

JNRC Survey & Engineering Subcommittee

Offshore Wind Claims Bulletin 2026

by Daniel Stevens (AXIS), Lukas Carbol (Niord) and Allan Tan (Allianz)

Introduction

The offshore wind sector has experienced rapid technological progress over the past 20 years. The wind turbines (WTG) currently being installed on construction projects now stand as tall as 280 meters from sea level to tip of the blade, producing over 15 MW of power each, and a number of operational wind farms now exceed 1 Gigawatt (GW) in installed capacity. The insurance market has supported the growth of this industry since its inception and continues to draw learnings from the reported claims and losses incurred. The root causes of the physical damage associated with offshore wind claims may be used to inform risk control strategies on future wind farms by identifying common trends and it is in this spirit which the following insights have been collated. This bulletin presents findings from recent claims analyses performed by three members of the JNRC's Survey and Engineering Subcommittee: AXIS, Allianz and Niord.

AXIS's insights

In March 2026, AXIS Global Energy published an analysis of global claims from offshore wind assets occurring during both the construction and operational phase with dates of loss spanning January 2021 to September 2025ⁱ. The findings depict an industry navigating complex technical risks in a competitive race to meet rapid global demand. AXIS's Sophie Draper analyzed the source of claims by wind farm 'asset' (for example wind turbine, substation, cables) and the specific component within that asset which suffered physical damage (for example the wind turbine blade, wind turbine gearbox or wind turbine generator). Some insights drawn from that published analysis are presented below.

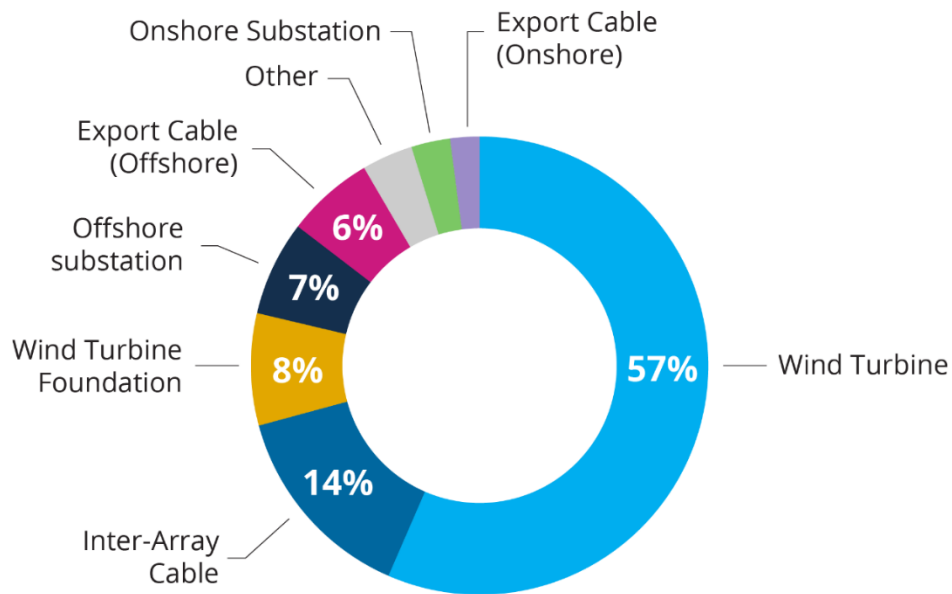


Figure 1: Percentage of claim count by project aspect. Open and closed claims, loss period: 1st Jan 2021- 1st Sept 2025 (source: AXIS)

Figure 1 shows that more than half (57%) of the claims by count were found to be related to wind turbines (exclusive of foundation and transition piece), accounting for the greatest proportion of total incurred losses in monetary terms at 37%. Comparatively, inter array cables were a distant second, in both claim count (14%) and total incurred losses. Export cables make up only 6% of claims by count but represent the largest average claim cost at \$18.8m, largely due to loss of revenue. Unlike inter-array cables, a failure of an export cable may result in the whole wind farm being unable to generate until repaired with a congruent impact on revenue. Wind turbine foundation claims follow next with an average claim of \$7.4m, reflecting the high costs associated particularly with pile running and pile rejection events. More than two thirds of wind turbine claims by count related to damage occurring to the drive-train, with one third relating to the generator. The data shows the most expensive component to remedy was the main bearing with an average claim cost of \$7.6m. Note, all monetary values are in USD (\$).

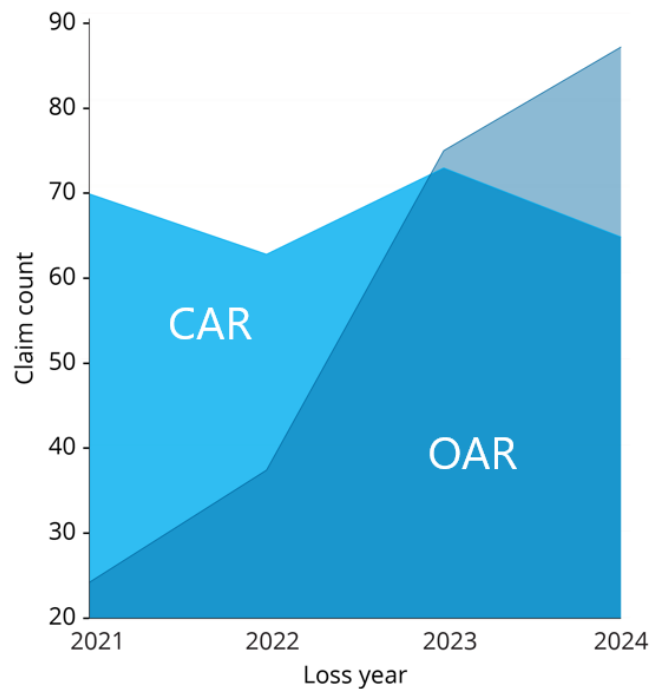


Figure 2: Claim count by loss year by policy type. Open and closed claims, loss period: 1st Jan 2021- 1st Sept 2025 (source: AXIS Capital)

Operational phase policy (OAR) claims increased in frequency over the period analyzed, while construction phase policy (CAR) claims were largely steady throughout, as shown in Figure 2. However, the average value of construction phase claims was \$6.4m, some \$2.1m greater than the operational phase equivalent.

NIORD's insights

At the 2026 Bergen Wind Academy, NIORD presented an extended version of an offshore wind claims data analysis published previously in May 2026 entitled "*INSIGHT: Blade failures - a growing driver of offshore wind insurance claims costs*". The analysis reflects NIORD claims data gathered since entering the offshore renewables segment in 2018. While in general terms, NIORD data is broadly aligned with the observations presented by AXIS, the article focused on a trend identified by looking more closely at recent policy years, from 2022 to 2025.

Cable-related losses remain the largest contributor, accounting for approximately 35% of NIORD claims costs on a 100% basis, net of deductible, with a relatively stable share over time. By contrast, the proportion of turbine-related losses increased from 34% of all costs incurred during 2018-2025 to 45% if we consider 2022-2025 in isolation. This shift is mainly attributable to blades, which alone account for a 7 percentage point increase, as illustrated in Figures 3 and 4 below. These figures show the claims cost breakdown by component and the corresponding development over the analysed periods.

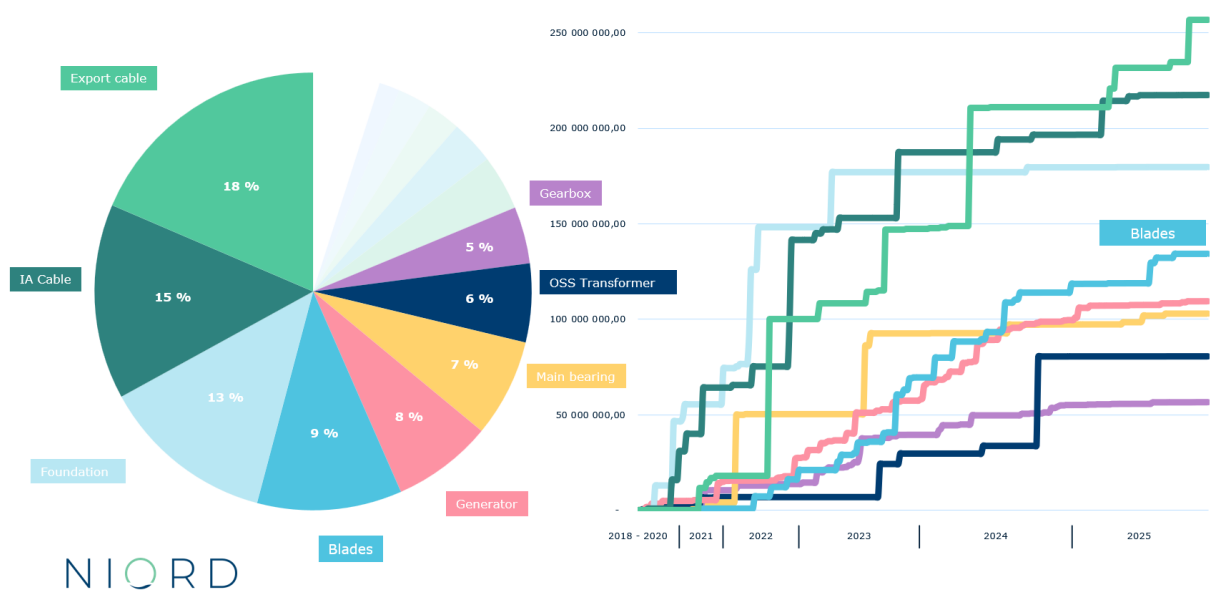


Figure 3: NIORD net claims costs on 100% basis per component 2018-2025 (policy years)

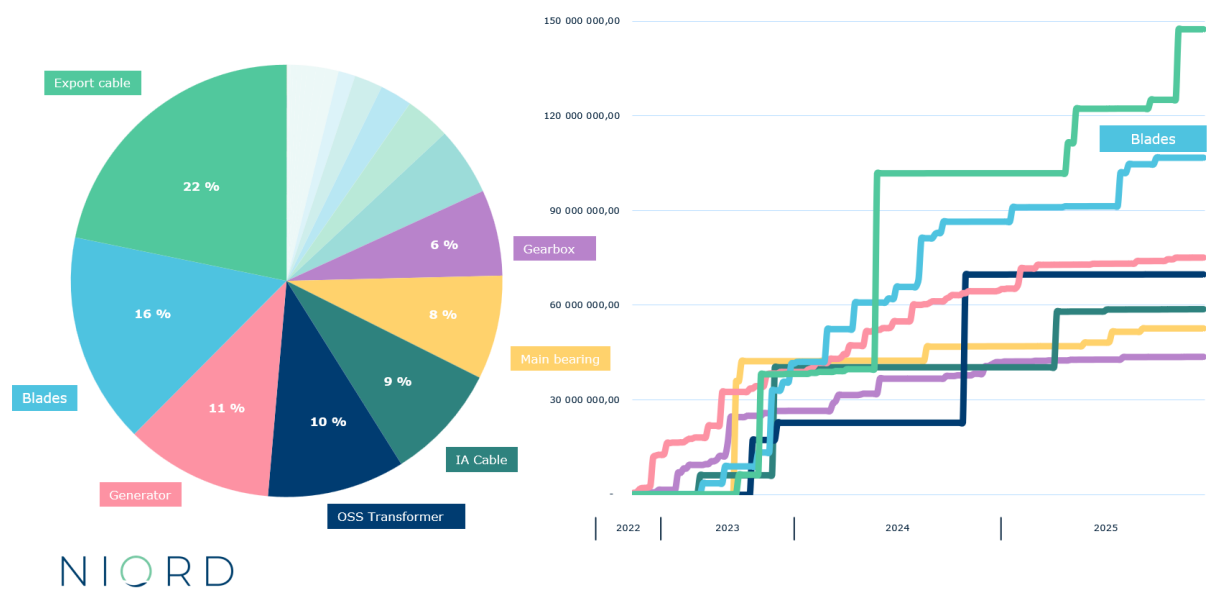


Figure 4: NIORD net claims costs on 100% basis per component 2022-2025 (policy years)

Cable-related claims also remained a relatively stable contributor in terms of frequency, representing 14% of the number of claims since 2018, with a slight decrease to 12% during 2022-2025. Similarly, blades account for 9% of claims in both analysed periods, whereas the overall turbine-related share by count increased from 57% to 63% during 2022-2025.

The data suggest that most offshore wind claims relate to turbine drive train issues, and that this trend is continuing to grow. However, alongside traditional high-cost areas such as inter-array and export cables, the cost profile of insurance claims is now also being shaped by blade-related losses.

Blades also stand apart when looking at the underlying causes of loss. If claims where causation remains under investigation are disregarded, more than 60% of offshore wind claims costs are attributable to defective workmanship, design or material. For blade-related losses, however, only 28% of costs are attributable to defects, comprising 19% workmanship-related defects and 9% design-related defects. The largest proportion of blade-related costs, 32%, is attributable to lightning, followed by handling and installation at 26%. In terms of frequency, lightning and handling/installation incidents recorded since 2018 each account for 30% of blade failures. During 2022–2025, however, handling/installation incidents declined to 23%, while lightning became the most frequent cause, representing 43% of all blade-related insurance claims.

Allianz's insights

As offshore wind projects continue to increase in size, complexity, and geographical reach, claims experience is revealing a number of recurring risk themes across both construction and operational phases. While offshore wind technology has matured significantly, losses continue to arise from foundations, subsea cables, major electrical equipment, and rotating machinery, highlighting the importance of effective risk management throughout the asset lifecycle.

During the construction phase, **foundation** installation remains a key exposure. Unforeseen seabed conditions and offshore installation challenges can result in structural damage, compromised foundation integrity, and extensive remedial works. Such events reinforce the need for robust site investigations, effective seabed preparation strategies, and close monitoring of installation activities.

Subsea cables continue to represent one of the most significant sources of claims within offshore wind developments. Losses may originate during manufacturing, transportation, handling, installation, burial operations, or subsequent service. Cable failures are often aggravated by the complexity of offshore repair campaigns, which typically require specialist vessels, favourable weather conditions, and carefully planned marine operations with Marine Warranty Surveyor oversight. Consequently, relatively localised damage can result in substantial repair costs and lengthy project delays as seen in a number of recent major subsea cable claims, where over 75% of the repair cost was attributable to 'marine spread', i.e. vessel, equipment and crew costs. Strong quality assurance, disciplined installation procedures, and careful management of offshore operations remain essential risk mitigation measures.

As projects transition into operation, claims increasingly involve generators, gearboxes, bearings, and other rotating equipment. The growing scale of offshore wind farms creates the potential for common-mode failures, where similar components fail across multiple turbines over a relatively short period. These events can significantly increase loss severity and emphasise the importance of condition monitoring, inspection programmes, reliability assessments, and thorough root cause investigations.

Business interruption is also becoming a more prominent driver of losses. Offshore repairs are highly dependent on vessel availability, suitable weather windows, and replacement component lead times, which for critical equipment such as large power transformers can extend to several years. As a result, generation outages can be prolonged, particularly where export systems or critical electrical infrastructure are affected with lost revenue potentially exceeding the costs of the underlying physical damage. The risk is further compounded by the growing scale and interconnection of offshore transmission networks, where a single failure in shared export or grid connection assets can impact multiple wind farms simultaneously, resulting in significant accumulation losses.

Overall, current major claims experience demonstrates that offshore wind losses are driven not only by physical damage but also by repairability, logistics, supply chain constraints, and offshore weather dependency. The key lessons remain the importance of rigorous quality management, disciplined construction controls, proactive asset monitoring, and robust contingency planning to improve risk resilience and reduce loss severity.

Summary

Whilst the specific claims data used and analysis approach taken may vary by insurer, some common themes emerge from each of the above commentaries:

- An uptick in the frequency of claims relating to wind turbines over the past 5 years, with drive-train components being the most expensive to remedy but blades showing the most rapid increase of overall proportion on insurance claims costs;
- Cable claims continuing to dominate in terms of the average monetary value of each claim, with marine spread making up a significant proportion of them;
- Business interruption costs being driven by vessel availability, suitable weather windows, and replacement lead times, often overtaking the cost of repair or replacement especially when multiple arrays of wind turbines are taken offline by a cable or transformer failure.

In presenting the above findings it is hoped that risk mitigation strategies in the areas highlighted above will be given a renewed focus by insurers, project sponsors and contractors to collectively reduce the recurrence of losses with avoidable root causes.

ⁱ [Home - AXIS - Managing Risks and Challenges in Offshore Wind](#) (2026)