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# Renewable Energy Losses

## Learning in a rapidly evolving sector from trends, claims, and underwriting shifts across global markets.

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# Executive Overview

- The Renewables Market
- Nature of Losses, current, anticipated and their considerations
- Policy Architecture is harmonised between CAR and OAR
- (Un)expected lessons
- A change in interests: Food for thought

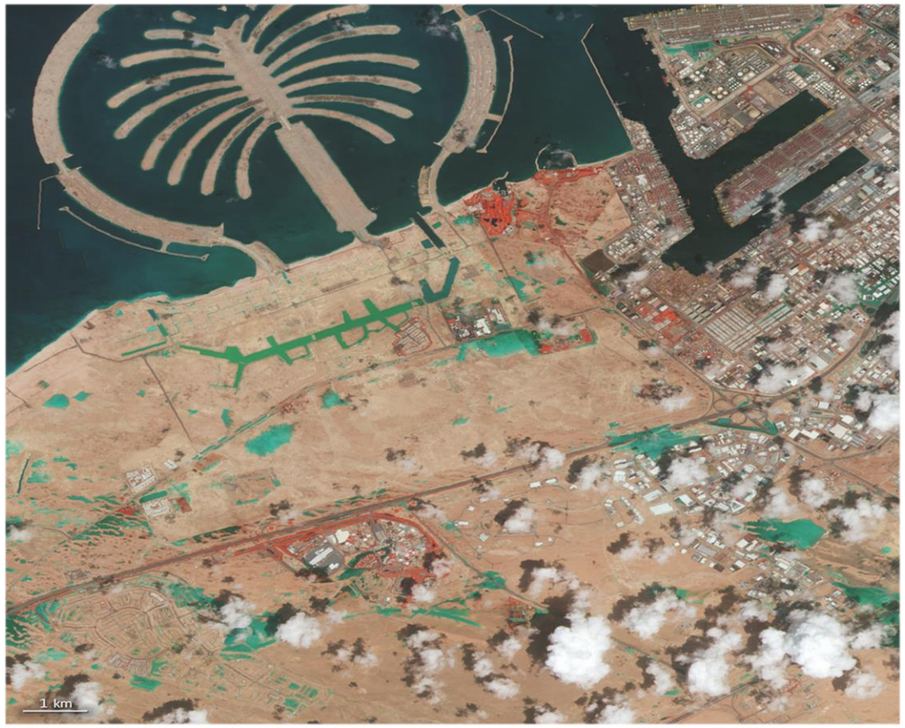
# The Renewables Market

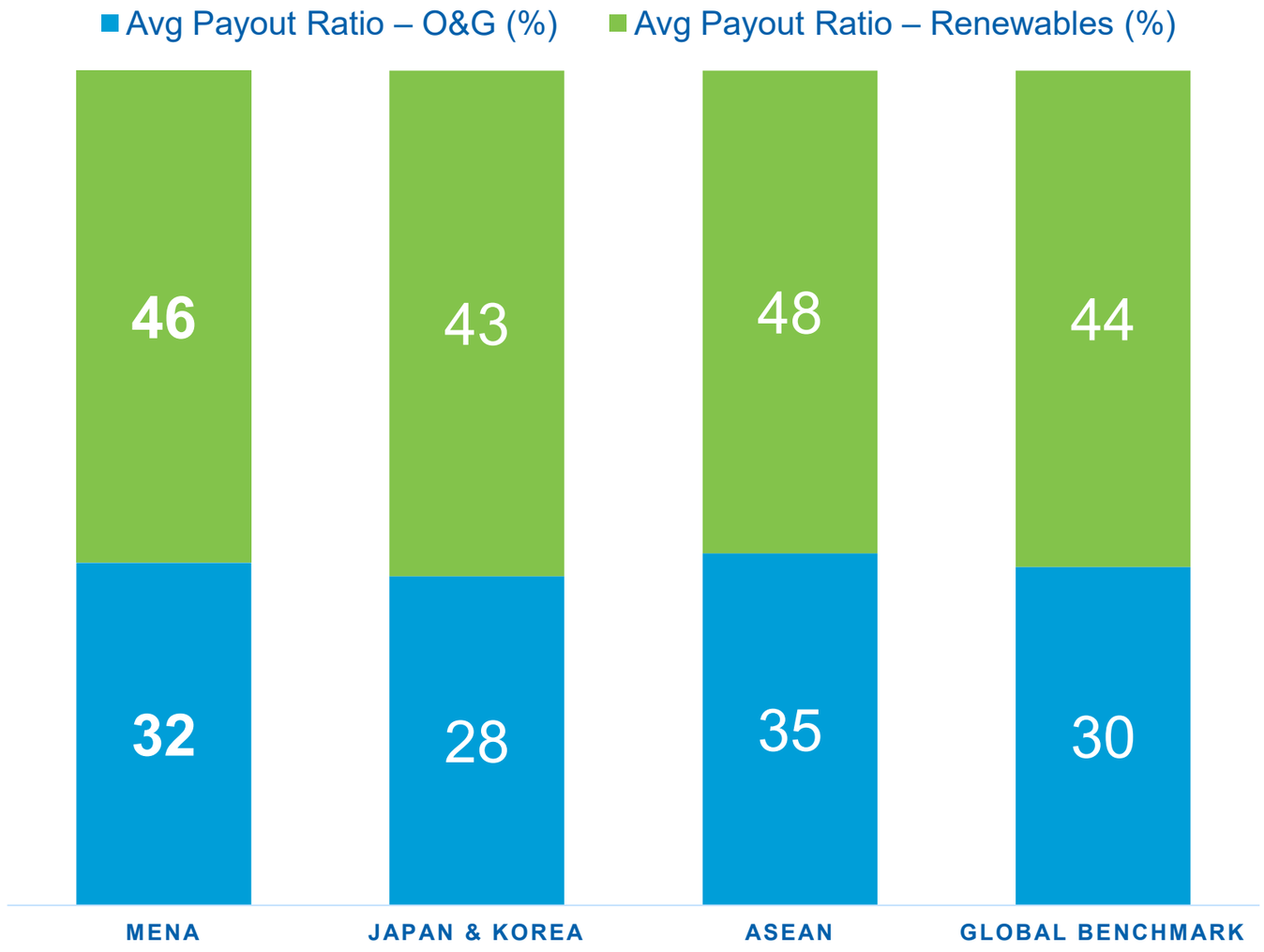
| Global Renewable Industry | What this translates to in the Insurance Market |
|---|---|
| • 1/3 of the worlds power is generated by Renewables<br>• Set to grow to 45% by 2030 as intended before the change in US Administration Policies<br>• Investments were targeting 2 Trillion by 2030<br>• USD 570 B of investment was achieved to Date.<br>• It seems achieving 1.5 T by 2030 is quite ambitious<br>• Asia, led by China dominated this investment growth trajectory | • USD 8 Billion in GWP<br>• According to Swiss Re, if investment targets are achieved, the anticipated premiums are expected to reach USD. 237 B, compared to USD 22 B acquired from Oil and Gas.<br>• Conservative Estimates stand at USD 30B<br>• Average Solar damage losses are approximately USD 60 M<br>• Trajectory of Insurance Renewable premiums is dominated by the US |

# Anatomy of the Loss

*Loss Severity Gap: Renewables vs Conventional Energy (2024–25)*

Renewable losses now average 40% higher payout ratios than Oil & Gas globally, driven by flood, hail, and DSU exposures.

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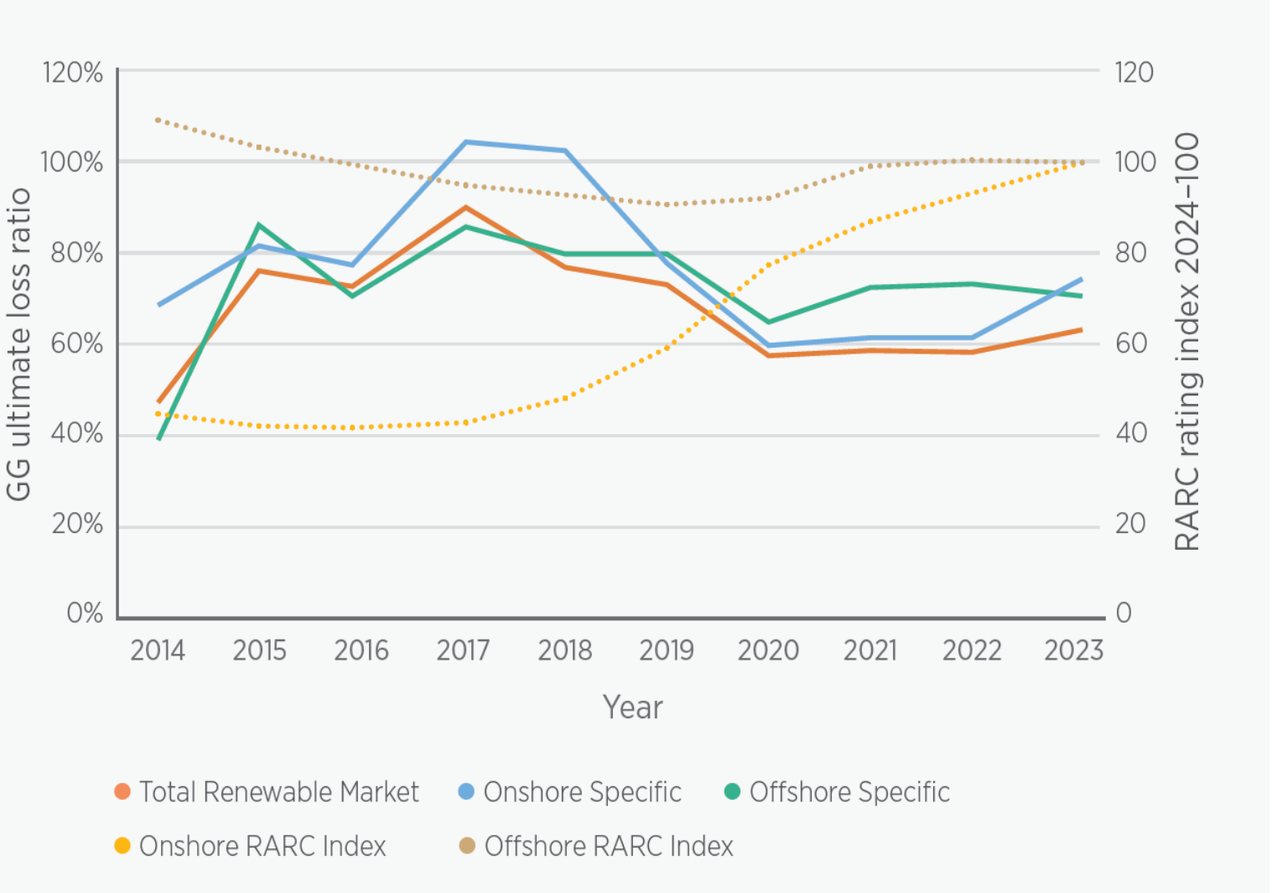
# Noteworthy Loss Events 2023–2025

| | |
|---|---|
| **Texas Hailstorms (2019 and 2024)**<br><br>Approximate losses of USD 70M respectively | **Noor 1, Solar Farm UAE Flood (2024)**<br><br>Estimated Loss payout ceiling at USD 600m |
| **Northern Europe Windstorms**<br><br>USD 500–700M, aggregation across multi-country portfolios. | **India Hydropower Plants (2023)**<br><br>Initially estimated more than 10 times its actual loss value of USD. 126M |



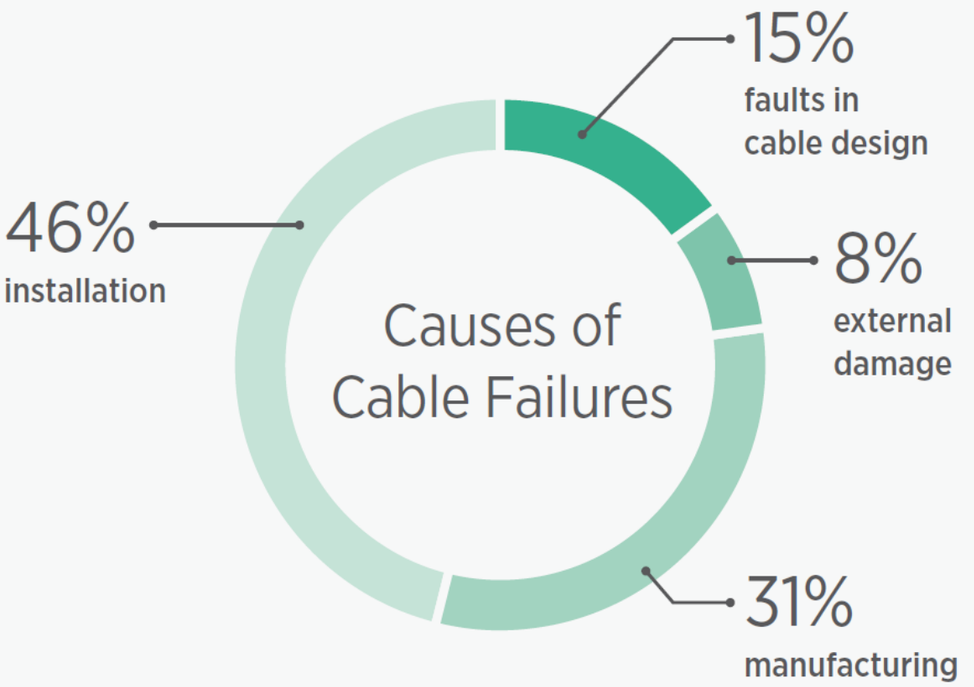
# The Loss Matrix

## Project Design Errors/Implications

- Subsea cable failures account for some of the highest losses to the Industry and account for approximately 75% to 80% of the claims with costs estimated at approximately USD 10 million per claim.

**Figure 3:** Causes of Subsea Cable Failures in Offshore Wind

Source: ORE Catapult *Data taken from the operational phases of offshore wind farms



# The Loss Matrix

**Serial Defects and/or Suppliers Design Defects:**

Manufacturing, design and material deficiency Problems applicable to Wind, Solar, Hydro or BESS

- Manufacturers Warranty
- Named Insured/or Co Insurance?
- Definition of Damage and the narrow application of LEG 2
- Who is liable?
- Serial Loss limitations

# The Loss Matrix

**Extreme Weather Events**

- Primary NatCats
- Secondary Perils – Severe Convective Storms
- Regular Review of Fire Procedures with the increase of wildfires – Isolate the equipment
- **How do we guard the risk properties?**
- Sense and Stow, Careful section of the sites, continual cross examination and maintenance considerations

An Example is Typhoon Yagi

**Influences of Cross Boarder Grid Implications such as sabotage**

- Interconnected cross border Grids between cooperating nations
- Clearly Defining Sabotage to cater to an All Risks wording

# Clause Convergence

## 1 | Construction Phase

**Policy**: CAR / EAR

**Pre-2024 wording:**
“Delay in Start-Up (DSU) extension up to 180 days.”

**Post-2024 revision:**
“DSU limited to 90 days; weather delay without physical damage excluded.”

**Market note:** reinsurers added weather-delay sublimits (+50–100 % deductible increase)

## 2 | Testing & Commissioning

**Policy**: Interim cover (energisation stage)

**Pre-2024 wording:**
“Mechanical and electrical failure during testing.”

**Post-2024 revision:**
“Extended testing windows trigger DSU audit; 90-day cap retained.”

**Market note:** supply-chain delays exposed policy-transition gaps.

## 3 | Operational Phase

**Policy:** OAR

**Pre-2024 wording:**
“All Risks including machinery breakdown and natural perils.”

**Post-2024 revision:**
“Hail/flood sublimit USD 5–10 M typical; BI extensions subject to audit; cyber triggers excluded.”

**Market note:** harmonised suit-limitation (12–24 months) across regions

# Market Repricing: From Broad Cover to Tight Terms

*Global repricing driven by CAT and DSU clustering*

| Before 2024 | After 2024 |
|---|---|
| **DSU Coverage:** up to 180 days | **DSU Coverage:** capped at 90 days; weather delay without physical damage excluded |
| **Flood Sublimit:** Not specified / full policy limit | **Flood Sublimit:** USD 5–10 M typical; separate aggregate cap introduced |
| **Deductible:** USD 500k all risks | **Deductible:** USD 2–3 M for flood, hail & storm perils |
| **CAR → OAR Transition:** loosely defined testing overlap | **CAR → OAR Transition:** harmonised wordings; suit-limitation aligned 12–24 months |
| **QA/QC oversight:** contractor-driven | **QA/QC oversight:** reinsurer-mandated joint loss adjuster + telemetry evidence |

# Expected Primary and Secondary Peril Events

- Asia – Typhoon Yagi, September 2024 – Vietnam, Philippines and the South China Sea



- USA, NatCat by far overreaching the losses anywhere in the world

# The Unexpected

- 48 hours of rainfall → USD 7 of Insured loss across all classes of business
- Damage to solar farms, substations, The most sophisticated sewerage network in the Gulf and open yards with thousands of new vehicles ready for export.
- Flood, Sandstorms and Extreme Heat exposures are now directly impacting solar grid assets, raising both CAR and OAR claim frequencies.

CAR - Benban Farms Fire loss during Construction

## United Arab Emirates – Flash Flood Catastrophe (April 2024)

The April 2024 UAE floods generated the region's largest insured catastrophe in a decades.

Record precipitation caused widespread inundation of solar farms, substations, and power assets. Aggregate insured losses exceeded USD 2.5 billion, cutting across Construction All Risks and Operational All Risks portfolios.

Source: Middle East Insurance Review Apr 2025; HDI Global MENA Outlook 2025.

# A change in interests: Food for thought

## Key insights:

- A change in global policies overnight can put a dent in renewable investments
- With the US being the primary driver of the insurance renewable market, Insurers should gear up for this litigious territory or alleviate wording ambiguity
- Bridge the gap between the Reinsurance Markets and Local Cedent market
- Renewables sources are now Integral to private dwellings that connect to the Grids.

Renewables does not appear it will only change how we generate power, it may change the way insurance contracts are linked across the board.

# Q&A