Industry Perspective

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Transition finance to support decarbonisation

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Content

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Executive Summary

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Climate change is one of the key environmental risks facing the world. It is caused by an accumulation of greenhouse gases (GHG) in the atmosphere due to an increased use of fossil fuels. The international community has widely recognised that limiting the rise of global temperatures to no more than 1.5°C would help us avoid the worst climate impacts and maintain a livable environment[1]. In the ASEAN region, governments have made commitments to achieve net zero emissions by around mid century.

To spur action from the private sector, transition finance is devised to support companies in the carbon intensive, high-emitting and "hard-to–abate" sectors in their decarbonisation efforts. As a new sustainable finance instrument, transition finance targets a variety of qualifying business activities, while addressing the risk of "carbon lock-in" by requiring borrowers to have a climate transition plan when seeking transition finance. A credible climate transition plan sets out a company's short-, mid- and long-term business and investment plans to achieve net zero emission, following a country approved, science-based or Paris-aligned pathway.

Beyond decarbonising a company's own operations and business offerings, business owners need to consider their wider impact in the value chain and economy. Large corporates should take the lead to support the energy transition of the small and medium enterprises (SMEs) in their value chain. When they phase out carbon-intensive businesses, their workforce currently employed in the high emission businesses should also be re-trained for the low-carbon economy.

All stakeholders - including government, companies, consumers and financial institutions - need to collaborate closely to achieve the goals of energy transition, while addressing the social-economic considerations in order to achieve a just and orderly transition.

To address our climate challenge, UOB has developed a Transition Finance Framework to assist carbon intensive, high-emitting and "hard-to-abate" companies in their energy transition journey. To complement the Transition Finance Framework, UOB has also rolled out a suite of financing solutions that are curated to support "Operational Efficiency", "Adoption or Supply of Low Carbon Fuels", "Carbon Capture, Utilisation and Storage" or "Carbon Credits" initiatives along the energy transition journey.

1. United Nations Intergovernmental Panel on Climate Change

What is Transition finance?

Transition finance to support decarbonisation

As the threat of climate change looms larger with each passing year, companies in the carbon intensive, high-emitting and "hard-to–abate" sectors need to take actions to reduce or remove their greenhouse gas (GHG) emissions. To achieve the long-term goal of creating a net-zero emissions global economy, financial support to assist their decarbonisation efforts is essential.

Transition finance provides the much-needed support for high emitting companies to decarbonise

However, green financing is not readily available to companies in the carbon intensive industries by virtue of their DNA or heredity. Financing a fossil fuel-based company may lead to a "carbon lock-in" effect, where fossil fuel-intensive systems are deemed to perpetuate, prevent or delay shifting to low carbon alternatives. Therefore "Transition finance" is created for financial institutions to support the decarbonisation efforts of high-emitting companies while mitigating such "carbon lock-in" risks.

To simplify sustainable financing for our clients, UOB has developed a Transition Finance Framework, targeting the following sectors:

- Oil, Gas and Chemicals:
- Metals & Mining;
- Fossil Fuels Power Generation;
- Transportation and Logistics: and
- Other "hard-to-abate" sectors.

Transition Finance Framework

ISS provided SPO^

- Supports the energy intensive, fossil fuels/ brown sectors, and "hard-to-abate" sectors in decarbonisation.

^SPO: Second Party Opinion

Transportation and Logistics covers (Marine, Land and Aviation)

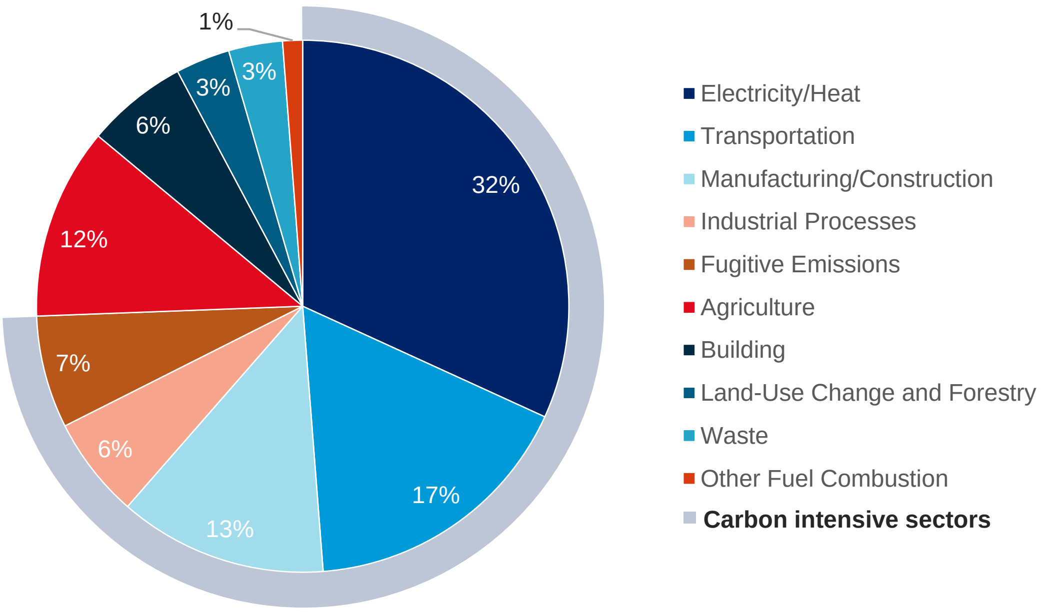
Oil, Gas & Chemicals | Transportation and Logistics* | Fossil Fuels Power Generation | Metals & Mining | CCS/ CCUS | Carbon Credits/ Offsets

Carbon intensive sectors produce more than 50% of GHG emissions

Address GHG reduction from core emitting sectors

Carbon intensive industries such as oil & gas, metals & mining, fossil fuels power generation and transportation are heavily reliant on fossil fuels and account for more 50% of GHG globally. **Transition finance is an imperative financial tool to address the GHG reduction from such key sources of emission.**

Sector by sector: Where do GHG emissions come from?



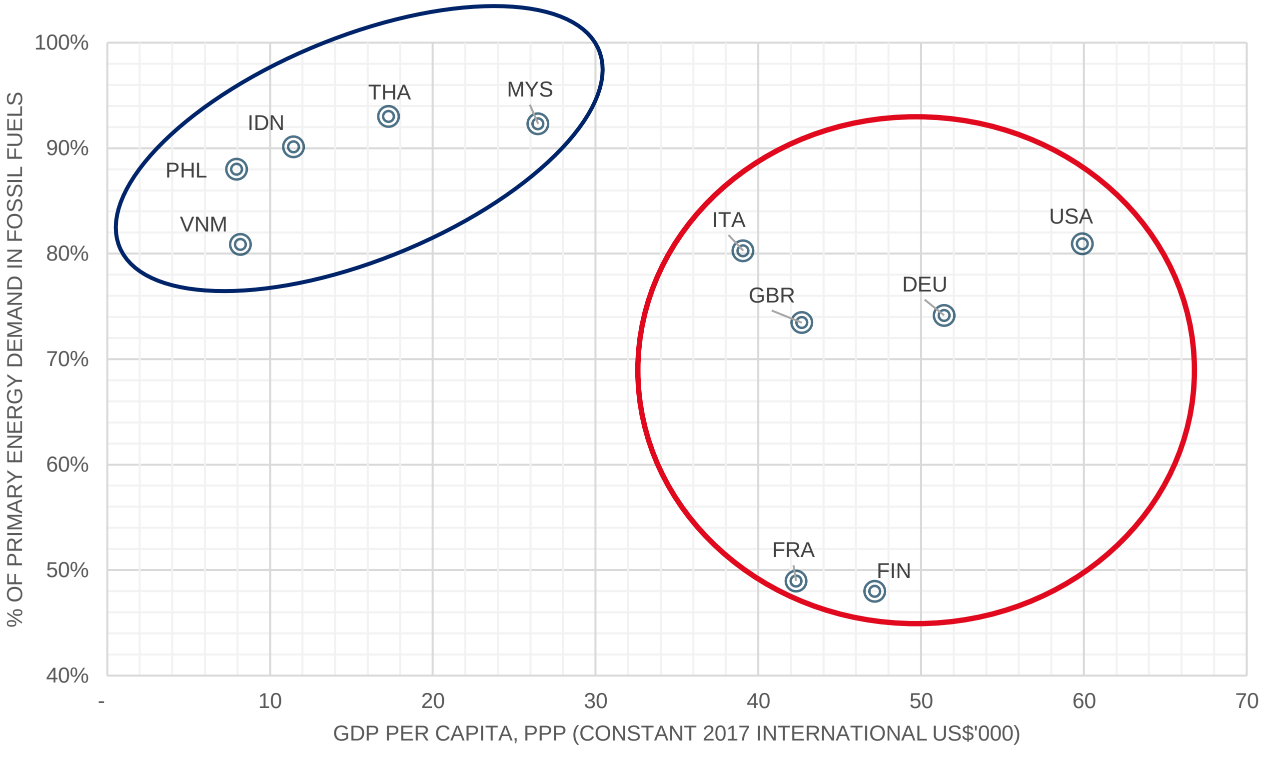
In ASEAN, the share of total GHG emissions from these 4 major sectors range from 50% – 80%. Unlike western countries whose wealth have afforded their transition into cleaner energy earlier, a fast-growing developing ASEAN remains heavily reliant on fossil fuels.

Source: 2019 Global GHG emissions by World Resources Institute, UOB analysis

Fossil fuel-reliant ASEAN countries need to take action now

Given the lower starting points of their respective countries' energy transition journey, the need for companies in ASEAN to take urgent action to decarbonise is greater compared to the developed West, and it becomes even more acute as the threat of climate change looms larger with each passing year.

Country comparison: Dependency on fossil fuels vis-à-vis GDP per capita



Source: BP Statistical Review, World Bank, UOB analysis

Transition finance to spur energy transition

Two-pronged approach: transition finance to assist carbon intensive industries to decarbonise, while complementing investments in renewable energy

Two-pronged approach to net zero: Transition finance to complement renewable energy investments

Much effort expended to address climate change has focused on investments in renewable energy such as solar, wind and geothermal to reach our net zero target. However, renewable energy would take time to achieve the scale and efficiency essential for longer term commercial viability. While the urgent push to increase renewables in the energy mix continues, it is also critical to take a parallel track to help carbon intensive industries move towards a lower carbon future.

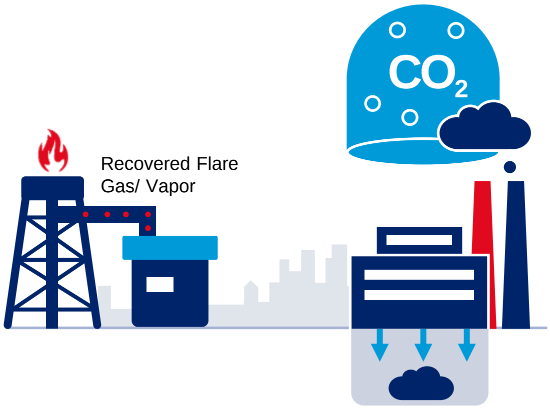
Transition finance will assist the transition of carbon intensive industries, while complementing investments in renewable energy. Such a two-pronged approach would enable progress towards the “Net Zero Emissions” ambition more effectively while ensuring the stability and affordability of energy supplies. To this end, financial support to spur the energy transition and encourage companies with carbon intensive businesses to begin to implement long-term climate transition plans becomes necessary. In 2020, key international climate financing institutions, such as the Climate Bond Initiative (CBI) and the International Capital Market Association (ICMA) developed guidance for companies to raise capital for their decarbonisation activities.

Companies can invest in various fuel and technological options to achieve decarbonisation

Decarbonisation activities supported by climate transition finance may take many different shapes and forms. To pivot to a lower carbon future, companies may consider near term facility upgrades to ensure a higher level of operational efficiency. Other plans may include lowering the carbon content in the products they manufacture, for example, shifting from aviation kerosene to bio-based sustainable aviation fuel or undertaking business transformation to provide or consume renewable energy. In the medium term, companies may invest in new technologies such as carbon capture utilisation or storage, or even shift to alternative new near-zero emission fuels like green hydrogen or ammonia.

Four key themes of decarbonisation activities

UOB's Transition Finance Framework has identified four key themes of decarbonisation activities that companies can adopt:



Four key themes of decarbonisation activities

1 Operational Efficiency

Energy efficiency and emissions reduction measures via:

- Waste heat recovery
- Co-generation systems
- Flare gas recovery
- Vapor recovery systems

3 Climate Change Mitigation

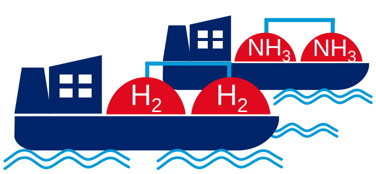
- Carbon capture and storage (CCS) or Carbon Capture, utilisation and storage (CCUS)
- CCS/ CCUS storage and adoption

2 Business Pivot

- Switch from fossil fuels to low carbon fuels e.g. biofuels, LNG, hydrogen, ammonia etc
- Switch from fossil fuel-based energy production to renewable energy production

4 Voluntary Carbon Credits

- Support the purchase, sale or trading of carbon credits or carbon neutral products to offset companies' residual emission
- Support generation and trading of voluntary carbon credits



Different types of transition financing levers

Asian Development Bank (ADB) estimates that the ASEAN region would require some US$210 billion investment every year until 2030 to develop climate change-adjusted infrastructure. Companies would require a substantial amount of capital to bring about these changes. To suit the various business needs of companies, transition finance can be structured into different underlying banking products at corporate, project or business activity level.

Financing levers under UOB's Transition Finance Framework

Financing Levers	
Transition Finance Framework (TFF)	
Term Loan	Trade Financing
Contract Financing	Equipment Financing
Treasury Products	Sustainability Linked Loan
Bonds	

Climate transition plan is key to raising transition financing

A credible climate transition plan includes a clear oversight and governance of the transition strategy and evidence of a broader sustainability strategy to mitigate relevant environmental and social externalities

Key elements of a climate transition plan

In raising transition financing, companies must be prepared to share a climate transition plan on how they would reach the long-term ambition of net zero GHG emissions. A credible climate transition plan should lay out a company's decarbonisation strategy and a capital investment plan to implement the strategy.

The Singapore Stock Exchange (SGX) has mandated that from 2023, companies in the energy sector need to provide climate-related disclosures. These would comprise elements of a climate transition plan, as recommended by the "Task Force on Climate-related Financial Disclosures" (TCFD). This obligation would be extended to the transportation sector in 2024. Therefore, having a climate transition plan would soon no longer be a "good-to-have" for companies, but a prerequisite for future capital raising.

The best practices in the industry include a "Do no significant harm (DNSH)" consideration as a key guiding principle for companies. This means that while reducing GHG emissions is a key focus, companies need to consider other material issues like good water, waste or biodiversity management. Besides recognising the concept of DNSH, companies would need to consider how human capital is retrained and redeployed towards responsibilities and tasks in lower carbon activities to ensure that employees are equipped and can be re-deployed for the energy transition process.

Elements of a company's transition plan

Country NZE or Paris or Science-based pathways aligned

- Report baseline GHG emissions scope 1, 2 and 3 (if viable)
- Set company specific KPIs or Targets (GHG emissions)
- Short-term, medium- and long-term goals

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Develop robust plans

- that will deliver on these KPIs (GHG emissions):
  - Decarbonisation strategy; or
  - Investment plan or business model change plan for decarbonisation/ emissions reduction; or
  - TCFD climate risk reporting

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Implementation plan

- Capital and operating expenditures
- Any other actions in the strategy

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Internal monitoring

- Track performance of KPI (GHG emissions) annually

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External reporting

- Annual KPIs (GHG emissions) that are:
  - independently verified; or
  - made available in annual reports, sustainability reports or reports submitted to governments, regulatory agencies, stock exchanges, auditor reports, industry associations or made publicly available.
- Failure to comply will result in declassification but not in event of default

Source: Adapted from CBI's Transition Finance for Transforming Companies, UOB analysis

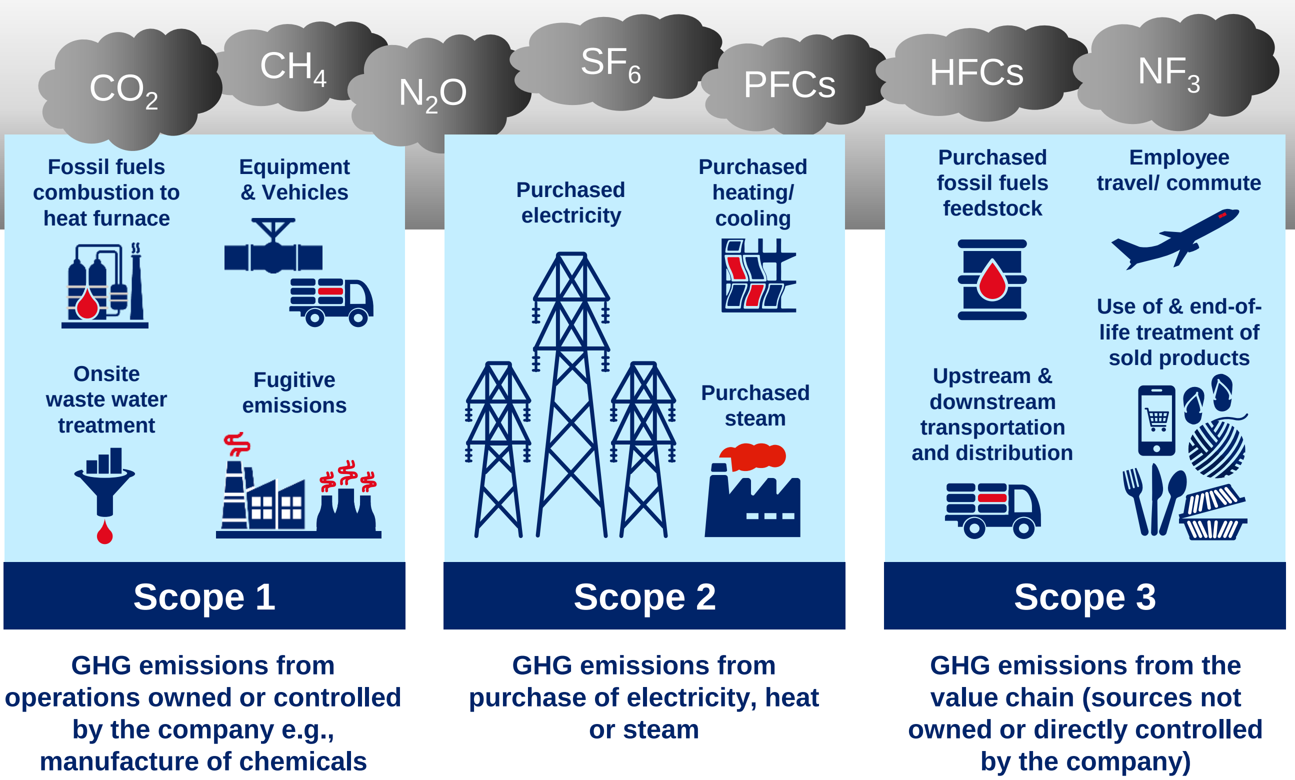
GHG emissions measurement and target setting

Measuring the GHG emissions of a company's operation is the often the first step in developing a climate transition plan. Standards such as Green House Gas Protocol provide detailed guidance on the accounting of emissions. Such measurement would form the baseline for a company's' decarbonisation planning, and the annual reporting of your progress.

A credible transition plan requires companies to consider how to reduce emissions over time in line with a recognised decarbonisation pathway over the short-, mid- and long-term. Such decarbonisation pathways should be aligned with the country's Net Zero pathways published by government, science-based pathways guidance that have been published by organisations such as the International Energy Agency (IEA), Network for Greening the Financial System (NGFS), or be Paris Agreement-aligned. Most importantly, companies need to ensure their ambitious decarbonisation targets are backed by actionable business strategies.

Companies need to commit to track and report their GHG emissions at least annually to ensure that their realised GHG reduction is inlined with their chosen GHG reduction pathway.

Sources of GHG emissions



Source: Under GHG protocol, GHG covers 7 gases including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulphur hexafluoride (SF_6), perfluorocarbons (PFCs), Hydroflurocarbons (HFCs), and nitrogen trifluoride (NF_3).
For a more detailed guide on how to set GHG protocol corporate accounting and reporting standard, clients can refer to Greenhouse Gas Protocol website as a reference.

Supporting value-chains and SMEs to decarbonise

MNCs and large corporates should take the lead to support the energy transition of the small and medium enterprises (SMEs) in their value chain

SMEs are the key to a net-zero economy

For fossil fuel related industries, GHG emissions are not merely contained within a company's own business operations (scope 1 emissions) and sources of electricity supply (scope 2 emissions). 70% – 80% of a company's GHG emissions are embedded in a company's supply chain comprising their suppliers, distributors and end-consumers of their products (scope 3 emissions). Hence, targeting scope 3 emissions is crucial to reducing a company's total emissions.

Multinational corporations, state-owned enterprises and large corporations are among the most well-resourced to lead the energy transition. They should require their ecosystem such as their suppliers to provide lower carbon source materials or distributors to deliver lower carbon end products. They set the overall direction and pace for smaller companies in the supply chain to decarbonise and have a responsibility to help their supply chain to cut overall GHG emissions. More often than not, the participants in their ecosystem would comprise SMEs.

GHG reduction from SMEs will play a significant role in the total ecosystem approach. In ASEAN, SMEs make up 89% – 99% of all establishments and contribute 30% – 53% to each country's GDP. As decarbonisation is a complex process which requires new investments and skill sets, SMEs need to start the process early to consider the options available for their decarbonisation.

In addition, multinational corporations, state-owned enterprises and large corporations could also accelerate the energy transition in the ecosystem by working with industry associations, universities and educational institutions to drive research and developments in new climate positive technologies.

The concept of “enabling activities”

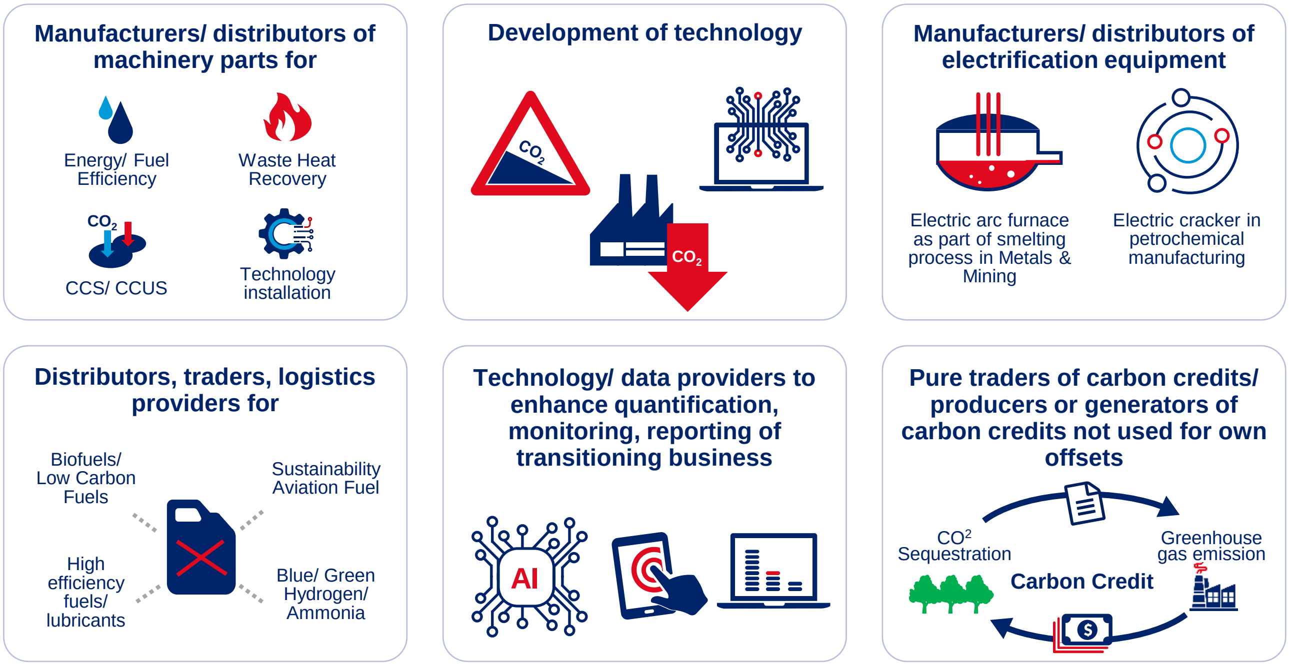
Enabling activities’ biggest contribution to transition will not be their own decarbonisation, but the decarbonisation they enable elsewhere.

To achieve the net zero ambitions, companies need to leverage on the expertise and capability of others. Enabling activities, or enabler companies, are those that provide support for transitioning activities. They are often the suppliers, traders and contractors in the value chain. Many SMEs will likely fall under this category.

For the purpose of transition financing, the GHG emissions of these enabler companies are considered to be insignificant, so there is no requirement for them to have a climate transition plan. Instead, they need to demonstrate their ability to make a substantial contribution in facilitating GHG reduction of other companies.

Some examples of enabling activities are shown in the diagram below:

Examples of enabling activities



Reaching net-zero in an orderly and inclusive way

Achieving the net zero targets require collaboration of all stakeholders

As most ASEAN governments have announced their net zero targets at the conclusion of the COP26 meeting, responsible corporate citizens should take action to contribute to realising the net zero goals. The United Nations has also urged governments to submit more ambitious national climate action plans ahead of COP27 in November 2022.

Net zero emissions targets set by governments

	Peak Emissions	Net Zero Target
ASEAN and Mainland China		
Singapore	2030	Around 2050
Malaysia	-	2050
Thailand	2030	2065
Indonesia	2030	2060
Vietnam	-	2050
Mainland China	2030	2060
Hong Kong SAR	2020	Around 2050
Others		
Australia	2006	2050
Canada	-	2050
India	2040-45	2070
Japan	-	2050
South Korea	-	2050
Taiwan	-	2050

We hope to see governments putting in place incentives such as tax incentives or even public funding to spur investments in new technologies to aid companies in the carbon intensive industries to decarbonise in alignment with their national net zero emission commitments while balancing socio-economic goals. With low or near-zero carbon fuels emerging to replace fossil fuels, governments should also develop new regulations and create a transparent regulatory environment to encourage investments and facilitate deployment.

Private companies need to plan early for their transition journey and translate them into action. They need to seriously consider their GHG reduction pathways and invest in lower carbon businesses. The talent pool currently employed in carbon-intensive sectors would need to be re-trained for low carbon energy employment.

Financial institutions should support the energy transition by providing transition finance with clear guidance. They have to share know-how beyond financing, assist in building knowledge in climate transition planning, reporting and sharing best practices across the ecosystem in transition financing.

Consumers need to be willing to bear a portion of the higher costs that will likely arise from development and adoption of new technologies.

To simplify sustainable financing, UOB has developed a framework for transition finance to assist carbon intensive companies in their energy transition journey. The bank’s vision is for energy transition in ASEAN to be executed in an orderly and inclusive manner where talents employed in carbon intensive sectors are re-trained for low carbon energy employment and access to energy remains available to everyone in an affordable manner.

Start planning for energy transition today

For companies in the carbon intensive, high emitting and “hard-to-abate” sectors, energy transition is not just a trend to watch out, but a fundamental shift to the industries’ development. UOB has developed a Transition Finance Framework to assist carbon intensive, high-emitting and “hard-to-abate” companies in your energy transition journey.

To complement the Transition Finance Framework, UOB has also rolled out a suite of financing solutions that are curated to address “Operational Efficiency”, “Adoption or Supply of Low Carbon Fuels”, “Carbon Capture, Utilisation and Storage” or “Carbon Credits” in your energy transition journey.

For more information on the Transition Finance Framework and banking solutions, please visit our website www.UOBgroup.com/sustainable-financing or email: UOBEnergyTransition@UOBGroup.com to find out more.

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