Mitigating Climate-related Financial Risks in the Energy Sector

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Climate-related financial risks

- Physical risks
- Transition risks
  - Policy and legal
  - Technology
  - Market
  - Reputation
The global carbon budget

2315 GtCO₂

2810 GtCO₂

495

Total carbon budget for 50% chance of success of staying below 1.5°C of global warming

CO₂ emitted by the fossil fuel industry up to end 2019

Carbon budget left from beginning of 2020

At current rate of 43.1 GtCO₂/year the 1.5°C carbon budget is exhausted in 11.5 years.

What are the implications for the industry and the drivers for the low-carbon energy transition?

Source: Carbon Tracker, January 2020
Stranded asset risks in the energy sector

For the oil and gas sector:

- Oil and gas majors are exposed to stranded asset risk in a low-carbon world…*  
- $2.2tn at risk by 2030  
- …and since 2018 they have invested $50 bn in major projects that undermine climate targets and threaten shareholder returns.
- Majors’ production cuts needed
  - To stay within budget, majors need to reduce upstream production from current levels by 35% by 2040.

For the power sector:

- To meet the global warming target set out in the Paris Agreement, 1 coal unit will need to close every day until 2040.

Is global coal capacity profitable?

- 2018: 42% unprofitable
- 2040: 72% at risk of becoming unprofitable
- Due to combination of renewable energy costs, carbon pricing and air pollution regulations.

Energy transition drivers:

- Renewable electricity costs less than fossil fuel electricity in 2/3 of the world**.
  - According to BloombergNEF
- Solar, wind and batteries costs fall by 15-20% for every doubling in capacity**.
  - x2 capacity
  - -15-20% cost

When will fossil fuel demand peak?

- In many cases it has already peaked:
  - European fossil fuel demand: 2006
  - Global coal demand: 2013
  - Global ICE cars demand: 2017

Source: Carbon Tracker, January 2020
The implications are clear

• To meet the Paris Climate Goals and avoid catastrophic climate change, our economies need to be rapidly de-carbonised
  – More than 80% of all proven fossil fuel reserves will become stranded resources
  – Investments in such resources may become stranded assets

• Renewable energy has become a competitive alternative to fossil fuels

• The energy sector needs to become part of the solution by:
  – Phasing out fossil fuel
  – Investing large-scale in renewable energy