



Speaker

Wim van Hyfte, PhD

Global Head of Responsible ESG Research & Investments **Member of the Executive Committee**



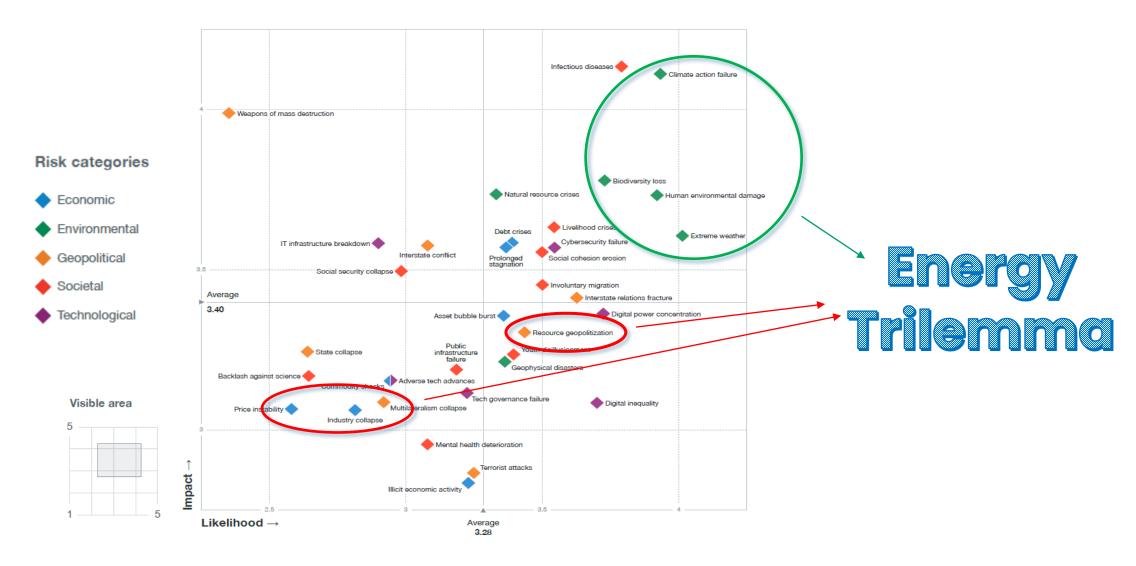


The energy trilemma.

Understanding the transition .

Investing with impact.

ESG Risks Dominate the Global Landscape.



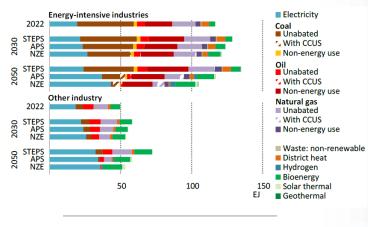


SEPT 2024

The Energy Trilemma



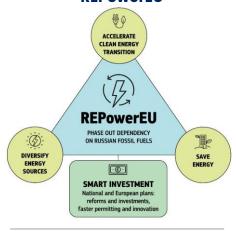
Energy demand by fuel for energy –intensive and other industries by scenario



Achieving climate ambitions in industries relies on electrification

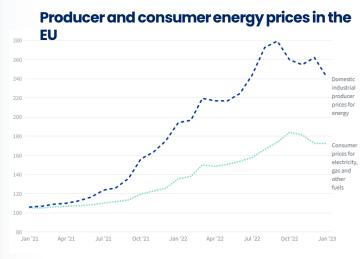


Transforming EU's energy system through REPowerEU



In 2021, the EU's 45% dependence on Russian gas prompted decisive actions from EU governments.





Russia's war and the use of energy as a political weapon had a devastating impact on energy markets



Transition risk and performance

Searching for solutions to climate change issues can generate risks and opportunities

Climate change has a **material impact** on companies and investments. It results on the existency of transition risks and opportunities, as splitted below:

Risks

Policy and legal risks

Technology risks

Market risks

Reputation risks

Opportunities

Resource efficiency

Energy source

Products/Services

Markets

Resilience

Transition risks can result in changes of:

PRICES OF ENERGY RESOURCES

> Changes in **prices of energy**



- > For example, reduction of renewable energy costs, and increase in supply of renewable energies, have driven down demand for the highest-polluting energies
- > Risks of stranded assets



ANTI -POLLUTION TAX

- > **Rising CO2 prices** due to changes in anti-pollution taxes and stricter carbon markets.
- > Emissions Trading System (ETS) based on Cap principle



FINANCING & INSURANCE RISKS

Financing and insurance risks for companies active in high-polluting sectors or involved with obsolete energy activities.



2 Key Solutions to play for a clean future: mitigate & adapt

ALTERNATIVES

- Waste-to-energy
- Wind
- Solar

-) Hydro
- Geothermal
- 2nd gen biofuel

STORAGE

- Lithium batteries
- **High Density Batteries**
- Hydrogen

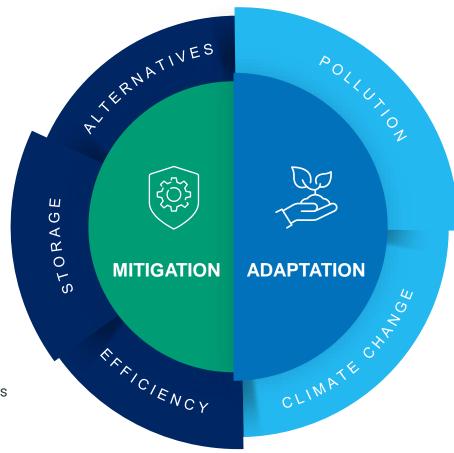
EFFICIENCY

- Enzyme technology
- Electric vehicle
- Advanced materials

Power electronics

Marketing communication for Professional & Qualified Investors

- **Smart City**
- **Smart Buildings**



POLLUTION ADAPTATION

- Waste-to-energy
- Recycling
- Air treatment & Pollution control
- Waste management & Technology
- Shared Economy

CLIMATE CHANGE ADAPTATION

- Enzyme technology
- Water management
- Water smart meter
- Wateer infrastructure & technology



Getting Impact Right ... is Hard



Positive Social / Environmental Impact Alongside Financial Return

- A sustainability objective
- The aim of directly or indirectly improving or pursuing positive environmental and/or social outcomes

No Hierarchy of Investment Approaches



From Additionality to Materiality

- ESMA & FCA
- Contribution to Positive Outcomes
- Theory of Chance / Activities based assessment, that is, defining
 - The primary and Secondary channels achieve a positive outcome for the environment and/or Society (Theory of Change)

Business Activities & Engagement



Define KPI's on Impact and Contribution

- Measure & Monitor
- Report
- KPIs
 - How investment activities contribute to achieving the impact (ie their investor contribution) as well as how the assets are achieving the impact.

Qualitative & Quantitative



Impact, materiality and business activities

Business Activities Score & Materiality

KEY SUSTAINABILITY CHALLENGES

Key Sustainability Challenges material

for this sector?
No / Yes?

Company's Business Activities Score

+100





If yes, to what extent?



XX %



XX %



Health & Wellness XX %



Digitalisation

XX %



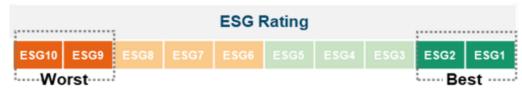
Demographic Evolution

XX %

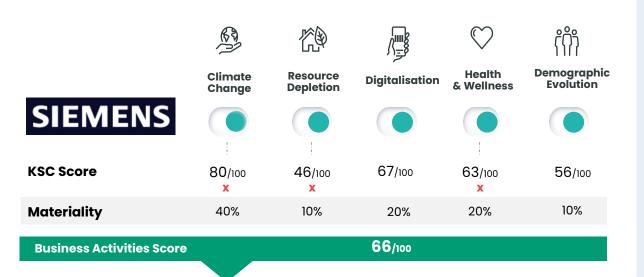
Materiality of Key Sustainability Challenges (KCS) for Each Sector

- Candriam's proprietary ESG analysis allows for a **forward-looking** assessment of **companies' sustainability.**
- Sector-level double materiality assessment to determine the exposure to each KCS
- Taking into account CAPEX, OPEX, and revenues (forward-looking)
- Aligned with the general philosophy of the EU Taxonomy on sustainable activities.

As a result of the combination of the Business Activities Analysis and Stakeholder Analysis, each company receives an **ESG Rating**



ESG Business Activities Analysis in practice



80 - Climate Change

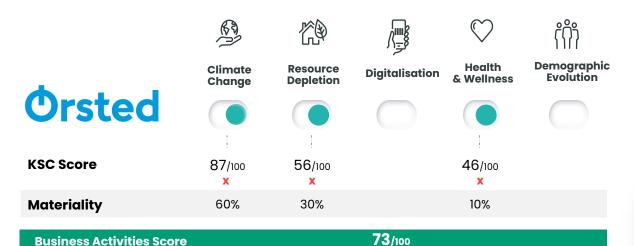
Focus - Solutions to Decarbonize other Industries

- "Enabler" solutions across all segments, allowing decarbonization of highemitting sectors Transport, Industry & Buildings
- > Digital Industries automaton & motion & energy efficient products & Systems
- > Smart Infrastructure Smart building management & Grid equipment & systems
- > Mobility battery & hydrogen trains



Low Carbon Solutions 30-50% High R&D (7.8%)

ESG Business Activities Analysis in practice

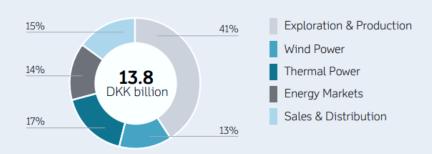


87 - Climate Change

Focus: GHG emission of power generation

- › Wind offshore/onshore Power Generation (score: 100) (73% EBITDA): zero carbon emissions and does not produce harmful SOx, NOx or mercury emissions
- > Coal Power Generation (0) (4% EBITDA): dirtiest power source, between 800 1000qCO2/kWh
- > Biomass Power Generation (35) (23% EBITDA) for CHP plants: CO2 release while burning biomass + risk of productive capacity loss

EBITDA 2011



- The company is on track to reduce its scope 1&2 emissions from generation by **98% in less than 20 years (2006–2025)**
- One of the very few companies in the world (less than 10) to have committed to **Net Zero** on its full value chain (scope 1,2,3) by 2040

EBITDA 2021



ESG Business Activities Analysis in practice

Business Activities Score & Materiality

KEY SUSTAINABILITY CHALLENGES

Utilities companies

Climate Change

Is this KSC material?

Solar power generation

Coal power generation	0/100
Natural gas power generation	30/100
Hydroelectric power generation	80/100
Wind power generation	100/100





100/100

Investing with impact



ESG Research

25 years

of successfully combining sustainability and financial objectives



Extensive in-house resources

- Experienced, dedicated ESG Analysts
- > Proprietary ESG database
- In-house sector and country specific models



Stewardship

Impactful active ownership

- Dedicated Engagement & Voting Team
- > Proxy Voting Policy since 2003
- Ongoing dialogue with issuers

Use our voice as an active investor **to**

- > **Encourage** transparency,
- Foster sustainable practices
- Support investment decisions.



Sustainable investments across

- Asset classes
- > ESG Thematic innovation
- Tailor-made sustainable solutions

Partner

to investors in their journey towards sustainability through various ESG-related services





Thank you for your attention.





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