Navigating a just transition to net zero

A framework for financial institutions
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Executive summary

Financial institutions are poised to play a critical role in the global transition to a net zero economy. As lenders, advisors, insurers, investors and brokers to the assets of the real economy, they wield significant influence. Increasingly, financial institutions are committing to net zero targets and developing climate transition plans to achieve these. The success of these net zero ambitions hinges on the transition being just and equitable, in a local and global context.

A just transition seeks to ensure that no-one is left behind as we move to a net zero economy, while the benefits are maximised in a way that is fair and inclusive. This will require management of financial, political and social risks, while balancing complex trade-offs between social, economic, environmental issues and carbon reduction goals.

Navigating the transition to net zero is fraught with complexity. Geopolitics have escalated the importance of energy security, creating tension with decarbonisation efforts. Consumers are grappling with higher energy prices, as governments try to provide subsidies while investing in the transition. Hundreds of millions of people continue to lack access to electricity. Significant numbers of jobs and communities worldwide are dependent on high-emitting sectors, whilst new jobs in 'green' supply chains may bring their own social risks. Moving to a net zero world will require a focus on both energy supply and demand side fundamentals.

Complexity and trade-offs will be familiar to financial institutions, who have been managing Environmental, Social and Governance (ESG) impacts, at some level, for the past two decades. But without great care, the pace and scale of transformation required by the net zero transition could prioritise decarbonisation at the expense of all else.

To avoid that outcome, financial institutions need to decide on their strategic approaches to financing the just transition, requiring a flexible framework to navigate difficult decisions. This includes not just *what* to finance, but also *how* to do so, such as what conditions might be attached and what related activities might be involved, including public finance partnerships.

This report identifies five approaches:

Green finance: increasing finance for low or zero carbon activities which are central to the global transition to a low carbon economy. These require investment – at scale – by financial institutions, but also raise social and systemic questions that need urgent attention. For example, addressing the complex sustainability and human rights issues associated with electric vehicle battery supply chains.

Decarbonisation engagement: engaging with businesses of high-emitting activities, that need to decarbonise, and where financial institutions have a significant influence to support the changes required. For example, through scrutiny of investee's transition plans.

Conditional transition finance: deciding on the appetite for any new investments in high-emitting activities which may require some continued investment as part of a net zero energy transition. These investments will need qualifying conditions in place and will be relevant to the use of natural gas as a transition fuel, for example, in low-income countries where this may have an interim role to play in meeting critical energy access and human and economic development needs.

Managed phaseout: financing high emitting assets that are being retired earlier than planned, aligned to a net zero energy transition. This requires clear commitments and careful planning with stakeholders beyond the financial institution to avoid social harm. For example, phasing out coal mines in economies highly-dependent on the resource with appropriate support provided to communities and workers.

Responsible divestment and exclusions: divesting or excluding assets or activities which do not align with an institution's decarbonisation pathway as part of its net zero aligned portfolio. This will involve restrictions on new lending and investment. In the case of existing assets, divestment will need to be handled carefully to minimise social harm and achieve real world emissions reductions. This is likely to follow a period of active engagement that has not succeeded. For example, placing exclusions on new investments into high-emitting assets at risk of becoming stranded and where the owner of these assets does not have a net zero transition plan in place.

There is no single solution to the difficult questions and trade-offs that arise in the transition to a net zero economy. What is clear, however, is that a narrow focus on decarbonisation will not succeed if other economic, environmental and social impacts are not considered.

The five practical approaches and accompanying strategic questions laid out in this report provide a framework for financial institutions to fulfil their role in financing a just transition to net zero. If, in doing so, they support sustainable and inclusive growth, these financial institutions also stand to benefit from the resulting economies they help to create.

1. Introduction

Financial institutions have a key role to play in driving the transition to net zero

To prevent a climate catastrophe, the world needs to transition to a low-carbon economy that produces net zero carbon-equivalent emissions by 2050. This transition will require radical economic transformation across all sectors. For example, the International Energy Agency (IEA) has estimated that by 2040, all unabated coal and oil power plants must be phased out, around 90% of existing capacity in heavy industries (such as steel, cement and chemicals) must reach the end of their investment cycle; and by 2050 almost 90% of global electricity generation must come from renewable sources.[1] It is estimated that annual investments in emerging markets and developing countries will exceed $1 trillion by 2025 and $2 trillion by 2030 to cut emissions and deal with climate change impacts and restore nature and land.[2]

Financial institutions have recognised the critical enabling role that they have to play in achieving the net zero transition, as investors, lenders, advisers, insurers and brokers to the assets of the real economy. The scale of the financing gap for net zero infrastructure that needs to be filled has been well documented: on a global scale, for example, TheCityUK estimated that $125 trillion of investment is required globally to decarbonise the economy, of which $32 trillion is required by 2030 with about 70% of such investment needing to come from private finance.[3] Standard Chartered estimated that emerging markets need to find around $95 trillion, a sum higher than annual global GDP, to transition to net zero by 2060.[4] In the UK, PwC estimated that £40bn of annual capital investment in new low carbon and digital infrastructure per year for the next ten years would be required to ensure a credible pathway to meeting the UK's decarbonisation goals.[5] Financial institutions further recognise the risks of inaction for their own operations – Mark Carney, former Governor of the Bank of England warned that firms ignoring the climate crisis will go bankrupt, and that "those banks overexposed to the sunset sectors will suffer accordingly".[6]

Financial institutions are increasingly committing to set net zero targets and developing climate transition plans to achieve those targets. At COP26 in November 2021, over 450 financial institutions responsible for $130 trillion of global capital, representing 40% of the financial system, recognised their imperative role by pledging to align their financing activities to net zero by 2050.[7,8] Momentum continues to build – The Science Based Targets initiative released a new framework in August 2022 (Net Zero Standard for Financial Institutions), to align lending and investment activities with the Paris Agreement.[9]

There is no net zero without just transition

The achievement of net zero hinges on the transition being just and equitable, in a local and a global context. Portfolio decarbonisation brings with it financial, political and social risks, such as energy and financial insecurity, stranded assets and economic decline. If not addressed, these risks could undermine the viability of financial institutions' net zero strategies and the credibility of the financial institutions themselves. A just transition seeks to ensure that no people, workers, places, sectors, countries or regions are left behind, and support those set to lose out as we move to a net zero economy. This is through using approaches such as social protection, employment rights, fairness in energy access and use, social dialogue, and democratic stakeholder consultation.[10]

The transition to net zero has associated social benefits. The greatest of these would be the avoidance of catastrophic climate change which disrupts the natural, economic and social systems we all depend on. A just transition also seeks to maximise benefits in a way which is fair and inclusive, through for example, creation of equitably distributed green jobs and improving low-carbon investment opportunities. The IEA estimates that over 30 million new jobs could be created in clean energy, efficiency and low-emissions technologies by 2030, for example, far outnumbering the expected losses of 5 million fossil fuel production jobs.[11] PwC research has shown that in the UK specifically, the multiplier for green jobs is estimated to be 2.4x – meaning that for every green job created, there are another 1.4 jobs which can be attributed to that green job.[12] Research by the International Labour Organisation finds that over 71% of workers whose jobs are affected by the transition to net zero have the potential to be reallocated to new jobs with the right training and upskilling.[13]

However, the benefits of the transition to net zero cannot be realised unless the social risks inherent to such a large scale global industrial transformation are addressed at the same time.

A just transition has the opportunity to address global disparities and inequalities. Today almost 800 million people, mostly in Africa and Asia, live without access to electricity.[14] Whilst this number has been decreasing steadily over the past decade, in Sub-Saharan Africa, the IEA found the number of people without access to electricity increased in 2020 for the first time since 2013.[15] The African continent is rich in renewable energy sources, possessing some of the world's greatest potential for solar power generation and substantial, additional potential for hydropower and wind energy.[16] Despite this, many renewable energy sources remain underutilised, with a lack of finance to scale alternatives to drive sustainable industrial development across the continent.

A just transition requires careful consideration of fossil-fuel dependent and vulnerable communities and countries. Fossil fuels currently meet 80% of the current global energy demand, with oil and gas production employing approximately 6 million people directly and over 60 million people indirectly.[17,18] These issues are particularly acute in certain geographies. The Carbon Tracker Initiative found that 400 million people live in 19 countries with the greatest fiscal dependence on oil and gas revenues. Without appropriate policies and support in place, as this revenue declines, job losses and cuts to public services are likely. Ten of these 19 countries, including Chad, Nigeria and South Sudan were categorised as 'low' in the United Nations Human Development Index.[19] As such, they face additional interwoven challenges as they not only restructure their economies, but also focus on ensuring a decent standard of living, education and healthcare provision. Previous transformations of the energy sector – such as the phaseout of coal mining in the UK – have demonstrated the risks if societal impacts are not considered, abrupt transitions can lead to social division and economic deprivation that may take decades to heal. We can take the opportunity to learn from what has gone before to deliver a just transition.

A just transition means consideration of energy security for all. Recent disruptions in energy markets following the war in Ukraine have highlighted the dependency of industrial processes on fuels that cannot be easily replaced by renewables. European countries are now having to balance energy security with meeting their carbon reduction pledges. This has led to temporarily ramping up oil and gas production and distribution, with some countries even turning to coal to secure energy supplies. This is in stark contrast to the severe limitations that have been placed by European development finance institutions and export credit agencies on overseas financing for those same fuels in lower-income countries.[20]

A just transition lens must be equally applied to green investments. It is worth noting that investments in low carbon solutions present a range of risks. Green industries will not free us from high dependence on certain critical resources and the geopolitical and social risks that come with this. A number of regions with large untapped lithium reserves – used in batteries for electric vehicles – such as Ukraine or the Democratic Republic of Congo (DRC), are currently subject to conflict or human rights abuses.

Financial institutions will need to navigate trade-offs as they transition to net zero

To decarbonise their portfolios, financial institutions will need to assess their current investments and scrutinise new investments against their own transition pathways. However, trade-offs between social, economic, environmental issues and the carbon reduction goals abound. Investment in a new high-emitting project in a low-income country can trigger accusations of inconsistency or 'greenwashing', but a decision not to could leave local communities missing out on benefits such as economic growth and industrial development. Investing in minerals essential for the low-carbon transition such as cobalt may support the climate transition, but may give rise to environmental and human rights challenges in certain contexts.

Such trade-offs are not new to financial institutions, who have been managing ESG impacts arguably for the past two decades, for example project finance banks under the Equator Principles.[21] But without great care, the pace and scale of transformation required by the net zero transition could result in singular focus on decarbonisation at the expense of all else.

Financial institutions are investing significant resources into understanding, forecasting and managing down their financed emissions. As of October 2022, more than 190 financial institutions have publicly committed to set emissions reduction targets aligned with the Science-Based Targets Initiative (SBTi), and more than 500 have become signatories to the Glasgow Financial Alliance for Net Zero (GFANZ).[22,23] The UN Race to Zero's new minimum criteria announced in June 2022 requires GFANZ members to step-up the level of ambition on phasing out fossil fuels; although amendments to the language used (which originally called for the restriction of financing and facilitating new fossil assets) highlights tensions financial institutions face between delivering net zero and often shorter term economic priorities and shareholder and political pressure.[24,25,26,27] Once decarbonisation commitments have been made, financial institutions will then need to consider their investment strategies, such as engagement, exclusions and divestments. Internally-set carbon budgets will start to have more teeth, strengthened by the roll-out of improved carbon pricing, stricter regulation of transition plans, and the adoption of better climate governance processes and ESG-linked remuneration within large and listed entities. The effects of this trend are already discernible in the divestments or portfolio reallocations made by several leading institutional investors.[28]

But decisions on where, when and how to proceed with, scale down or end the financing of carbon-intensive activities cannot be reduced to a simple carbon budgeting and accounting exercise. Nor can they be reduced to a binary investment versus divestment discussion. Divestment to other lenders or investors that do not prioritise climate change may not lead to real world carbon reductions. Investment in renewables value chains may yet create systemic and geopolitical risks that have not been fully grasped. Premature asset closure might create significant localised economic hardship in the absence of plans for workforce reskilling and place-based regeneration. There may often be scope for material decarbonisation of existing assets under stewardship, with the right engagement and capital investment; and there are legitimate differences between projects in lower income countries that export fossil fuels for use in developed economies and projects that build infrastructure and generate power for domestic populations. For instance those that export gas versus those that build the gas infrastructure needed to provide electricity and support industrial processes within those lower-income countries, benefiting local communities.

It is therefore increasingly urgent that financial institutions decide on their strategic approaches to financing the just transition, requiring a flexible, just framework to navigate these difficult decisions. This includes not just *what* to finance, but also *how* to do so – the conditions they attach to it, and the related activities, including public finance partnerships, they bring alongside their financing decisions. Drawing on such a framework will, in our view, help financial institutions decide on their position in relation to any particular financing activity and how this fits into their decarbonisation pathway: whether that is to engage, invest, support credible transition or divest.

Enabling financial institutions to better navigate a just transition

This report outlines a framework that financial institutions can use to navigate a just transition to net zero. There are a number of principles-based approaches to financing a just transition, such as Impact Investing Institute's 'Three Just Transition Elements', the World Economic Forum's 'Principles for Financing a Just and Urgent Energy Transition', the multilateral development banks' joint 'Just Transition High-Level Principles' and Council for Inclusive Capitalism's 'Just Energy Transition' framework.[29,30,31,32] New guidance continues to be released, including GFANZ's 'Financial Institutions Net-zero Transition Plans', and the UK Government's Transition Plan Taskforce's just transition report, which is open for consultation until February 2023.[33,34]

This report is intended as a contribution to the global discussion on transition finance and seeks to situate just transition principles in practical financial institution decision-making.

Our framework starts by breaking down financial institutions' decision-making into **five practical approaches to assessing potential and existing investments.** Each approach raises different questions which can form the basis for assessment of whether the investment could be aligned with a just transition to net zero. The five approaches are:

Green finance: increasing finance for low or zero carbon activities which are central to the global transition to a low carbon economy. These require investment – at scale – by financial institutions, but also raise social and systemic questions that need urgent attention.

Decarbonisation engagement: engaging with businesses of high-emitting activities, that need to decarbonise, and where financial institutions have a significant influence to support the changes required.

Conditional transition finance: deciding on the appetite for any new investments in high-emitting activities which may require some continued investment as part of a net zero energy transition, with qualifying conditions in place.

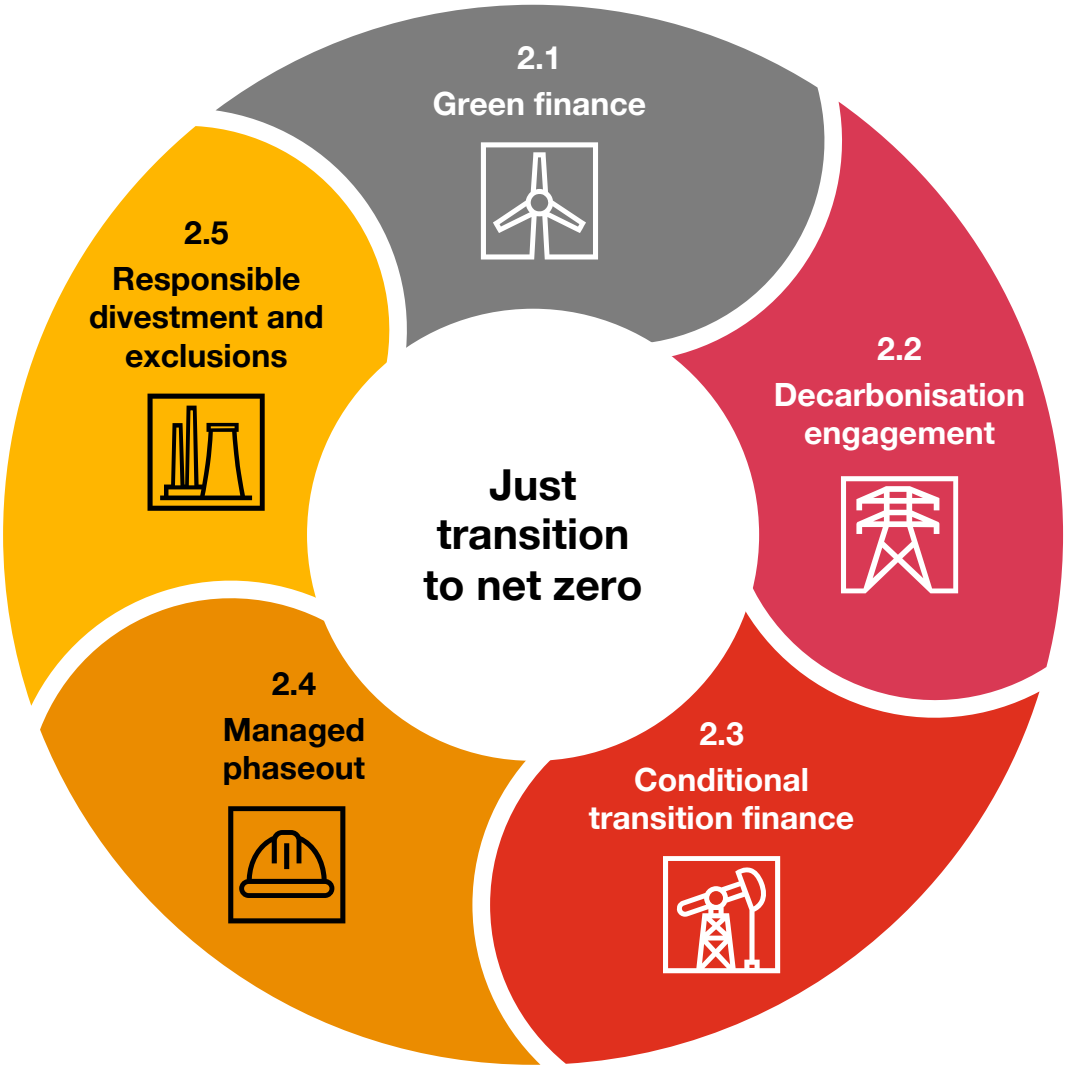
Managed phaseout: financing high emitting assets that are being retired earlier than planned, aligned to a net zero energy transition. This requires clear commitments and careful planning with stakeholders beyond the financial institution to avoid social harm.

Responsible divestment and exclusions: divesting or excluding assets or activities which do not align with an institution's decarbonisation pathway as part of its net zero aligned portfolio. This will involve restrictions on new lending and investment. In the case of existing assets, divestment will need to be handled carefully to minimise social harm and achieve real world emissions reductions. This is likely to follow a period of active engagement that has not succeeded.

Each of the five approaches is explored in turn. These include a discussion of the just transition challenges, illustrated through some real world examples, and the implications for financial institutions. For each approach, a set of strategic questions are proposed for financial institutions to consider as they grapple with their decisions at the individual transaction or portfolio-wide level. The framework is not intended as instructional per se. Financial institutions will need to make their own assessments, and are likely to deploy some or all of these approaches concurrently, for instance, providing green finance for certain projects whilst managing phaseout from high-emitting industries.

In this report, we focus mainly on the energy and extractives sectors, which present challenging environmental and social questions for financial institutions. However, this framework could be applied to other, vital sectors of the economy such as agriculture, construction, or transport.

2. Approaches to navigating a just transition to net zero



2.1 Green finance

The transition to net zero provides an opportunity to create entirely new global industries and associated supply chains. Indeed, Mark Carney – UN Special Envoy on Climate Action and Finance and former Governor of the Bank of England – has described it as "the greatest commercial opportunity of our age".[35] Financial institutions are rapidly responding to this opportunity with almost daily announcements of significant volumes of capital being directed towards 'green finance'.

There is no universal definition of 'green finance', or what constitutes an environmentally sustainable investment, as evidenced by the different green taxonomies being developed by various countries and regions, including the EU, UK, China and Canada among others (see Box 1). In this report, green finance in the context of the net zero transition can be broadly defined as finance for low or zero carbon activities, including investments which facilitate a reduction in greenhouse gas emissions (GHGs) or the carbon intensity of an activity.

Despite the inherent positive impacts through climate change mitigation, investments considered as green finance still require rigorous assessment to ensure that the global transition to net zero is socially just and balanced with nature. It could be easy to assume that a 'green' investment is inherently positive, but failure to consider its wider impacts could risk creating or worsening other harms. This is explored further below through examining the growing demand for batteries to facilitate the transition to net zero, which illustrates the care and nuance investors need to maintain in order to pivot to green finance without harming communities or ecosystems. An example considering the role of financial institutions in facilitating inclusive demand-side innovations is also presented (see Box 2).

Green finance

Finance for low or zero carbon activities which are central to the global transition to a low carbon economy, including investments which facilitate a reduction in greenhouse gas emissions (GHGs) or the carbon intensity of an activity.

Box 1: EU Taxonomy criteria for environmentally sustainable economic activities

The EU Taxonomy (Article 3) states that 'an economic activity shall qualify as environmentally sustainable' where it satisfies the following conditions:

a. contributes substantially to one or more of the following environmental objectives (as set out in Article 9): climate change mitigation; climate change adaptation; sustainable use and protection of water and marine resources; transition to a circular economy; pollution prevention and control; protection and restoration of biodiversity and ecosystems (in accordance with Articles 10 – 16)

b. does not significantly harm any of the same environmental objectives (in accordance with Article 17);

c. is carried out in compliance with the minimum social safeguards (as laid down in Article 18); and

d. complies with technical screening criteria established by the Commission (in accordance with Article 10(3), 11(3), 12(2), 13(2), 14(2) or 15(2)).[36]

Batteries – powering a net zero economy

Battery storage will be critical to balance energy systems that are increasingly reliant on intermittent sources of renewable energy as we transition to a net zero economy. Batteries themselves will especially be needed to power electric vehicles (EVs), which are expected to provide a $46 trillion market opportunity between 2021 and 2050.[37] This significant market growth will drive increased demand for the raw materials needed to produce EV batteries – on average, these require six times more mineral inputs than internal combustion engine vehicles.[38] Although quantities vary, a typical car lithium-ion battery pack requires approximately 8 kg of lithium, 35 kg of nickel, 20 kg of manganese and 14 kg of cobalt.[39] Scaling the extraction of these minerals presents several key economic, political, environmental and social risks for investors to consider when assessing opportunities for green finance; a number of these are illustrated below:

Understanding relative carbon emissions

It is crucial that investors account for the fact that investments classed as 'green finance' may still result in some carbon emissions, and these emissions vary between seemingly similar investments based on geography, energy sources, technological inputs etc. For example, the nickel required to produce batteries for EVs must be 'Class 1 nickel' which contains more than 99.8% nickel content.[40] Supplies of Class 1 nickel are being depleted, due in part to accelerating demand for EVs, and so manufacturers will increasingly have to rely on converting lower grade nickel to Class 1 nickel. This is a highly energy intensive process, meaning the embodied carbon within an EV battery will be influenced by the type of nickel used as an input. Similarly, most lithium is currently extracted from hard rock mines using fossil fuel energy sources with around 15 tonnes of CO_2 emitted for every tonne of lithium mined.[41]

Protecting health and livelihoods at every turn

The resources needed to produce a lithium-ion battery tend to be more geographically concentrated than fossil fuels.[41] This concentration could exacerbate supply-chain risks for EV investors particularly in relation to the 'S' of ESG. For example, two-thirds of the world's supply of cobalt is mined in DRC where human-rights activists have raised concerns over conditions 'in particular over child labour and harm to workers' health; like other heavy metals, cobalt is toxic if not handled properly'.[43]

Investing in the expansion of nickel mines, if not carefully managed, can also threaten local livelihoods in a plethora of ways. The mining, crushing and transportation of nickel-rich ores 'can generate high loadings of dust in the air… [with] high concentrations of potentially toxic metals, including nickel itself, copper, cobalt and chromium'.[44] Equally, opencast nickel mining decreases soil fertility even after mining has ceased, with impacts for agricultural productivity and livelihoods.[45] At the other end of the supply chain, investors will need to ensure that EV batteries are responsibly disposed of; when the batteries degrade, they produce hydrogen fluoride and other pollutants that are harmful to humans.[46]

Considering environmental impacts beyond climate change

When assessing investments related to 'green finance', it is important to recognise that the 'E' of ESG goes beyond just climate change to incorporate critical environmental issues such as nature and biodiversity loss. As Yang Shao-Horn, JR East Professor of Engineering at MIT summarises 'mining raw materials like lithium, cobalt, and nickel is labor-intensive, requires chemicals and enormous amounts of water – frequently from areas where water is scarce – and can leave contaminants and toxic waste behind' all of which can have a destructive impact on local ecosystems.[47] For example, this is of particular concern in the Philippines, which as well as being China's largest supplier of nickel ore, is also classed as one of the world's 18 mega-biodiverse countries.[48,49] If the country continues its current trend of opening new mines to service growing global demand, there is a risk that neighbouring areas of pristine rainforest are significantly harmed, threatening already severely endangered species as well as the livelihoods of communities who depend on the outputs of the forests.[50,51]

Box 2: Financing energy-efficiency improvements in the UK

As well as focusing on supply side issues, it is also important to manage demand. Financial institutions can play a key role in financing energy-efficiency improvements which are required for a net zero economy. In the UK, increasing living costs, which could push millions into energy poverty, highlight the need to lower energy demand, while also providing an opportunity for job growth in the retrofit and green energy sectors.[52] For example, the UK has the oldest housing stock in Europe; Bankers for Net Zero and the Green Finance Institute claim around 29 million homes need to be retrofitted with low-carbon solutions if the UK is to meet net zero emissions by 2050.[53] Such solutions are not cheap. Octopus Energy and Halifax have announced a pilot scheme which will offer Halifax mortgage customers air source heat pumps for as little as £2,000 (approximate up-front costs range between £8,000-£15,000).[54] This will help remove installation cost barriers faced by homeowners, while also cutting their energy costs.

What does this mean for financial institutions?

When deploying green finance, institutions will need to make stringent assessments of their new loans and investments in order to avoid some of the emerging risks outlined above. Several frameworks already exist to support financial institutions to make such assessments, including, for example The Equator Principles which are based on the IFC Performance Standards and 'are intended to serve as a common baseline and risk management framework for financial institutions to identify, assess and manage environmental and social risks when financing Projects'.[55]

Provided financial institutions are fully considering the potential impacts of their loans and investments linked to green finance, it is imperative that financial assets of this type are accelerated to achieve the transition to net zero. Financial instruments to consider in this context are those that involve conditionality based on measurable final outcomes. For example, sustainability-linked loans – 'loan instruments and/or contingent facilities (such as bonding lines, guarantee lines or letters of credit) which incentivise the borrower's achievement of ambitious, predetermined sustainability performance objectives' – could be provided to extractive companies financing the development of new nickel mines subject to the inclusion of strict sustainability performance targets linked to issues such as run-off of pollutants into water sources.[56]

Strategic question set

Green finance

1  

Has the whole value chain been considered in determining the net climate and wider environmental impacts of the asset(s)? This includes, for example, the energy source used to mine, manufacture, transport batteries; the land cleared to create new mines for transition minerals; contamination of water supplies from mining or end of life disposal of battery components.

2 

Has the whole lifecycle of the value chain been considered in determining the net social impacts of the asset(s)? This includes, for example, responsible disposal of products at end-of-life to prevent damage to human health, preventing displacement of local communities to create new mineral mines; a thorough assessment of the human rights and employment conditions of workers.

3  

Do the economic and social benefits of investment flow to local communities, e.g. increased access to energy or greater energy security in the case of investments in renewable energy infrastructure or battery production capability; increased number and quality of jobs created from opening new mineral mines or commissioning new manufacturing plants? Are these benefits distributed fairly within communities, or do they exacerbate inequalities (e.g. by gender, disability, ethnicity and income).

4 

Will the investment help to create opportunities for more local domestic investment and the growth of domestically owned businesses? Does pursuing this investment opportunity risk crowding out domestic investors who would keep all returns in the country, and therefore limit economic development opportunities?

5  

How does the investment seek to address job losses caused by the energy transition and support reskilling? Are new jobs created suitable for and appealing to those leaving high-emitting sectors? Has location been considered to align areas of high job loss with job creation?

Key:

 Climate

 Environment

 Social

 Economy

2.2 Decarbonisation engagement

Financial institutions can engage and work with companies they lend to and invest in to understand how they are minimising the potential harm they may cause and how they intend to transition their business models for a low-carbon future. While climate engagement should apply across all assets, financial institutions will increasingly need to make decisions about which assets in the highest emitting sectors they will stay invested in and which they will exit, under which criteria and over what timeframe.

Some companies in high-emitting sectors such as oil and gas, and hard-to-abate sectors such as steel and cement production, face particular challenges to decarbonise but arguably in many countries are the most advanced in their net zero planning. For financial institutions, decarbonising a portfolio whilst staying invested in a high-emitting and/or hard-to-abate asset relies on understanding how the company operating the asset plans to reduce its carbon footprint in the short, medium and long term.

As such, it is critical that financial institutions have a strategy to assess transition plans of high-emitting companies – what technologies (existing or not yet developed) do they plan to invest in and rely on to reduce emissions? Do they plan to retrofit or switch power sources? Do they have a business model transition plan which enables the business to operate in a future low-carbon economy? And do they have the capital expenditure budgets to fund this transition, and where needed the access to finance?

Decarbonisation engagement

Engaging with businesses of high-emitting activities, that need to decarbonise, and where financial institutions have a significant influence to support the changes required.

Furthermore, when assessing the viability of transition plans, financial institutions should take into account the context in which businesses operate. Continued operation of high emitting assets may be needed in the short term where key services are provided to a population as long as the asset has a 1.5C aligned GHG emissions trajectory.[57] We know that for reasons of energy and economic security; energy access and affordability; and availability of alternative energy sources, phasing out of fossil fuels will not happen immediately. Ten of the 19 countries with the greatest fiscal dependence on oil and gas revenue were categorised as 'low' in the United Nations Human Development Index, with these countries being particularly vulnerable in the transition to a net zero global economy.[58] Furthermore, outside of emerging economies, many communities and local governments in regions such as North America or the Middle East are reliant on jobs and fiscal revenues provided by fossil fuel companies.

Decarbonising high-emitting assets

In specific cases where operations of high emitting assets will need to continue, mitigating environmental harm is vital. Below are some examples of how high-emitting sectors can decarbonise:

Investments in cleantech e.g. Carbon Capture Utilisation and Storage (CCUS)

Examples of projects where organisations or governments are attempting to do this include:

- **The Longship Project**, the Norwegian Government's full-scale carbon capture and storage project building from a Joint Venture Agreement between selected international oil companies. Phase one of the project 'Northern Lights', will be completed mid-2024 with a capacity of up to 1.5 million tonnes of CO_2 per year.[59]
- **Porthos**, a project to transport CO_2 from industry in the Port of Rotterdam to store in empty gas fields more than 3km beneath the North Sea. It is a joint project with EBN, Gasunie and the Port of Rotterdam Authority.[60] The CO_2 will be transported through an offshore pipeline to a platform in the North Sea, and when operational, Porthos will store around 37 million tonnes of CO_2, approximately 2.5 million tonnes per year for 15 years.[61]

Development of transition business models for the future

Major oil and gas companies which are aiming to become net zero emissions energy businesses by 2050 are doing so through a customer centred approach offering them low-carbon products and solutions e.g. biofuels, charging for EVs and hydrogen, investing in CCUS and reducing emissions from their own oil and gas operations. They are also planning to work with various stakeholders for example aircraft manufacturers to stimulate and accelerate demand for sustainable aviation fuel/sustainable alternatives.[62]

What does this mean for financial institutions?

Decarbonisation engagement is an important approach in this framework, especially in the short to mid term where operations of high emitting assets continue. Financial institutions have an opportunity to do this across all asset classes either through direct engagement or through more indirect stewardship. This can be achieved through effective stewardship to understand the operations, expenditure and partnerships of the companies they lend to or invest in. For example, in the short term, financial institutions could propose to management to employ more resource efficient processes to see reductions in carbon emissions. In the medium term, they could encourage them to invest in research and development in technology such as CCUS to mitigate environmental harm until they transition towards net zero business models in the longer term.

Investment in cleantech

Investment in cleantech will have a key role to play in the transition to a low carbon economy, especially in high emitting sectors like energy. PwC's State of Climate Tech 2022 report found that investment into climate tech startups shrunk by 30% in 2022 compared to a bumper 2021 (though funding for the energy sector bucked this trend and grew 60% to $15bn in the first three quarters of 2022). This contraction was largely in line with a reduction in venture funding across the wider market, however the analysis found a particular gap in funding going towards early stage start-ups, as well as those working on the most impactful solutions.[63]

Financial institutions have their own role to play in investment in cleantech, whilst recognising that government policies will be key to facilitating this – especially for start-ups operating in higher risk spaces with less mature technologies, such as CCUS and hydrogen.[64] At the same time, financial institutions should engage with companies to understand what types of technologies they plan to invest in/are investing in to reduce emissions whilst also encouraging them to move away from fossil fuels towards renewable energy. A particularly challenging example to consider is oil sands in Canada which is key to both its economy and overall net zero pledge.

Canada is the 5th largest producer of oil globally, with its oil and gas sector contributing US$105 billion to its GDP (total of US$1.65 trillion) and supporting 400,000 jobs across Canada in 2020.[65,66] It has led to economic growth and creation of jobs across the whole of the country and it is estimated that the oil sands industry will contribute an estimated $8bn in taxes.[67] However, it has attracted strong criticism as one of the world's most carbon intensive oil operations emitting significantly higher emissions in comparison to conventional oil.[68,69] Oil sands extraction and processing post extraction requires more effort and water usage and produces potentially higher environmental damage than conventional oil due to its thickness.[70]

To produce one oil barrel from oil sands (when mining not in-situ production), 3 barrels of fresh water is needed in comparison to less than 0.3 barrels of fresh water for conventional oil.[71] Tailings ponds which hold waste from the oil extraction process causing potential environmental damage have continued to grow in Alberta to the total size of 300 square kilometres.[72] A Tailings Management Framework has been published to try to ensure this is reduced within ten years after a mine's end life and that the oil companies implement this framework to reinstate the site to its previous condition. Until 2021, only 0.1% of land affected by oil sands in Alberta has been reclaimed.[73,74]

Canada's top banks more than doubled their investment in oil sands in 2021 to $16.8bn.[75] The banks are under increasing pressure to support domestic growth whilst also decarbonising. They are yet to fully disclose how they plan on meeting their targets under Net Zero Banking Alliance (NZBA) on greenhouse gas emissions, which commits to reaching Net Zero by 2050, but have emphasised that they plan on financing these companies to support them in decarbonising rather than trying to divest. They will be reliant on the oil producers cutting their emissions.

An alliance has been formed between Canada's six largest oil sands producers, with a combined 95% market share called The Pathways Alliance organization.[76] They have announced 'a three-phased plan to ensure immediate progress to reduce carbon emissions and achieve a goal of net zero emissions (for scope 1 and 2) by 2050'.[77] The plan is reliant on the pursuit of multiple technologies, including CCUS technology, increased electrification and fuel substitution and process improvements. The group states that through advancing innovation and technology, they have reduced overall emissions intensity by over 23% between 2012 and 2019.[78] They recognise that fossil fuels will need to play an increasingly diminished role in the energy mix as we transition to a low carbon economy, but that where emissions do continue, they need to demonstrate leading ESG performance and a clear transition to net zero.

The question for financial institutions is how to balance support and scrutiny of activity that reduces emissions from fossil fuels that will still be used during the transition with the need to accelerate an economy-wide net zero transition. There is a need to encourage the highest ESG standards from fossil fuel companies in the short term and to scrutinise use of CCUS to build confidence they lead to both real reductions in unabated emissions in the short to mid term, and absolute reductions in line with net zero in the longer term. More importantly, banks will need to encourage a pivot towards low carbon solutions in the medium to long term as unabated fossil fuels become obsolete in a net zero world.

Beyond assessing potential environmental harm, financial institutions need to continue to engage with companies they lend to or invest in to see that workers are able to transition to green jobs through investment in training and upskilling, and that local communities whose land is affected by fossil fuel extraction are consulted as key stakeholders.

Transition business models

Many companies are now starting to develop and publish transition business models and strategies on how they plan to decarbonise and meet net zero targets by 2050. Financial institutions should engage with them on these and track their progress against their plans as a way to encourage them to decarbonise and move away from increased fossil fuel extraction. This is already being seen; for example through the Say on Climate initiative which encourages companies to produce and publish robust net zero action plans which shareholders will annually vote on and hold them accountable to.[79]

Oil and gas companies have reported increased earnings in 2022 on the back of high commodity prices.[80] For those energy majors with a diversification strategy, they will be well placed to allocate capital to accelerate investment in low carbon plays (from EV charging and hydrogen to renewables, biofuels and carbon capture and storage). However, in the first half of 2022, some oil and gas companies invested ten times more in new oil and gas projects compared to low carbon projects.[81]

It is also important that financial institutions engage with companies on the just transition and assess transition business models from a social perspective. Jobs will not necessarily be created in the same sectors as where jobs will be lost. This will heavily impact communities dependent on fossil fuel production.[82] Workers in high emitting sectors will need to be supported to retrain in low carbon alternative sectors and/or learn new skills that will help them in future roles. It is vital that as companies decarbonise, the effect on workers and local communities is taken into account and solutions are put in place to ensure a just transition.

GFANZ has published a framework on net zero transition plans for the financial sector which financial institutions can use as a guide to operationalise their net zero commitments to support the real economy transition.[83] Further practical guidance on developing, reporting on progress of and evaluating net zero transition plans is also available.[84] The UK government launched the Transition Plan Taskforce (TPT) in 2021, which has developed a gold standard for best practice climate transition plans for private sector firms in the UK and recommendations on how to address the Just Transition within their net zero policies.[85] Financial institutions should take particular note of TPT's guidance to aid them in assessing businesses' transition plans and engaging with them to decarbonise in a socially inclusive way.[86,87]

Alongside direct approaches, financial institutions can also carry out decarbonisation engagement through indirect or multistakeholder collaborative approaches where they have less direct ability to influence, whether seeking to influence government policy, civil society or other financial institutions (through market standards and practice e.g. Equator Principles and UNPRI).

One such example is the Financing a Just Transition Alliance (FJTA), founded in November 2020 by more than 40 financial institutions, universities, civil society organisations and trade unions.[88] The FJTA's first report has made recommendations for other financial institutions to integrate environmental and social dimensions of the just transition into their policies and decision-making, including in engagement with corporate net-zero plans.

The Just Way, a report released in 2022 by Scottish Widows outlines how the just transition feeds into asset owner's responsible investment and stewardship framework, as well as making clear recommendations for financial institutions within the pensions industry and to the government to encourage a just transition to net zero.[89] These recommendations include calling for 'Investors to explicitly make reference to a just transition in their stewardship, engagement, and voting policies'.[90] The report also details the importance of looking at the just transition beyond employment, but also race and gender as women and people from ethnic minorities are more at risk of being left behind as we move towards a net zero economy.[91,92]

Strategic question set

Decarbonisation engagement

1  

On what grounds can continued operation of a high-emitting asset be justified, and has that rationale been documented, quantified and challenged in light of the overall net zero trajectory of the economy in which the asset operates?

2  

Can the environmental impacts of the asset(s) be materially mitigated, to the extent that continued operation of the asset can be justified? Is a credible and funded plan in place to do so?

3 

Does the decarbonisation pathway to net zero include the implications of continuing to finance the asset(s) in the short, medium and long term? Is there a strategy in place to monitor financed emissions and monitor the trajectory to ensure emissions are being reduced?

4 

Has every viable technological and process improvement to abate the greenhouse gas emissions of the asset(s) been considered? Where there are commercial barriers to adoption, have all public finance partnerships available to accelerate and/or incentivise action been considered?

5 

What will be the impact on workers of introducing lower-carbon technologies and processes, and will adequate training or career development opportunities be provided to enable all workers to take advantage of the change, so as to avoid exacerbating existing inequalities (e.g. by gender, disability, ethnicity and income)?

Key:

 Climate

 Environment

 Social

 Economy

2.3 Conditional transition finance

The IEA has stated that for net zero emissions to be reached by 2050, no new investments should be made in fossil fuel infrastructure.[93] At COP26, 39 development agencies and countries pledged to stop direct international public financing of new fossil fuel projects by the end of 2022.[94,95] Efforts continue to encourage private finance to do the same. Some institutions are starting to respond; in October 2022, Lloyds became the first bank in the UK to commit to end financing for new oil, gas and coal projects.[96] However, the likelihood and timing of other banks making such commitments will be heavily dependent on the markets they operate in, reflecting the differentiated emissions targets of developed and developing countries.

Yet rising energy security concerns combined with calls for climate justice on a global scale are gaining a new, louder platform in particular surrounding COP27 – the 'African COP'.[97] This is sparking debates over whether there are situations where 'conditional transition finance' (CTF) for fossil fuel projects can be justified.[98,99] Financial institutions are grappling with the development of nuanced exclusion policies and financing mechanisms that reflect judgements of this kind. CTF may be justified on the grounds of meeting a gap in essential goods and services (such as energy access), energy security, and genuine social impact. These should still aim to mitigate environmental harm to the greatest extent possible, be on a trajectory to net zero alignment by 2050 at the latest, and require stringent conditions for the validation of claimed social benefits.

Conditional transition finance (CTF)

Limited new investments in high-carbon activities which may require some continued investment as part of a net zero energy transition, with qualifying conditions in place. CTF may be justified on the grounds of meeting a gap in essential goods and services (such as energy access), energy security, and genuine social impact.

The role of natural gas

Natural gas, in particular, has been debated for its role as a transition solution to a range of immediate energy security and access concerns, whilst being a 'less-bad' emitter than other alternatives (producing fewer CO_2 emissions per unit of energy than coal or oil).[100,101]

Energy security

As a reliable source of energy, natural gas can serve as a backup to manage intermittency of supply as renewables come to make up a greater proportion of total energy capacity.[102] Such arguments have gained greater prominence in Europe in recent months as the continent faces an escalating energy crisis and prioritises lessening its dependence on Russian gas. Typically, Russia would supply around 40% of Europe's natural gas but has increasingly cut supplies since the start of 2022. In particular, flows through the Nord Stream 1 pipeline – which would normally carry a third of Russia's total gas supply to Europe – were indefinitely suspended in early September.[103,104]

This is creating a situation of emergency across Europe to the extent that countries are choosing, in addition to accelerating renewable production and importing gas from alternative international partners, to pursue new – and resurrect old – fossil fuel projects. Recent announcements include: The Netherlands and Germany's joint North Sea drilling operation for gas; UK regulator approval of the development of a North Sea natural gas field in efforts to increase domestic production; and Germany's support for a new gas pipeline from Spain to France and central Europe.[105,106,107] The situation has been deemed so urgent that even coal plants are being restarted in places (including in Austria, Germany and the Netherlands).[108]

Energy access

In emerging markets, climate justice considerations come to bear more heavily on the issue of natural gas as a transition fuel. The UN's Sustainable Development Goal 7 aims to 'ensure access to affordable, reliable and modern energy for all by 2030', yet 770 million people globally continue to live without access to electricity, 77% of whom live in Sub-Saharan Africa.[109] And demand is only expected to increase with Africa's population expected to double to 2.5bn by 2050.[110] Energy access is essential not only for economic development, but for a myriad of other social goals including gender equality, quality education, and health and wellbeing.[111]

The low-base supply from which many Sub-Saharan African countries are starting means there is scope, to a certain extent, for 'leapfrogging' to renewables to achieve these objectives. Increasingly cost-effective renewable technologies provide a pathway to expanded energy access through off-grid and decentralised solutions.[112,113] From an investor's perspective, investment in clean energy in emerging markets offers a significant business opportunity via access to Base-of-the-Pyramid markets and is a cost-effective way to reduce emissions at the global level; the IEA estimates that the cost of emissions avoidance here is around half the level in advanced economies.[114,115,116]

However, studies that model the need to both achieve net zero by 2050 and expand electricity generation for economic development, forecast the need for investment in a mix of new energy sources in Africa over the medium term, including both renewables and gas.[117]

Investment is being sought by a range of African countries for the development of the continent's collective 455.2 trillion cubic feet of natural gas reserves on this basis, reinforced by the reality that the continent has been responsible for only 3% of global emissions to date (and Sub Saharan Africa – excluding South Africa – just 0.55%).[118,119] Mozambique for example, has a number of prospective gas projects at various stages of development and financing (see Box 3). Some of these have demonstrated the socio-economic benefits that investment in the projects would bring. However, other projects located in Mozambique are on the global 'carbon bomb' watch list of those that will contribute at least a billion tonnes of CO_2 each over their lifetime.[120] From an energy access point of view, criticism has also been levied at the rationale of investment in production for export, as opposed to investment in downstream infrastructure to meet urgent domestic needs.[121] The Africa Green Hydrogen Alliance's research concludes green hydrogen could sustainably industrialise Africa, boosting GDP by 6-12% in six key countries by 2050.[122]

Ultimately, financial institutions will need to review carefully the possibilities of each potential CTF investment opportunity to support energy access, including assessment of the potential alternatives and corresponding impacts on a just transition pathway.

Box 3: Central Termica de Temane Power Project, Mozambique

In a national context where 70% of people lack access to electricity, the Central Termica de Temane (CTT) Power Project is expected to provide electricity to 1.5 million households and contribute around 14% of the electricity supply capacity available to meet national demand.[123] The project also contributes to the first phase of the Temane Transmission Project (TPP) to build a new transmission line, facilitating reliable electricity supply along its route and ultimately supporting the connection of future renewable energy projects.[124]

From an environmental standpoint, risks remain – it has been categorised as a 'Category A' project according to the IFC, which denotes potential significant adverse environmental or social risks and/or impacts, with risks to local biodiversity and clean air noted amongst others.[125] Taking a longer term view, though, CTT is aligned to the Paris Agreement and supports Mozambique's transition to net zero by 2050.[126]

Risk of stranded assets and stranded communities

Financing new gas projects in 2022 requires management of significant financial and reputational risks for lenders and investors, and of broader environmental and social risks for populations and the planet. Global pressures to decarbonise alongside the increasing competitiveness of renewable energy increase the risk of such projects becoming stranded assets, and those that depend on them for their livelihoods, becoming stranded communities.[127,128] Demonstrated mitigation of such risks via credible 'just transition' plans is essential for the provision of CTF. Spain's recent suggestion that planned additions to its gas infrastructure can be transformed for export of green hydrogen, may prove to be an interesting example.[129]

However such proposals will require robust feasibility studies to verify the practicality of the transition from gas to hydrogen. Stringent safety protocols will be needed to prevent leakage and dangerous combustion, and appropriate assessments must be conducted to confirm economic opportunities will be created for otherwise 'stranded' communities.

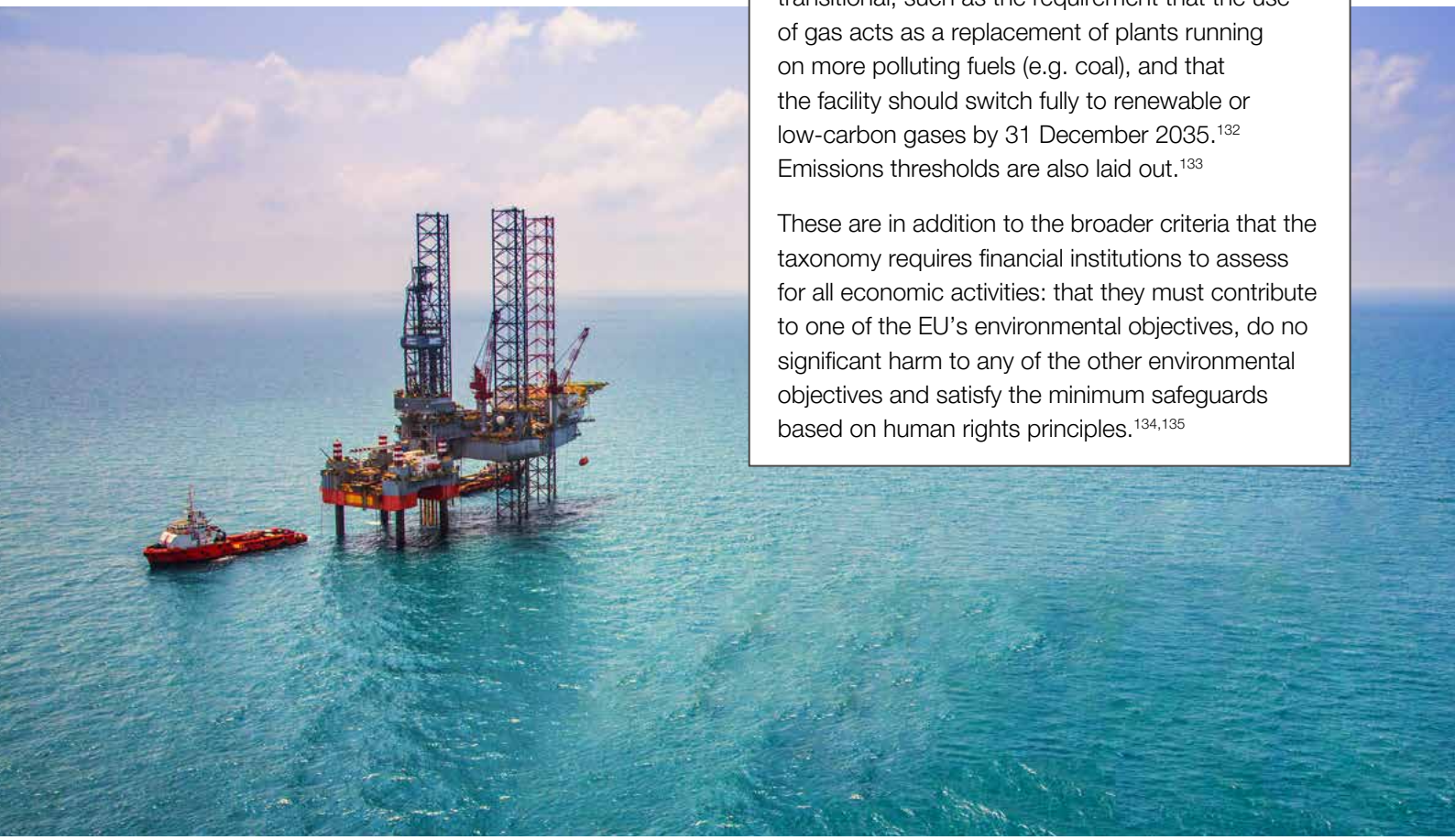
What does this mean for financial institutions?

- **Defining transition financing** – Financial institutions will need to consider their own criteria for transition finance to facilitate assessments of which fossil fuel projects may qualify, and on what basis. Financing criteria for gas projects are rightly tightening as countries and financial institutions set net zero targets, illustrated by recent regional and national examples (see Box 4).[130] Financial institutions will need to apply these levels of scrutiny for 'transition' investments, and also be mindful of wider social implications of such investments if they are to be aligned with a *just* transition.

Box 4: Natural gas in the EU Taxonomy

The European Commission announced earlier this year the inclusion of natural gas within the EU Taxonomy, citing the need for stable energy sources through the transition to net zero.[129] Yet this includes strict technical screening criteria for any gas investments to ensure they are actually transitional, such as the requirement that the use of gas acts as a replacement of plants running on more polluting fuels (e.g. coal), and that the facility should switch fully to renewable or low-carbon gases by 31 December 2035.[132] Emissions thresholds are also laid out.[133]

These are in addition to the broader criteria that the taxonomy requires financial institutions to assess for all economic activities: that they must contribute to one of the EU's environmental objectives, do no significant harm to any of the other environmental objectives and satisfy the minimum safeguards based on human rights principles.[134,135]

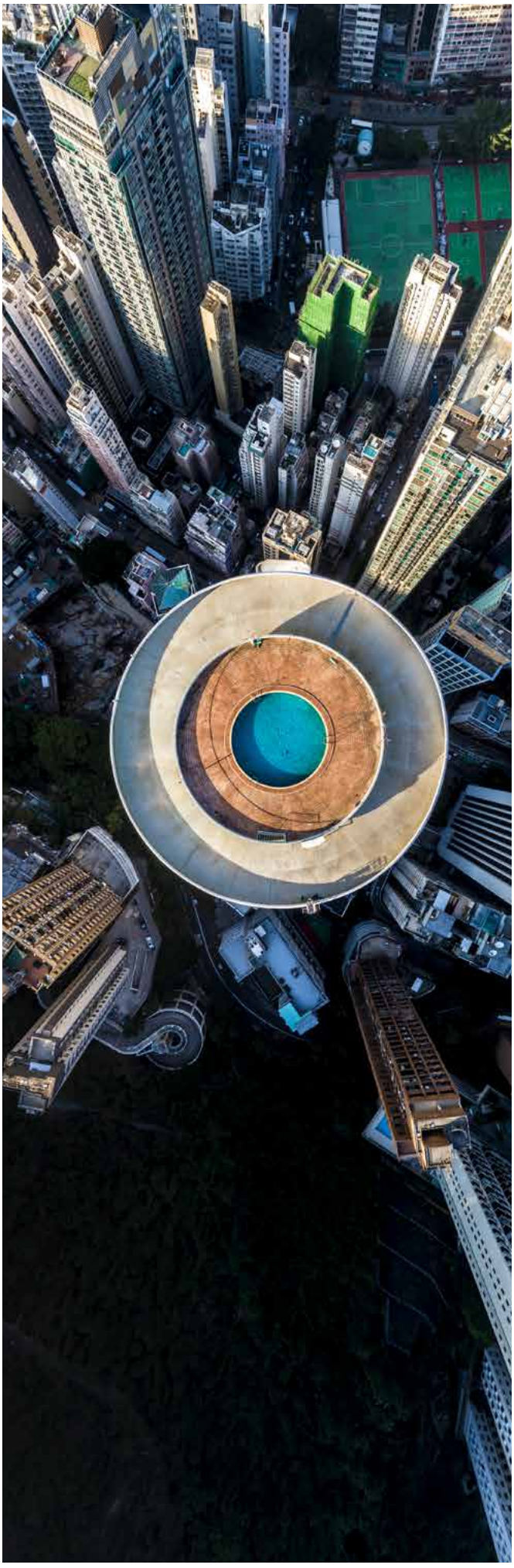


- **Financial institutions could make use of instruments which can support placement of conditions on such lending and investments, enabling the management of wider risks and impacts** – Use-of-proceeds instruments such as certain transition bonds may present effective transition financing instruments in how they can enable the dictation of strict conditions for the investment in question (see Box 5).

Box 5: Example of transition bond – CAPCO

One example is the issuance of a $300m USD transition bond in February 2021 by Castle Peak Power Company Limited (CAPCO) through its parent company CLP Holdings Limited (CLP).[136,137] The proceeds from the Bond will be used to finance the construction of a new combined cycle gas turbine unit at one of the power stations owned by the company in Hong Kong, following the commissioning of CAPCO's first unit of this kind in 2020. CLP notes that both projects support its decarbonisation plan, reducing carbon intensity in the short-term by transitioning away from coal- to gas-fired power whilst 'ensuring a reliable and affordable supply of electricity to the city'.[138]

- **Blended finance may be needed over time where private capital for transitional fuel becomes less available due to net zero commitments and exclusions** – If and where there is a legitimate need for investment in fossil fuels on the basis of energy security or energy access, but projects are nonetheless unable to secure sufficient private financing in light of new net zero commitments, blended finance may have a legitimate role to play in bridging this gap, including development finance.[139] However, and as noted above, there is an inconsistency with a number of countries' policies preventing financing for some new fossil fuel projects overseas, whilst continuing to support similar domestic projects.[140]



Strategic question set

Conditional transition finance

1 

Have lower-carbon options that can meet energy and/or local economic requirements been considered and ruled out prior to making this investment decision? This should include consideration of both lower carbon fuels, and review of the design and technology of the investment to ensure the best available (from a carbon impact perspective) have been used across site preparation, construction and operation.

2 

Can the asset be operational within a timeframe that means it will deliver the socioeconomic benefits it is premised on whilst also being on a trajectory to be either closed down or operating at net zero by 2050 at the latest, with appropriate plans in place to ready local communities for this transition? This could be through retraining local people, for example, or co-investment in enterprises associated with a net zero global economy, and partnerships with local authorities.

3 

Have the physical and transition climate risks been fully factored into the strategic and commercial case for investment? This should include, for example, consideration of the risk of becoming a stranded asset, or more broadly, locking a material part of the economy into a legacy global value chain.

4 

Have the social benefits on which this investment is premised been documented, quantified and challenged, including concrete provisions to ensure these are realised? For example, where investment is justified on the grounds of meeting energy access needs, does the necessary domestic infrastructure exist to facilitate this, or are there plans in place? Other benefits could include national energy security; job creation; or contribution to public finances. Has the intersectional impact of these benefits been assessed? What provisions are in place to provide targeted support to address inequalities along loans of gender, ethnicity, disability or income, for example?

5 

Can the negative environmental impacts of the asset(s) be materially mitigated, and are credible plans in place to do so? This includes, for example, risks to local biodiversity during the construction and operation of new gas projects.

Key:

 Climate

 Financial performance

 Social

 Economy

 Environment

2.4 Managed phaseout

According to analysis from the Intergovernmental Panel on Climate Change (IPCC) and GFANZ, CO_2 emissions from existing and planned fossil-fuel based infrastructure, if operating until the end of design life, would exceed the global carbon budget by 66%.[141,142] This highlights the urgent need to phase out high-emitting assets on an accelerated time frame, or as the IEA describes it, 'retire dirty early'.[143]

Building on GFANZ's publication, 'Managed Phaseout is a stakeholder-engaged, net-zero aligned strategy for the early retirement of high-emitting assets'.[144] High-emitting assets account for significant direct or indirect production of GHG emissions. These include energy assets, which this report focuses on (such as coal mines, oil fields and fossil-fuel power stations), industrial sector assets (such as cement plants and steel mills), and consumer sector assets (such as vehicles).

Managed phaseout involves a range of engagement strategies from closing and decommissioning the asset to environmental remediation where sites are restored to ecological productivity.[145] Redevelopment can then follow, for example, repurposing a coal site for a solar farm. Retiring assets on an accelerated timeline necessitates just transition considerations. This is especially the case in national or local contexts where these assets are of particular significance for vulnerable stakeholders and continuity of critical services is needed. Stakeholder consultation, adequate planning and management and assistance provision through policies is required, putting people at the heart of the low-carbon transition.[146]

Managed phaseout

Retiring high emitting assets earlier than planned, aligned to a net zero energy transition. This requires clear commitments and careful planning with stakeholders beyond the financial institution to avoid social harm.

Phasing out coal

Coal is a priority area for managed phaseout, or 'phase down' as committed to in COP26, as 'both the largest source of electricity generation and the single largest source of global carbon emissions'.[147] Phasing out coal operations is not a new process – coal power generation has fallen almost a third in the EU since 2012, for example; although the accelerated pace and scale required is.[148] It will be essential to build on key lessons learnt from these experiences to ensure a just transition.[149,150]

Sufficient time for consultation and implementation must be factored into managed phaseout, alongside provided support for affected workers and communities. The World Bank estimates that within the past half century around 4 million jobs in coal mines were lost due to decommissioned assets, leaving behind families and communities who were reliant on the industry.[151] Research also found that following mine closures in the United States, workers tended to have long unemployment spells and that those who find work may suffer earnings reductions of up to 30 percent over at least 15 to 20 years.[152] This highlights the need for social remediation, such as provision of reskilling opportunities for workers.

As early retirement of high-emitting assets becomes more urgent, a trade-off is presenting itself between allowing sufficient time and support for workers and communities to be relocated, retrained, or even retire, versus pushing forward the clean energy transition at the pace required. For example, a Social Contract for the hard coal mining sector in the Silesia Province (Poland) was signed in May 2021 after many months of difficult negotiations.[153] With around 78,000 employed in the coal sector in Silesia, this aims to ensure social protection for mine workers including guaranteeing work until retirement or giving a one-off severance package.[154,155,156] While the agreement gives coal miners more time for progressive phaseout, continued coal mining until 2049 is at odds with the urgency of the climate catastrophe and might also affect EU funding supporting the phaseout.[157,158]

Energy security of supply and economic dependency must be factored into managed phaseout. For instance, coal makes up over 80% of electricity generation in South Africa and almost 100% in Botswana.[159] China and India have the highest total coal consumption in the world.[160] In India, close to 40% of their districts have some form of coal dependency, with some districts' GDP being up to 50% reliant on coal.[161,162] These high dependency levels need to be factored into the pace and timing of phaseout, including considerations on how potential gaps created in energy supply will be met by investment in clean energy and the necessary infrastructure. New 'Just Energy Transition' partnerships (JETP) are being formed to accelerate these efforts – most recently, a JETP for Indonesia which will mobilise $20 billion, adding to the $8.5 billion South Africa JETP launched at COP26 (see Box 6).[163] JETPs are reportedly in the pipeline for Vietnam, India and Senegal too.

Box 6: South Africa's Just Energy Transition (JET) Partnership

In South Africa, energy supply challenges are having a profound effect on economic growth and jobs – since July 2022 households and businesses experienced their greatest frequency and duration of loadshedding.[164] The Just Energy Transition (JET) Partnership between South Africa, US, EU, UK, France and Germany launched at COP26 will mobilise $8.5 billion for South Africa's Just Transition.[165] While this has been described as a "drop in the ocean of climate finance that is required', by Dr. Crispian Olver, Executive Director of South Africa's Presidential Climate Commission, this has been catalytic in the movement to accelerate the shift away from coal, invest in renewables and protect fossil fuel-reliant communities.[166]

The JET Partnership will mobilise public and private finance using various mechanisms, including grants, concessional loans and investments and risk sharing instruments.

Redevelopment or retrofitting of high-emitting to low-emitting assets can be used as means to create new jobs and new energy supply streams (see Box 7). Redevelopment or retrofitting also have the benefit of providing future revenue flow.

Box 7: Enel's redevelopment of coal plants

Enel, the Italian utility, has committed to finding innovative solutions to transform their coal plants to renewables and energy storage.[167] As part of this, Enel is promoting Endesa's Futur-e initiative at the coal-fired power plant in Andorra, Teruel. This includes installing 1,585 MW of solar power, 140 MW of wind power and a large-scale energy storage system of up to 160 MW. The Futur-e project will create new jobs – around 450 jobs have been created, with a further 4,000 jobs during construction of the renewable plants and 138 longer-term positions for their operation and maintenance. The project has also developed technical training programmes aimed at local communities which promote new work opportunities.[168]

What does this mean for financial institutions?

Financial institutions may be exposed to high-emitting assets directly through services such as project finance and insurance, **or indirectly** through a) financing companies and other real-economic asset owner-operators, and/or b) companies in their supply chain or serving local communities dependent on the operation of the asset (e.g. food, hospitality etc).[169] This can enable financial institutions to play a part in managed phaseout such as through influencing decarbonisation strategies and providing financial support, either alongside government or company sponsored programmes or as part of a public-private or blended finance fund.

Financing is also needed for effective environmental and social remediation. According to the World Bank, 'insufficient funding is the biggest barrier to physical mine closure and land reclamation taking place in a satisfactory manner'.[170] Social remediation costs, such as social package pay-outs, must also be met. This will require mobilisation of public and private finance, alongside financial assurance mechanisms to provide security and guarantee funding availability.[171]

Blended finance can be used to accelerate coal phaseout, combined with investment in renewables. The Asian Development Bank (ADB) has launched an Energy Transition Mechanism (ETM) 'to accelerate the transition from coal to clean energy in Southeast Asia, in a just and affordable manner'.[172] This has received support from HSBC, among others.[173] The ETM has two financing schemes – one aimed to buy coal-fired power plants to close them, or otherwise incentivise owners to retire facilities early, the second, to invest in renewable power to replace lost capacity.[174]

> "By purchasing a coal-fired power plant with, say, 50 years of operational life ahead of it and shutting it down within 15 years we can cut up to 35 years of carbon emission"[175]
>
> **Ahmed M Saeed, ADB's Vice President for East Asia, Southeast Asia and the Pacific**

A just transition is an 'integral part of the ETM', and is coordinated with ADB Just Transition Facility.[176] This includes an assessment of just transition activities, such as employment and livelihood implications.[177]

Indonesia and the Philippines have announced partnerships with the ADB to pilot the ETM. The ETM will develop specific approaches in collaboration with each country, depending on their energy production and distribution structure.[178,179] For instance, in the Philippines, where most electricity generation comes from private companies, the ETM will look to change the incentive structure for private companies, potentially through re-leveraging with a lower cost of capital.[180] These countries will also receive support from Climate Investment Fund's Accelerating Coal Transitions (ACT) Investment Programme, for which the G7 announced up to $2 billion in support in June 2021.[181]

Financial institutions which are not directly or indirectly exposed to high-emitting assets can still choose to support managed phaseout. For instance, financial institutions can choose to purchase and phaseout high-emitting assets on an accelerated timeline (as seen in the ADB example above). This can be through a carbon reduction fund, where funders purchase assets until they yield sufficient returns then decommission. Assets can be split into tiers with some decommissioned sooner depending on the cash flows and returns needed, and the provision of alternative clean energy sources in the relevant region. Financial institutions can also encourage development institutions such as multilateral development banks or development finance institutions with the appropriate expertise to take over and manage closure of high emitting assets.

New and innovative financing mechanisms will need to be developed and/or engaged with by financial institutions. For instance, securitisation was used following the retirement of a coal plant in Wisconsin, when environmental trust bonds representing $100 million of the remaining investment in environment controls at the Pleasant Prairie power plant were authorised.[182] These bonds, with lower interest rates, are expected to save customers $40 million over the next 15 years and will make it more affordable to retire facilities earlier than intended.[183]

'Many financial institutions (lenders, equity investors and insurers) have become hesitant to provide finance to high-emitting assets, even when the objective is decarbonisation through early retirement'.[184] This section has highlighted how both public and private finance is needed for the managed phaseout of high-emitting assets. To do this, financial institutions, working in conjunction with national, regional and local plans, need to understand and mitigate any potential negative social impacts created by the closure of high-emitting assets, while accelerating a low-carbon transition. By supporting sustainable economic growth and the creation of new markets and companies, the financial institutions are also likely to benefit from new customers, both corporate and personal, and share in the financial benefits such growth will bring.

Strategic question set

Managed phaseout

1

Have opportunities to redevelop or repurpose the asset(s) to a lower-emitting activity been explored? Will new jobs in redeveloped assets be suitable and available for workers set to be affected by an accelerated closure?

2

What will be the impact of early asset closure on direct jobs? How can affected workers be supported in moving into green jobs, in terms of retraining, qualification and skills, or supported through early retirement provision?

3

What will be the impact of accelerated closure on the volume, distribution and security of national energy supply or production/provision of other essential goods and services? Are investment plans in place to fill any supply gaps created?

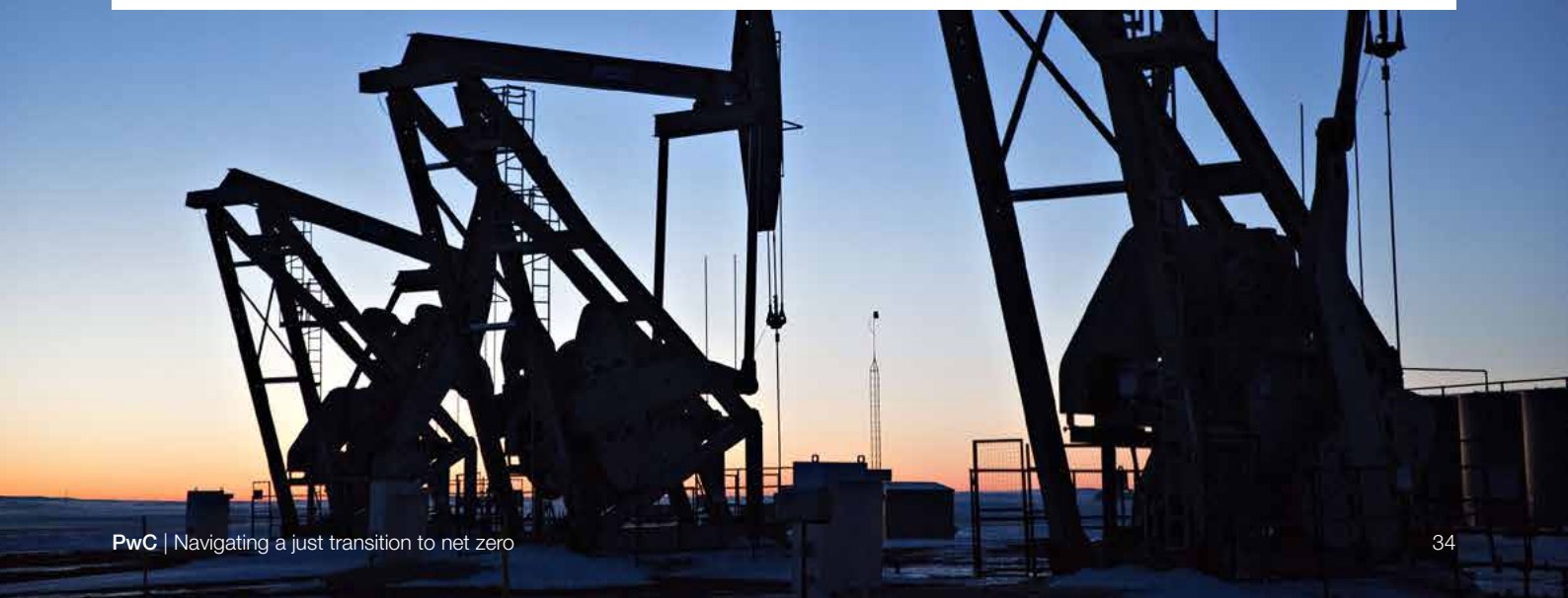
4

How exposed are (local) communities to being economically stranded by accelerated closure (e.g. in terms of tax contribution, job losses) and what might be the second order effects on the broader supply chains that service this industry? What can be done to reinvent local economies through fresh investment in replacement enterprises, and partnerships with government(s)?

5

Will early closure disproportionally affect certain groups, potentially exacerbating existing inequalities – such as regional, ethnic, gender or other socio-economic inequalities? What provisions are in place to provide targeted support to address such inequalities?

Key: Climate, Economy, Social



2.5 Responsible divestment and exclusions

The divestment movement has gained pace globally – the 'Divestment Database' tracks institutions across different sectors which have made fossil fuel divestment commitments, totalling nearly $41tn in assets, more than the annual GDP of the United States and China combined.[185] Recent divestment campaigns have shone a particular spotlight on financial institutions' fossil fuel investment activities and demand that they end new investment in fossil fuel companies, divest from ownership of fossil fuel equities and bonds, and end fossil fuel sponsorship.

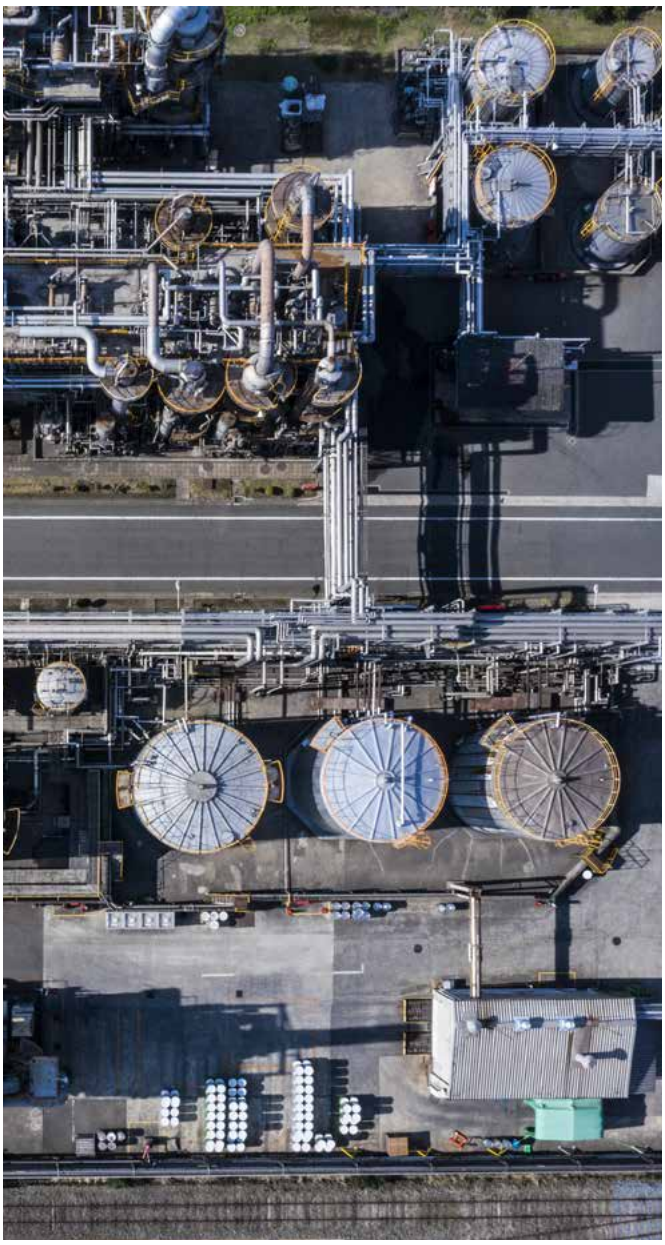
In 2021, financial institutions who own and manage assets of at least $10bn have made public commitments to divest from fossil fuels.[186] French bank, Banque Postale – the first bank to announce a full exit of oil and gas by 2030 – committed in 2021 to immediately suspend provision of financial services to companies involved in new exploration, extraction and infrastructure projects.[187]

Others continue to assess whether/in what cases divestment is an appropriate approach to support their net zero ambitions, in light of issues such as emissions transfer. This is when emissions are simply transferred to other companies (e.g. through transferring carbon-intense assets from one owner to another, with new owners often being less transparent and less committed to addressing climate change).[188]

Recognising that responsible divestment and exclusions must incorporate consideration of the broader socioeconomic and environmental implications of withdrawing capital, this section explores some of the arguments related to divestment versus engagement, and how these two approaches can be reconciled.

Responsible divestment and exclusions

Divesting or excluding assets or activities which do not align with an institution's decarbonisation pathway as part of its net zero aligned portfolio. This will involve restrictions on new lending and investment. In the case of existing assets, divestment will need to be handled carefully to minimise social harm and achieve real world emissions reductions.



What does this mean for financial institutions?

Growing pressure to divest

There is growing pressure for divestment from high emitting companies. Following COP26, a survey of over 6,000 investors by the investment firm NinetyOne found that when given the option, 36% of investors would prefer that managers and asset owners get rid of all current investments in high emitting companies and to not invest in high emitters again. Just a month earlier, this figure was 30% demonstrating a shift following the COP26 discussions towards support for divestment and exclusions to achieve net zero.[189]

However, a large proportion of financial institutions have not yet put in place portfolio-wide exclusion and divestment policies. Efforts to strengthen standards by Race to Zero – the UN body that sets the minimum criteria that GFANZ requires its members to meet – have exposed the challenges of trying to secure such commitments. In September 2022, Race to Zero revised its requirements for members, released just three months prior, that had stated members must '*restrict* the development, financing, and facilitation of new fossil fuel assets', noting that '[a]cross all sectors, this includes no new coal projects' (emphasis added).[190] The updated wording reads that members 'shall *phase out* [their] development, financing, and facilitation of new *unabated* fossil fuel assets, *including coal*, in line with appropriate global, science-based scenarios' (emphasis added).

This illustrates the tension between setting criteria to ensure that net zero commitments follow a path aligned to the Paris Agreement, and the political and economic implications in the shorter term. As of June 2022, only 11 of the 240 largest GFANZ members had ruled out all financial service provision to companies building new coal mines, plants and infrastructure.[191]

Divestment versus engagement

Financial institutions which are choosing to divest argue that engagement on its own does not work even after years of targeting companies and that the more institutions that divest, the more pressure is placed on governments to introduce more stringent regulations.[192,193] Furthermore, divestment contributes to a momentum of action, uniting more organisations around 'an explosion of climate advocacy'.[194]

Divestment is also a relatively quick and simple way for financial institutions to reduce portfolio (financed) emissions, be on track for their own net zero trajectories, and respond to public and investor pressure.[195] This can be through an asset allocation strategy which reviews existing assets that may be contributing the greatest amount to the portfolio-wide emissions footprint. Financial institutions can then rebalance their portfolios through divestment from high-emitting assets and/or shifting the portfolio towards lower-emitting constituents. Several financial institutions have developed methods to reduce portfolio emissions exposure using sector-based approaches, including JP Morgan's Carbon Compass, ING Bank's Terra methodology, and Barclays' BlueTrack.[196]

However, divestment approaches have been criticised for their reliance on simplistic arguments around withdrawing finance as a quick and easy way to reduce a financial institution's carbon footprint, without necessarily supporting real economy emissions reductions. Bill Gates stated that "Divestment, to date, probably has reduced about zero tonnes of emissions".[197] The incentive for businesses to remove high-emitting assets from their portfolios in order to meet decarbonisation milestones, sometimes labelled 'brown-spinning', could therefore detract from the ultimate aim of the divestment movement.[198] This is because although divestment provides an immediate carbon footprint reduction for the divesting financial institution, real economy carbon emissions may simply be transferred to the new acquirer.

Divestment may lead to greater negative social and environmental impacts depending on new asset owners. Critics such as Zingales, Broccardo and Hart argue that divestment is less effective than keeping a voice within a company, as divesting can lead to reduced asset value. "That very action creates an incentive for people who don't care [about social or environmental concerns] to buy on pure return" – Luigi Zingales.[199] This could see new asset owners operating in less regulated markets run operations to maximise short-term profits, without accounting for wider environmental or social impacts.[200,201] In cases where assets move from transparent public markets where pressure can be applied, to less transparent private markets where they are not scrutinised so closely, divestment might perversely slow decarbonisation.[202]

Divestment can direct capital away from high emitting companies that require capital to enable their transition to net zero. Financial institutions play a central role in both placing pressure on climate laggards and supporting their transition to decarbonise through providing finance. With divestment, "when you choose exit, you don't have any voice in the future" states Luigi Zingales.[203,204] Detractors of this approach argue that the ability for each institution to influence the decarbonisation pathway is lost through divestment, and so too is the ability to encourage a just transition across social, economic and environmental impacts.

Ultimately financial institutions will increasingly need to consider what the real-world impact of divestment will be on both carbon emissions and, for example, impacts on local communities and workers. Are they just shifting the problem elsewhere?

Divestment as part of a broader strategy

It is important to think of divestment as part of a broader strategy. For many institutions, the argument of divestment versus engagement is viewed as a false dichotomy and the combination of threat of divestment with real engagement is the preferred approach.[205] Large asset managers have publicly stated that they will deploy both strategies in an escalation framework, whereby divestment is the final result if an investee fails to take the action stipulated by the manager (see Box 8).

Box 8: Schroders' Climate Transition Action Plan

Schroders set out their net zero ambition to have portfolio alignment to 1.5 degrees by 2040 in their Climate Transition Action Plan. The Action Plan sets out climate expectations of all investees, including the requirement to set a net zero target across scopes 1, 2 and 3 and a transition plan to get there. Alongside the expectations, Schroders sets out an escalation practice for action the manager will take if expectations are not met. Ultimately failure to meet expectations over a timeframe will result in divestment.[206]

Similarly, Aviva noted that divestment plays a role as part of a broader engagement strategy:

> "Aviva Investors' ESG philosophy promotes the relative merits of engagement over divestment as the more effective mechanism of delivering positive change and outcomes for our clients and society. Engagement provides us the opportunity to partner with companies as they navigate the challenges of transition.
>
> **However, for our engagement approach to have impact, it must be accompanied by a robust escalation process, including the ultimate sanction of divestment."**
>
> **Mirza Baig, Global Head of ESG Research and Stewardship at Aviva Investors[207]**

Applying divestment and exclusions in different contexts as part of a just transition

For a just transition, policies should take into account local/regional/national contexts. For instance, exclusion policies may provide a later timeline for coal exclusions in emerging markets with high economic dependence on coal, such as Indonesia. The KfW Group's exclusion list makes an exception for financing heating stations and cogeneration facilities fired with coal in 'developing countries', subject to a rigid sustainability assessment.[208]

Financial institutions can decide to 'divest to reinvest' – where investment previously in fossil fuel assets/companies is reinvested in projects which bring social and/or environmental benefits.[209] This could be new renewable projects which may bring new jobs, although here not just the number of jobs, but also the type of job, job security and length amongst other factors should be considered. Financing green projects is discussed in more detail in section 2.1.

Strategic question set

Responsible divestment and exclusions

1

At what point are high-emitting investment(s) no longer compatible with the net zero pathway? Should a portfolio-wide exclusion and divestment policy for particular high-emitting sectors, such as coal or oil and gas be implemented? Is this in addition to product-level exclusions, for example as seen with article 8 or article 9 funds within the EU's Sustainable Finance Disclosure Regulation?[210,211]

2

Has maintaining the asset and deploying stewardship strategies to influence the decarbonisation of the asset and its value chain to create real world emissions reductions been considered?

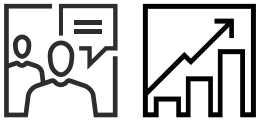
3

What will the real-world decarbonisation impact be of divesting from high emitting assets? Will the asset(s) pass to new owners with plans for decarbonisation, or simply to less climate-conscious owners and therefore the emissions will continue?

4

What will the real-world social impact be of divesting from high emitting assets? Will the asset(s) pass to new owners with employment transition plans, retraining opportunities, worker welfare practices in place? Could the asset(s) be forced to close suddenly without proper transition plans in place for current employees? Will divestment disproportionally affect certain groups, potentially exacerbating existing inequalities – such as regional, ethnic, gender or other socio-economic inequalities? What provisions are in place to provide targeted support to address such inequalities?

5



If an exclusion policy is implemented, will these be applied with different timeframes for different contexts/regions in line with a just transition? Will areas in need of conditional transition investment lose out from the exclusion policy?

Key:  Climate  Economy  Social

3. Conclusion

Questions of a global just transition are being raised with increasing urgency and need to be faced. How quickly can we decarbonise our global economy, and what will this mean for industrial development in parts of Africa, Asia and Latin America? Can the world's remaining carbon budget be fairly shared between geographies, as nations such as India have demanded? How do we support local communities who might lose out in the short term, to protect the interests of the global community in the longer term? How do we enable the benefits of a low-carbon transition to be shared while supporting those set to lose out? How do we ensure that the transition to net zero addresses both the climate and nature crises, and the need for energy security and economic development?

We are already seeing the revival of calls for greater financing from the Global North to South and to meet commitments previously made – notably, developed countries have fallen almost $17bn short of the $100bn of climate finance per year by 2020 target.[212] Greater collaboration between the public and private spheres will be required to support the just transition. This will be needed both to support the managed phaseout of high-emitting industries (such as Indonesia's JETP which will mobilise $20 billion, adding to the $8.5 billion South Africa JETP launched at COP26) and to finance new green and inclusive projects, including encouraging the scaling up of private finance in emerging markets.[213,214,215,216]

Financial institutions clearly have a key role to play in the just transition to net zero be it through providing green finance or through engaging with high-emitting sectors to decarbonise. This report has focused on the energy and extractives sector, however financial institutions should seek to apply a just transition and net zero lens across their portfolios. Whilst there are no simple solutions to the difficult questions and trade-offs that arise in the transition, this report has set out a framework of suggested considerations and approaches that will support financial institutions to approach each investment decision, as summarised below.

For the highest-emitting assets in portfolios, financial institutions increasingly need to engage with companies to decarbonise assets; place conditions on financing to the extent that they may be required as economies transition; support the managed phaseout responsibly; and/or, apply exclusion policies and divest;

For all assets, financial institutions increasingly need to scrutinise companies' transition plans against their own targets and their viability in a future low-carbon economy. Effective scrutiny of transition plans and consequential engagement should ensure communities dependent on these assets are not left behind.

For investments that are already compatible with the low-carbon transition, financial institutions should consider and appropriately act to minimise any negative socio-economic impacts and risks associated with fast-growing, green investment opportunities.

4. Methodology and key resources

This report has drawn from secondary sources, including existing frameworks and research on the just transition. PwC firms across the global network, including PwC South Africa, PwC Poland, PwC Canada and PwC Malaysia, have contributed insights from relevant just transition challenges and initiatives in their countries and regions.

This research was used to compile a long-list and short-list of relevant just transition criteria. These were grouped according to key indicator themes and areas, e.g. social and transition plans, and were used to inform the question lists as part of the framework.

Key frameworks and research in this field include:

- **World Benchmarking Alliance's** work on the just transition, including:
  - » Just transition methodology, which identifies just transition indicators with clear guidance and an extensive methodology;
  - » 2021 Just Transition Assessment, which piloted their just transition assessments.
- **Council for inclusive capitalism's** 'Just energy transition' framework
- **Climate Action 100+'s** development of a just transition indicator as part of their Net Zero Company Benchmark
- **GFANZ** work on managed phaseout of high-emitting assets and their recent report on Financial Institution Net-zero Transition Plans
- **LSE and the Grantham Research Institute on Climate Change and the Environment's** research including their:
  - » Work on investor action and the just transition e.g. this report on climate change and the just transition which was written in partnership with Principles for Responsible Investment and includes five areas for investor action;
  - » Financing a Just Transition Alliance 2021 Report of the UK Financing a Just Transition Alliance;
  - » Recent 2022 publication, Making transition plans just, How to embed the just transition into financial sector net zero plans.
- **Commonwealth Development Corporation** (now **British International Investment**) Guidance into new natural gas power plants
- **OECD's** Equitable Framework and Finance For Extractive-based Countries in Transition (EFFECT) framework
- **Reclaim Finance's** Coal Policy Tool which collates and ranks coal policies (e.g. exclusion criteria, phaseout plans) across major financial institutions

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Authors

PwC UK Sustainability Team:

- Joe Crotty
- Priyanka Kanani
- James King
- Margot King
- Alexandra Lockyer

Sponsoring partner

- Jon Williams, Global Banking & Capital Markets ESG Leader and UK Chair, PwC Sustainability

Support from PwC Global

- Emma Cox, Global Climate Leader

Support from PwC Network Firms

- PwC Malaysia
- PwC Canada
- PwC South Africa
- PwC Poland

For more information about this report, please contact our team:

- Jon Williams: jon.d.williams@pwc.com
- Alexandra Lockyer: alexandra.lockyer@pwc.com

For more information about our Sustainability services, please visit: pwc.co.uk/services/sustainability-climate-change.html

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