INTERNATIONAL DIRECTORS SUMMIT 2022

ICDM Institute of Corporate Directors Malaysia

Race to net zero: Climate risk, stranded assets, stranded humans

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Our speaker for this masterclass

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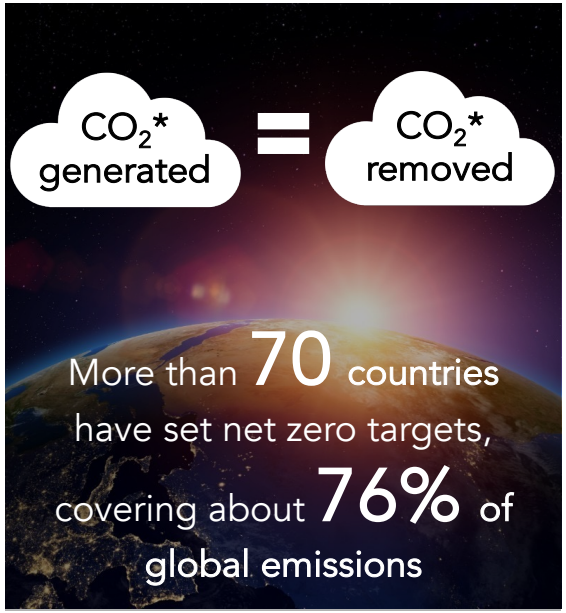
There are growing commitments to achieving net zero emissions

Note:
- *This list is not exhaustive*
- *Definition of net zero may vary across peers. Information on this slide is based on peer's disclosure in their Sustainability Report and SBTi website*

What is net zero?



Local companies have committed towards achieving net zero

Malaysian Resources Corporation Berhad	Petroliam Nasional Berhad	Maybank Banking Berhad	Tenaga Nasional Berhad	Bursa Malaysia Berhad
Net Zero by 2040	Net Zero by 2050**	Net Zero by 2050	Net Zero by 2050**	Net Zero by 2050
Axiata Group Berhad	Sunway Berhad	Malaysia Airlines Berhad	FGV Holdings Berhad	MSM Malaysia Holdings Berhad
Net Zero by 2050	Net Zero by 2050	Net Zero by 2050**	Net Zero by 2050	Net Zero by 2050

Source: EY Desktop Research (22 September 2022); United Nations Net Zero Climate Action (24 September 2022)

*Legend: *Carbon dioxide **Net zero aspiration*

What are driving the actions?

From the regulators and investment community….

- Regulators and central banks are **mandating the disclosure of climate related information**, risks and performance, intent on incorporating them within financial filings
- Investors and shareholders are also driving the **uptake of improved climate change disclosures.**
- **Alternative savings option centered on environmental, social, and governance (ESG) concerns**, allowing members to manage their funds based on their personal values

Increasing stakeholder expectations

From the consumer….

- Consumers are making **purpose driven decisions** when selecting products/service providers
- The market is shifting towards lower carbon footprint options from **companies with commitments on carbon mitigation**

From the board and c-suite….

- Companies are increasingly **launching industry initiatives, new commitments/products** towards a low carbon economy
- Businesses are responding. Large companies in Malaysia are increasing their commitments (e.g., net zero by 2050, net zero carbon roadmap, etc.)

Source: EY Desktop Research (22 September 2022)

Understanding climate change transition drivers is paramount in committing towards net zero

Risks

1 Regulation and legal
- Carbon pricing mechanisms
- Enhanced emissions-reporting obligations
- Mandates on regulation of existing products and services
- Exposure to litigation

2 Technology
- Substitution of existing products and services with lower emissions options
- Unsuccessful investment in new technologies
- Transitioning to lower emissions technology

3 Market
- Changing customer behavior
- Uncertainty in market signals
- Increased cost of raw materials

4 Reputation
- Shifts in consumer preferences
- Stigmatization of sector
- Increased stakeholder concern or negative stakeholder feedback

Opportunities

1 Resource efficiency and energy source
- Efficient buildings, modes of transport, production and distribution processes
- Use of supportive policy incentives
- Use of new technologies

2 Products or services
- Development and/or expansion of low emission goods and services
- Development of new products or services through R&D and innovation

3 Resilience
- Participation in renewable energy programs and adoption of energy-efficiency measures
- Resource substitutes/ diversification

4 Markets
- Access to new markets
- Use of public-sector incentives
- Access to new assets and locations needing insurance coverage

Source: CDP Climate Change 2021 Scoring Methodology *Note: This list is not exhaustive*

Climate-related regulations and policies will impact the way businesses operate across sectors

Note: This list is not exhaustive

1

Policy and Legal

Carbon Related

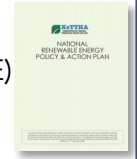
- Conduct feasibility study with the aim to create carbon taxation system
- Climate Change Act that is expected to come into force in 2024
- Bursa Malaysia is launching a voluntary carbon market (VCM) exchange by the end of 2022
- Ministry of Environment and Water (KASA) to develop a domestic emissions trading scheme (DETS)
- Revision of Malaysia's unconditional Nationally Determined Contributions (NDCs) to 45% by 2030

Finance Related

- Bank Negara Exposure Draft on Climate Risk Management and Scenario Analysis
- Bank Negara Climate Change and Principle-based Taxonomy
- Value-based Intermediation Financing and Investment Impact Assessment Framework (VBIAF)

Energy Related

- National Energy Policy 2021-2040 and Energy Efficiency & Conservation Act
- Increase renewable energy (RE) installed capacity to 31% by 2025
- Compliance of National Building Energy Intensity (BEI) labelling in selected private properties



Real Estate Related

- Sustainable Energy Development Authority (SEDA)'s Low Carbon City Masterplan
- Malaysia Low Carbon City Framework
- Green Building Index

Transport Related

- Low-carbon mobility blueprint
- Encourage usage of green vehicles

Source: EY Desktop Research (22 September 2022)

Updated MCCG 2021 to strengthen board oversight of sustainability management including climate change

1 Policy and Legal

Practice 4.1
- The board together with management setting the company's sustainability strategies, priorities and targets
- Strategic management of material sustainability matters driven by senior management

Practice 4.2
- Company's sustainability strategies, priorities and targets are communicated to its internal and external stakeholders

Practice 4.3
- Board to ensure they stay abreast with and understand the sustainability issues including climate-related risks and opportunities

Practice 4.4
- Performance evaluations of the board and senior management in addressing the material sustainability risks and opportunities

Practice 4.5
- Board identify a designated person within management, to provide dedicated focus to manage sustainability

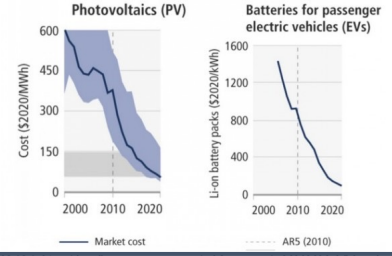
Source: MCCG Guidelines (as at 28 April 2021)

Technology, market and reputation will also drive the transition towards low-carbon operations

2 Technology

Decreasing cost of renewables and **emerging technologies** (e.g., battery storage and hydrogen) will **encourage low-carbon transition**, allow access to new market and use of public-sector incentives

IPCC Climate Change 2022 report indicates **costs for renewables** have **fallen below** those of **fossil fuels**, in some cases



3 Market

Changing customer behavior towards low-carbon products and services, requiring investment to transition

- Demand for **green / low carbon cities and building**
- Demand for **green materials** (e.g., cement, steel, aluminum)
- Demand for green infrastructure **to drive low carbon mobility** (e.g., EV facilities) / encourage **non-motorised transport** (e.g., cycling lane)
- Demand for **energy efficient transport** services, impacting **cargo demand** and increase need for fuel efficient ships

4 Reputation

Reduced revenue from decreased demand for carbon intensive goods/services

Increase employee attraction and retention

Companies **proactive in adapting to climate change** have shown **better long-term financial performance and social standing in public**

Source: IPCC Sixth Assessment Report 2022 Working Group III – Mitigation of Climate Change; Leaders for Climate Action - How Can Your Business Benefit from Climate Action — Short and Long Term? (13 August 2020)

Heightened public focus on ESG risks could render carbon intensive assets uneconomic & unfinanceable

Climate transition risks such as changes in policy, technology and sentiment could prompt a **reassessment of the value of a large range of assets** and **create credit exposures** for banks and other lenders as costs and opportunities become apparent

Transition risk drivers

- Climate policy
- Technology
- Consumer preferences

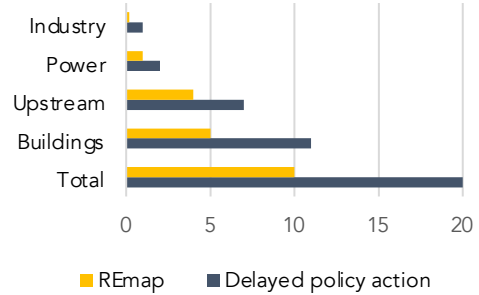
Economy	Financial system
Stranded assets	Financial market losses (equities, bonds and commodities)
Reinvestment and replacement	Credit market losses (loans)
Increase in energy prices	

Financial contagion feeding back to the company

Economic deterioration impacting financial conditions

Source: AIIB. Planning for the Future and Avoiding Stranded Assets (18 June 2021)

Cumulative stranded assets by sector in 2015-2050 (USD trillion)



Source: IRENA analysis. Stranded Assets and Renewables (July 2017)

Case study: What are oil & gas stranding risk?

Examples		
Resources	Exploration and development	
Production and processing	Distribution infrastructure	

Mitigation

1. Strategic **electrification**
2. Pay for **early retirement**
3. Planning to **decommission infrastructure**
4. Find **new uses** for old assets
5. Creating a bright line for **new investments** in the oil & gas system

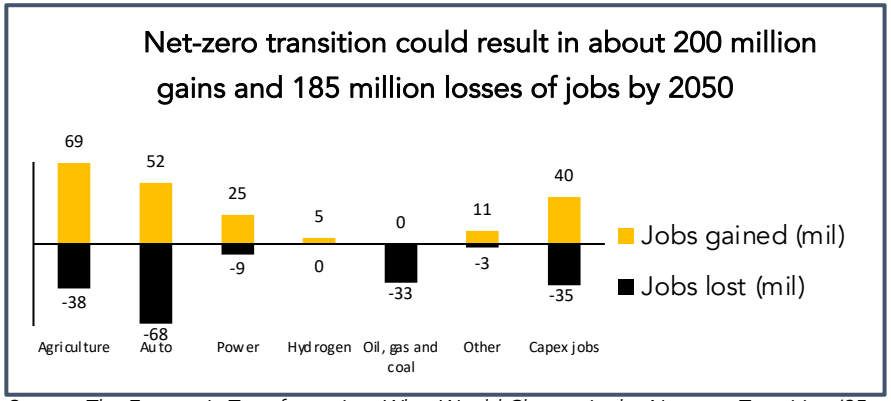
Source: Carbon Tracker. Stranded assets (23 August 2017); Environmental Defense Fund. Managing the Transition 2019

Mitigative actions

1. Gather data
2. Identify current and future risks and impacts
3. Set scenarios to determine shifts of risks and impact over time
4. Assess risks and impacts management
5. Incorporate risks and impacts in credit risk, valuation, financial models

Source: AIIB. Planning for the Future and Avoiding Stranded Assets (18 June 2021)

Successful employment transition strategy is key to economic development and societal stability



Source: The Economic Transformation: What Would Change in the Net-zero Transition (25 January 2022)

Potential impacts:

1. Past transitions, driven by market forces, corporate entities and short sighted public policies left workers and communities largely behind with little to no support
2. These policies are fragmented and inadequate, leading to the destruction of human capital as well as deep resentment and opposition to climate action and policies
3. New jobs may be created in different communities, regions or countries than those where principal job loss occurs
4. Skills associated with vanishing jobs do not necessarily match the profiles of emerging industries. Future ESG skillsets include digital, social & cognitive

Source: Workers and Communities in Transition: Report of the Just Transition Listening Project 2021; Measuring the Socio-economics of Transitions: Focus on Jobs (August 2020); Defining the Skills Citizens will Need in the Future World of Work (25 June 2021)

Supporting the transition via Public-Private Partnership

Case Study:
Alberta's Climate Leadership Plan 2015 (Canada)

1. Develop net-zero aligned green career roadmap
2. Design reskilling and upskilling programs
3. Create training programs on future-prove non-technical skills
4. Create employee support mechanisms

Source: Jobs and Skills in the Transition to a Net-zero Economy (26 May 2022); Alberta, Canada: Supporting Both Workers and Communities to Ensure a Just Transition (1 April 2021)

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