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Michael Scaramo

# Munich Re's Climate Ambition & Insurance Evolution



## Scaling Up 2023

Derek Griffin, PhD  
GreenTech Solutions

Munich RE 

## Strong Business Partner for the Energy Transition



Munich RE 

> **140 years** of risk expertise

> **50 years** climate change expertise

> **10 years** in renewables

AA- rated company

Global organisation with regional go-to experts



- 2021 Balance Sheet €312.4bn
- 2021 Group Result €2.8bn
- ~40,000 employees worldwide



- Significant & risk-adequate capacity guaranteed by strong financial position
- In-depth expertise due to industry experts in-house
- Customized, long-term risk transfer solutions

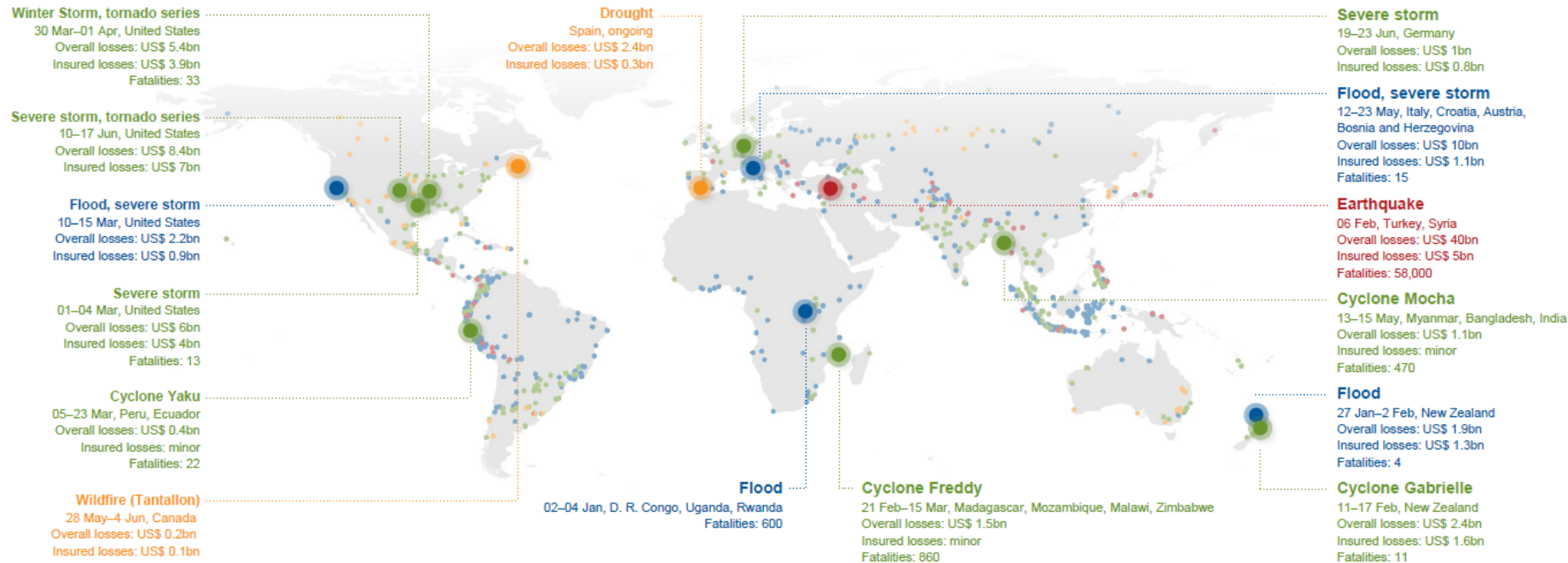




- UN Secretary General: “the move from fossil fuels to renewables is happening – but we are decades behind. We must make up time lost to foot-dragging, arm-twisting and the naked greed of entrenched interests raking in billions from fossil fuels”
- NYC Climate Week 2023

# Nat cat loss events in the first half of 2023

Natural disasters caused overall losses of US\$ 110bn worldwide



**Geophysical events**  
Earthquake, tsunamis, volcanic activity

**Meteorological events**  
Tropical storm, extratropical storm, convective storm, local storm

**Hydrological events**  
Flood, mass movement

**Climatological events**  
Extreme temperature, drought, wildfire

Significant catastrophes (based on the number of fatalities, overall and insured losses)

Small, medium and large loss events

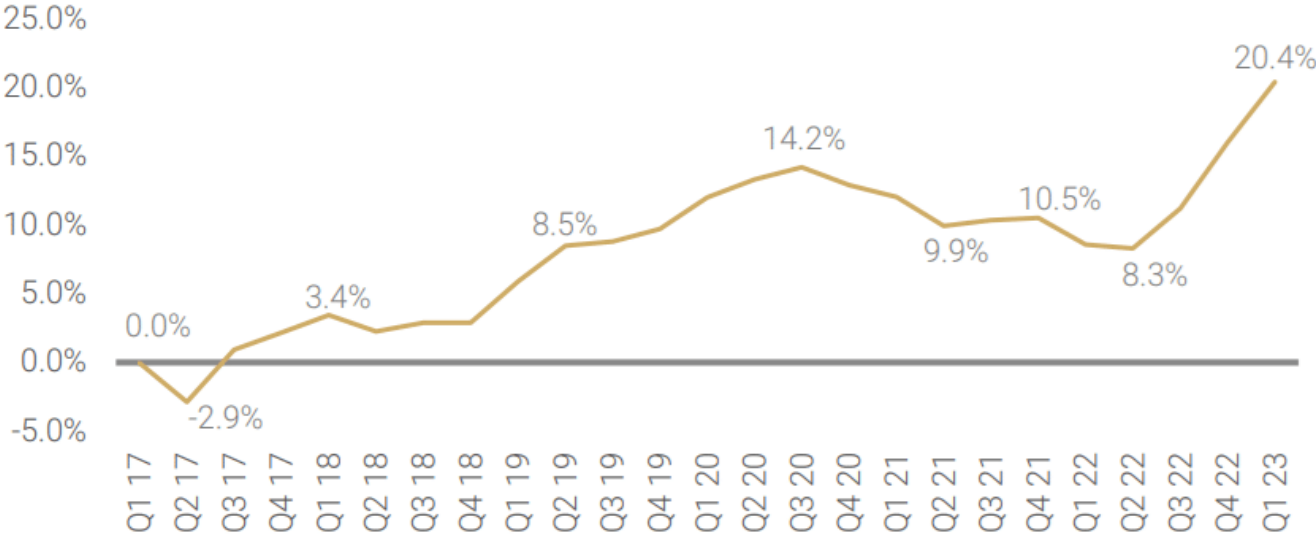
# Commercial Property Insurance Premiums on the Rise

## Estimated Insured Property Losses, U.S. Natural Catastrophes, 2013-2022 (1)

(\$ billions)

Year	In dollars when occurred	In 2022 dollars (2)
2013	\$24.1	\$31.0
2014	23.2	29.2
2015	22.9	28.8
2016	31.6	39.3
2017	130.9	158.7
2018	60.4	71.6
2019	38.8	45.2
2020	81.0	93.3
2021	93.3	102.7
2022	98.8	99.9

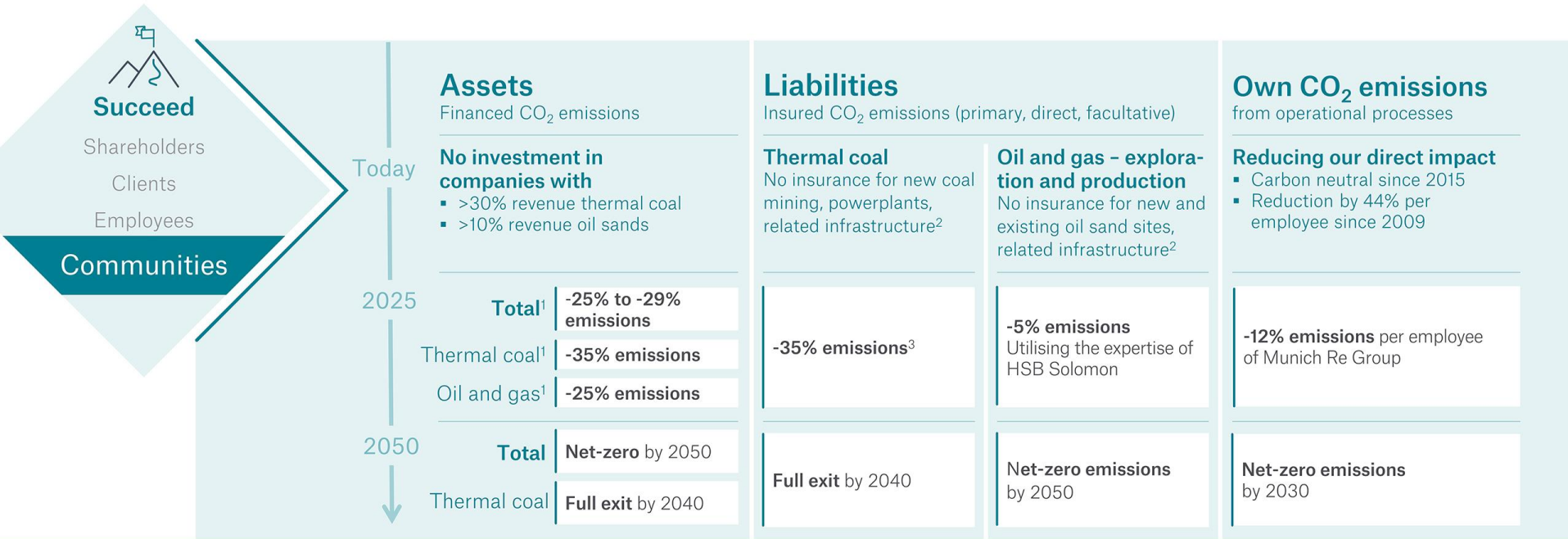
Premium Change for Commercial Property, Q1 2017 - Q1 2023



Commercial Property/Casualty Market Index

# Munich Re Group Ambition 2025 and beyond

Lead by climate action – leveraging role as investor, underwriter and audible public voice



## Leading with high and credible ESG standards

<sup>1</sup> Based on sub-portfolio of equities, corporate bonds and real estate at the end of 2019.

<sup>2</sup> Minor exceptions apply such as sites in countries with <90% electrification rate.

<sup>3</sup> "Produced tonnes of thermal coal / MW capacity insured" used as proxy for emissions; base year 2019.



# Tackling Climate Change Together

Munich Re Climate & Sustainability Initiatives



- >€8 bn Annual Clean Tech Investment
- Climate-tech Accelerator Program
- Munich Re Ventures CleanTech Fund
- \$1.25 bn US Green Bond issued in 2022
- Extreme Weather Climate Campaign
- Tree Trust Afforestation Project
- EU ETS Carbon Market Product to reduce available Carbon Allowance Supply

**Accelerator / Start-up Programme with Climate-KIC**

**Ecosystem-based Adaptation**  
 (conservation/restoration of ecosystems like forests / drylands for climate change adaptation and mitigation)



Carbon Removal ClimAccelerator  
*Call for Start-Ups*

**APPLY NOW!**  
 DEADLINE: 10 SEPTEMBER



# All established and emerging technologies can be covered by Munich Re Performance Guarantee Insurance

For manufacturers, projects and investors

Current MRE Canada Opportunities

## Solar Energy

PV Warranty Insurance backing your solar investment | Munich Re



## Wind Energy

Wind farm insurance: on- and off-shore | Munich Re



## Energy Storage

Electrical Energy Storage Systems Insurance | Munich Re



## E-Mobility

Enabling the e-mobility transition | Munich Re



## Hydrogen

Securing the power of Green Hydrogen | Munich Re



## Waste2Value

Bioenergy Plant Performance Insurance | Munich Re



## Geothermal & Geological risks



Carbon capture + storage  
Carbon Credits

GTS



~ 900 projects in green tech

~ 55 GW insured

Projects in ~ 80 countries

Green Tech Solutions Whitepaper

Technical risks in the production of green hydrogen from the perspective of a (re)insurer



# US Inflation Reduction Act (IRA)

## Supporting Key Clean Energy Industries

- “Clean Electricity” Investment (ITC) and Production (PTC)
- Solar, Wind, Biomass, Hydro, Geothermal, Landfill Gas, Waste Incineration, etc.
- “Clean Hydrogen” Production and Distribution
- Nuclear Energy
- Carbon Capture Storage
- Biofuels / reduced emission fuel Production, Blending, and Distribution
- Energy Storage – Battery, Thermal, EV and Grid

### Incentive Multipliers:

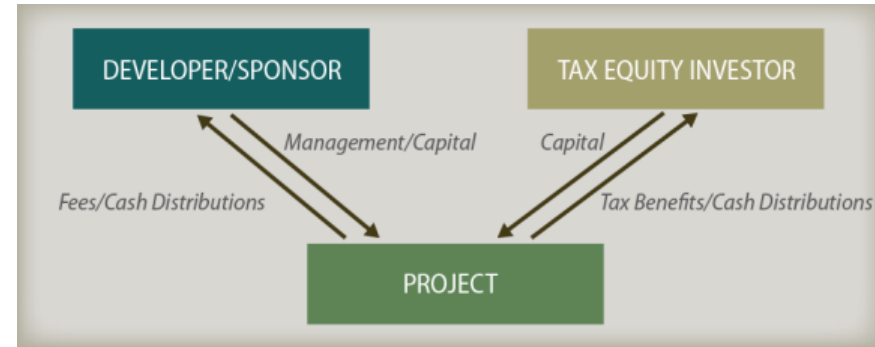
- Domestic Materials and Manufacturing
- Specified Labor Requirements on Wage and Apprenticeships

# Overview of Traditional Tax Equity Structures

*Tax Equity Financing structure has been in-use for many years and has contributed significantly to the growth of renewables.*

- Tax Equity investors invest in a project that will generate tax credits in the future. These investors will pay somewhere between 85¢-95¢ for \$1.0 worth of future tax credits.
- Tax equity investors, are generally sophisticated investors with considerable due diligence capabilities. Bank of America and JP Morgan have been two of the largest tax equity investors.
- Tax Equity investments have increased significantly over the past few years:
  - 2017: \$10 billion
  - 2021: \$20 billion
  - 2022: \$18-\$19 billion
  - Post IRA (Tax Equity + Tax Credit): \$40-\$75 billion

## General Tax Equity Structures



## Inflation Reduction Act (“IRA”) – A true game changer in spurring climate investments

*IRA is estimated to inject \$370 billion into green investments from tax credits alone from the U.S. Government, over the next 10 years.*

### Transferability of Tax Credits

- One of the landmark changes in IRA is that it allows companies to sell tax credits to other companies for cash.
- Pricing (expected between 85¢ and 95¢) of these tax credits vary by **technology**, the **creditworthiness** of the seller and **time period** between when the purchase price must be paid and when the buyer can apply the tax credit to offset a tax liability.
- In most situations, the buyer of these tax credits assume all responsibility to repay the IRS (with penalties, interests etc.) should the claimed tax credit amount is successfully challenged by the IRS.

### Risks for Tax Credit Buyers

- Per IRS, the tax credit buyers assume substantially all the risks of a successful IRS challenge leading to a disqualification, reduction or recapture of tax credits already issued or anticipated to be issued in the future.
- **Legal Risks:** Structuring, Qualification, Recapture. These are risks current tax equity insurance generally covers.
- **Technology Risks:** For PTCs, technology risk adds another layer of risk as total amount of tax credits generated is dependent on the amount (e.g., clean power, hydrogen etc.) produced.

# Tax Credit Insurance

*The transactional nature of a tax credit sale transaction makes it imperative for the tax credit buyers to seek indemnity from a credit worthy counterparty against any disallowance or recapture*

## Key Issues in a Tax Credit Sale Transaction

- Unlike tax equity investors, who will have some recourse on the assets, the tax credit buyer will not have any recourse.
- New tax credit buyers may not be sophisticated counterparties to perform full due diligence on both the legal and the technology risks of a Project.
- **Climate friendly investments cannot take-off without these tax credit buyers' interest in purchasing these tax credits.**

## Tax Credit Insurance can Bridge the Gap

- IRS guidance has identified tax credit insurance as the preferred means to protect tax credit investors.
- Tax credit insurance can not only provide coverage for the 'Rep & Warranty' provided by the Seller but can also cover technology risks associated PTC credit generation
- Given the lack of recourse and sophistication as well as the transactional nature worrying a tax credit buyer, climate investments will not grow to a level necessary to achieve climate change goals unless risks for tax credit buyers are addressed.

Unique Opportunity for the Insurance Market to Combine Performance Guarantee Insurance with Tax Credit Insurance to Unlock the expected \$40-\$75 bn Annual Tax Equity/Credit Market



# Green Tech Solutions

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