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Insights: Driving world class net zero transformations

Discussion document

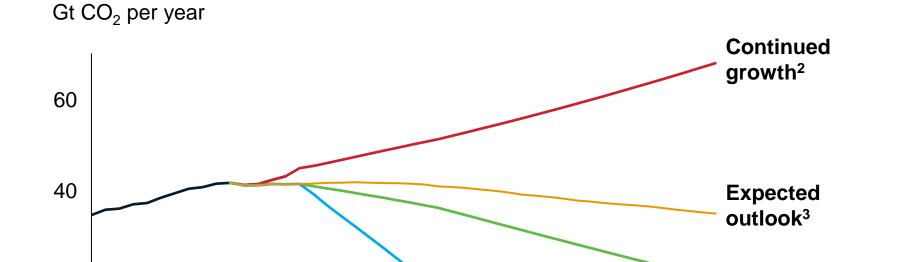
Jun 2024

Current emission trajectories a stark departure from a 1.5C pathway

2°C pathway

1.5°C pathway

2050



Historical trends continue, and yearly CO₂ emissions surpass **70 Gt by 2050**, leading to warming of up to **4.8°C** and severe physical climate impacts

McKinsey's aggressive projection of current global energy trends still leads to warming of 3.5°C

The significant effort required to reach a 1.5°C pathway would be **challenging**, **yet feasible**

2020

Pathways of global carbon dioxide emissions¹

NB: Projected warming estimated by 2100

2010

20

2030

2040

 ²⁰⁰⁵⁻²⁰¹⁸ emissions from Global Carbon Budget 2019. Emissions from biotic feedbacks not included (e.g.: permafrost thawing, wildfires).

^{2.} Average of the IEA WEO 2019 Current Policies Scenario and IPCC RCP8.5 pathway.

^{3.} Reference case used is McKinsey's Global Energy Perspective - Reference Case 2019

Global decarbonisation - huge challenge and large opportunity



Largest capital reallocation world has and will see since post Second World War - \$13.5 T needed particularly in production, energy and transport sectors by 2050



To be enabled primarily by innovations from private sector – Development and scale-up of new technologies



Urgent need to get the business models right to reduce need for scale-up of grey technologies e.g., optimize and scale RES business model to replace requirement for adding coal-based capacities

Driving net zero transitions & allocating capital towards greener portfolio is an imperative and a huge opportunity – 300 Decacorns could be created through this transition by 2030

Transitioning to Net Zero could enable corporates to capture emerging value from strong tailwinds...



Capitalize on regulatory tailwinds



Adapt to regulatory headwinds



Manage carbon intensity



Access new, large climate value pools



Diversify with new business



Preserve talent





from the IRA in new spending and tax breaks that aim to boost clean energy

30-50%

corporate profits at risk from regulatory action (e.g., carbon pricing in EU, SEC new reporting requirements)

~20%

lower WACC on average for companies who have green businesses

\$1.1-1.2B

addressable water market size by 2030, including venture, PE, and infrastructure capital

\$10T+

in annual climate revenue across industries for next 30+ years

80%

of millennials want to work for a company strong on climate/ ESG

...with early movers having an opportunity to gain significant competitive advantage



Capture green premiums

Increasing willingness-topay premiums for sustainable products; green premiums will likely decrease over time

Sustainabilitymarketed products enjoy a price premium as high as 39.5% vs. conventionallymarketed ones¹



Respond proactively to regulations

Carbon tracking is becoming "right to play" in many markets; first movers may be better able to shape industry standards and optimize their strategy & carbon costs

PEF will require disclosure of product environmental footprints²

CBAM could cost crude exporters to the EU \$1-2/bbl (at \$40/tCO2e price)²



Recruit and retain talent

Demand for ESG experts has far outpaced supply; overall talent base is increasingly attracted to sustainable companies

80% of millennials want to work for a company strong on ESG / CSR³



Acquire preferential financial terms

Investor sustainability requirements are increasing, and emission reduction has been linked to P/E appreciation

74% of institutional investors are more likely to divest for poor ESG records⁴

10% decrease in emissions associated with avg. 0.4% increase in P/E⁵



Increase market share

Consumers and customers increasingly demand products with traceable E&S impact statements; first movers may build brand recognition

Unilever's Sustainable Living brands are growing 50% faster vs. rest of portfolio³

Net zero transitions have been creating significant value for shareholders in the new climate economy

Absolute difference in stock price change versus international index from 01/01/2019 to 05/01/22

Greener portfolio market performance vs. international index (Jan 2019 – May 2022)¹

Absolute difference in indexed performance versus international index, absolute percentage points



^{1.} Fidelity ZERO International Index; blend of international large cap equities

Source: Yahoo Finance (May 2022)

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In unlocking this transition, key bottlenecks need to be overcome, but also provide significant opportunities

Scaling and industrializing value chain	Materials	Invest into expanding sustainable supply chain, increase recycling rates and process efficiencies
	Manufacturing and Labor	Invest in initiatives to increase economies of scale and decrease costs for key energy transition technologies
	Land	Integrated land use planning e.g., such as rooftop solar and partnerships with food producers for agrivoltaics
	Infrastructure	Invest in repurposing existing infrastructure and developing new infrastructure
	Investments	Track investments and look for opportunities to facilitate investments
Tech cost ramp down	Cost competitiveness	Accelerate speed up the learning curve and increase the cost-competitiveness of low-carbon technologies
Offtake	Offtake at right price	Vertically integrated play to resolve challenges associated with long-term offtake



At the same time, like any other corporate transformation, an execution recipe is required

Gathering data

Fragmented, inconsistent, not at required granularity (e.g. by plant, geography, ...)

Understanding drivers

Little understanding of starting point and drivers



Understanding emissions

Sizing ideas



Identifying levers

Insufficient visibility of what's possible to define ambition level

Sizing levers

Difficulty in assessing impact and cost of levers, and comparing among them using rigorous business cases

Sequencing a plan

No broad view of tradeoffs and decarbonization pathway across multiple organizational areas

Matching top-down with bottom-up

Need for granular initiatives to make actionable, while maintaining high-level view on overall plan

Setting targets

Difficulty setting targets (incl. Science-Based Targets)



Making plans

Executing



Building capabilities

Upskilling the broad organization on sustainability cornerstones

Creating transparency

Building accountability and visibility of progress across many stakeholders

Value chain play

Influencing across value chain

Allocating resources

Identifying resourcing bottlenecks and dynamically re-deploying

Examples of capital (re)allocation towards greener portfolios

Illustrative

Non-exhaustive



Invested \$1B in Rivian, a startup EV company

- Largest shareholder with 17% stake
- 3K+ Rivian made vans operating in the US for Amazon
- Plans to have 100K Rivian's EV delivery vehicles across the world by 2030



A.P. Moller Holding Company (majority owner of Maersk) has formed C2X to pursue large scale green methanol projects

Maersk also holds 20% of C2X

 C2X signed framework agreement worth upto \$3B for production of green fuels in Suez Canal economic zone

Source: Company websites, press search

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Global beverage company is well on the way to reduce scope 3 emissions using this structured recipe

Gathering data

Emission baseline developed, with scope 3 accounting for 90% emissions

Understanding drivers

9 packaging materials analysed, with 4 contributing to 80% scope 3 emissions



Understanding emissions

Sizing ideas



Identifying levers

Worked with suppliers to identify levers like recycled material, alternate material, light weight material and supplier level decarbonisation

Sizing levers

Cost and opportunity for each supplier understood in structured way – e.g., 86% or aluminium emissions could be abated with a saving of \$346t/CO2e for suppliers

Sequencing a plan

MACC curve created with all the ideas to prioritise the ideas

Matching top-down with bottom-up

Detailed plans with clear milestone setup for all prioritised initiatives

Setting targets

Targets set including an internal carbon price



Making plans

Executing



Building capabilities

Organisation wide communication and capability building on why, what, how

Creating transparency

Online dashboard with clear progress against plan and measurement

Value chain play

Supplier influencing through incentives

Allocating resources

Transformation office set up