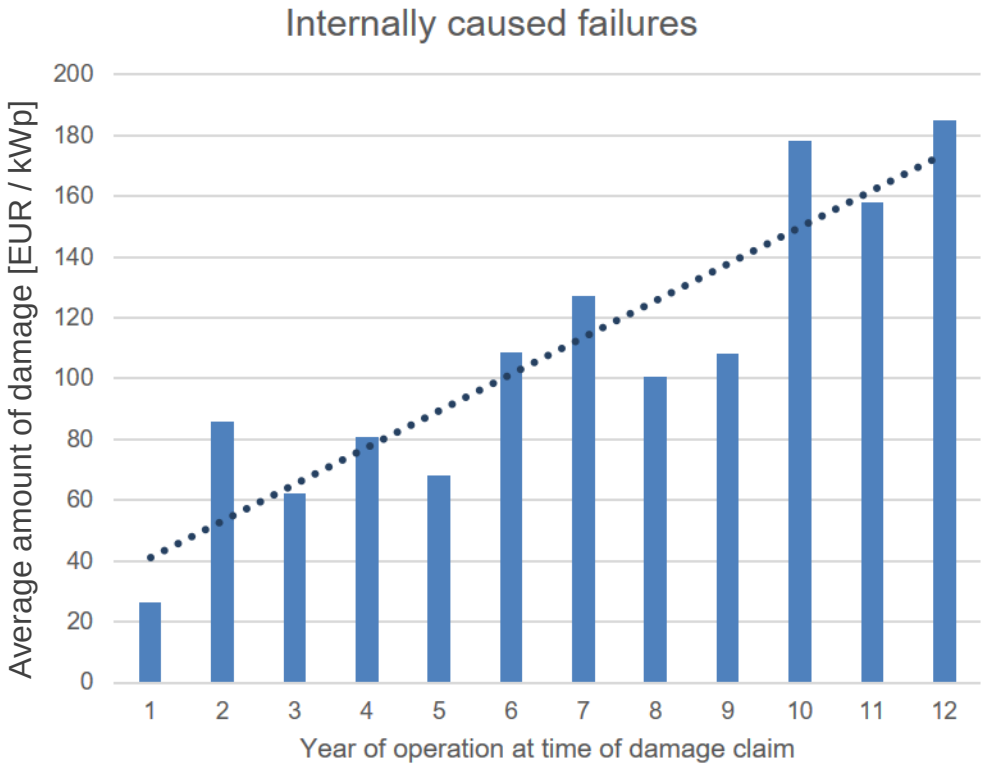
All claim cases Jan 2012 through June 2017 for which amounts of damage have been available

Source: EXXERGY analysis on >3.600 insurance claim cases 2012 - 2017

Studies from the field:
…that can be more significant than calculated for

Average amount of damage over service lifetime



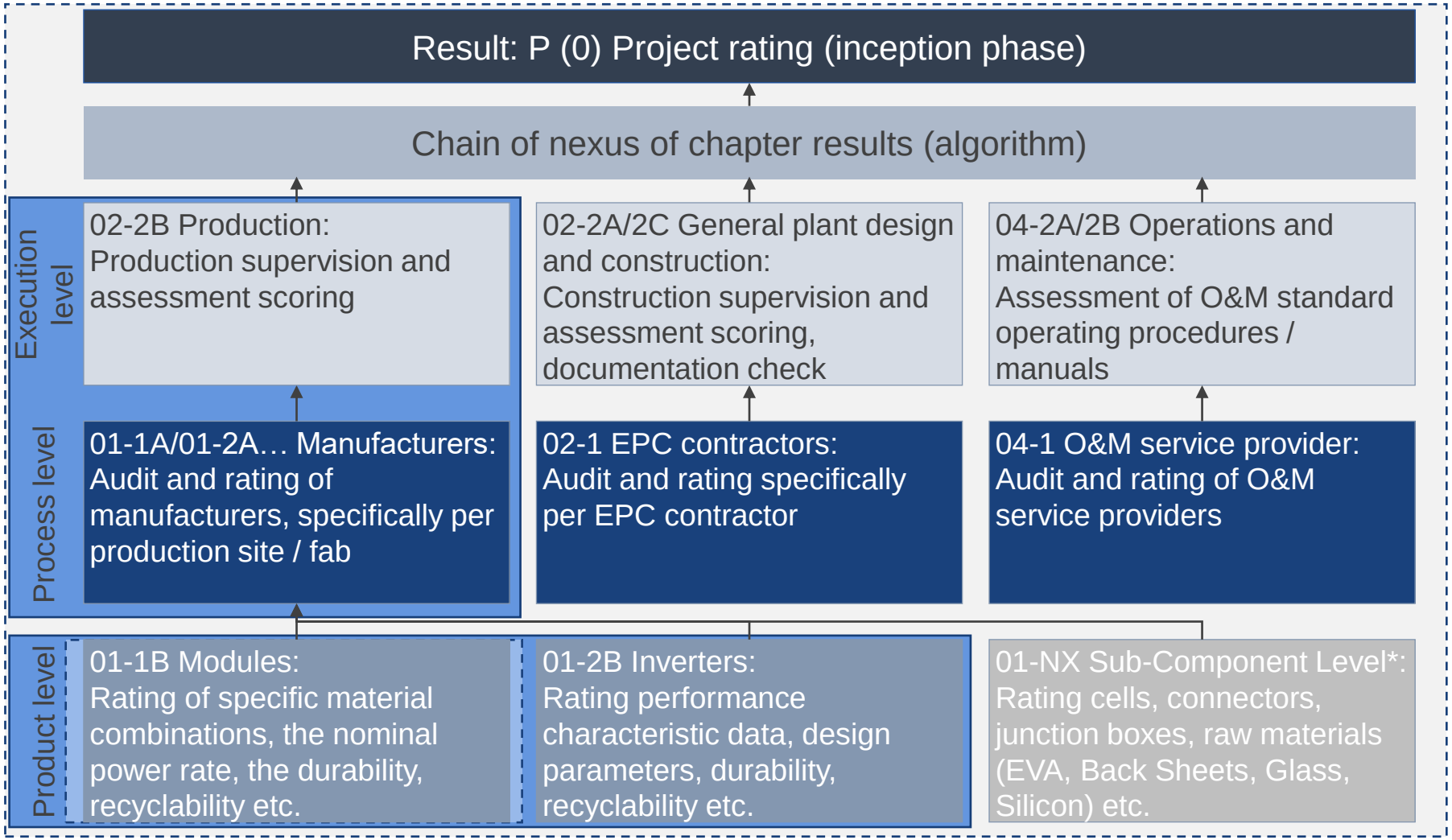


- Externally caused failure: Damage is caused by external factors (hail, lightning strikes, snow loads, theft, marten bites etc.)
- Internally caused failure: Damage is caused by the PV system (20.13% of all cases)

The graphs only reflect such claim cases for which
(1) the service age of the PV power plant was known at the date of claim and max 12 years and
(2) the amount of damage covered was >0.
PV power plants with a service life >12 years have not been listed because the data pool did not offer a statistically relevant number of cases.

Source: EXXERGY analysis on >3.600 insurance claim cases 2012 - 2017

A comprehensive technical rating system for PV power plants
The logical principal: “Product”, “Process”, and “Execution”



Rating	Point range	
	From	To
AAA	981	1000
AA	921	980
A	861	920
BBB	801	860
BB	741	800
B	681	740
C	621	680
D	≤	620

* Under development

Introduction and background to the rating system
Business case for manufacturers – or: “What’s in it for me?”

- Marketing effect: As one of the first movers, the rating will differentiate your product offer for some time as rating assessment capacity will initially be limited
- Certainty: The rating may serve as a benchmark vs. best practices and best available technologies
- Productivity: Depending on the findings during a 2nd level rating audit, more or less improvements can be expected provided that the conclusions from the findings turn into improvement actions – these can include a number quick wins
- Following is a neutralized example of productivity gains that resulted in several 5-points improvement on average Wp output per module (population A = before level 2 audit, population B = after corrective actions and re-audit):