BDO INSIGHTS: IMPLICATIONS FROM COP26 AND THE JOURNEY TO NET ZERO

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INTRODUCTION

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The two-week COP26 summit in Glasgow ended on 13 November 2021 with the *Glasgow Climate Pact*, signed up to by nearly 200 countries, stating that it is alarming and of the utmost concern that human activities have already caused around 1.1°C of warming and that the impacts are already being felt in every region. The pact also states that if we are to limit the temperature increase to 1.5°C above pre-industrial levels, we need to make rapid, deep and sustained reductions in global greenhouse gas emissions – cutting global carbon dioxide emissions by 45% by 2030 (relative to 2010 levels) and to net zero by the middle of the century, and making large reductions in other greenhouse gases.

The COP26 summit is reported to have kept the 1.5°C limit within reach by finalising the outstanding elements of the Paris Agreement and strengthening the ambitions and actions of all countries. They agreed to revisit and reinforce their current emissions targets to 2030, known as Nationally Determined Contributions (NDCs), in 2022.

Besides, countries are expected to accelerate the development, deployment and dissemination of technologies, along with the adoption of policies, to transition towards low-emission energy systems. This includes rapidly scaling up the deployment of clean power generation and energy efficiency measures by accelerating efforts to phase down unabated coal power generation and inefficient fossil fuel subsidies, while recognising the need for support towards a just transition. Outside *the Glasgow Climate Pact*, countries have made several key commitments and pledges in relation to:

- Ending deforestation
- Reducing methane emissions
- Accelerating clean technology and sustainable solutions
- Mobilising net-zero capital investment
- Accelerating the transition to clean power generation
- Accelerating the transition to green transport
- Devising a framework for a carbon trading market

In addition to providing an overall understanding of the key commitments made at COP26, this paper aims to provide insights into the following implications for businesses:

- Net zero as imperative for business
- Financing the transition
- Green projects driving future investment trends
- Preparing for transition risks
- Transition-led inflation of energy prices
- Rising costs of green raw materials and products
- Carbon taxes as a strategy

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KEY COMMITMENTS FROM COP26

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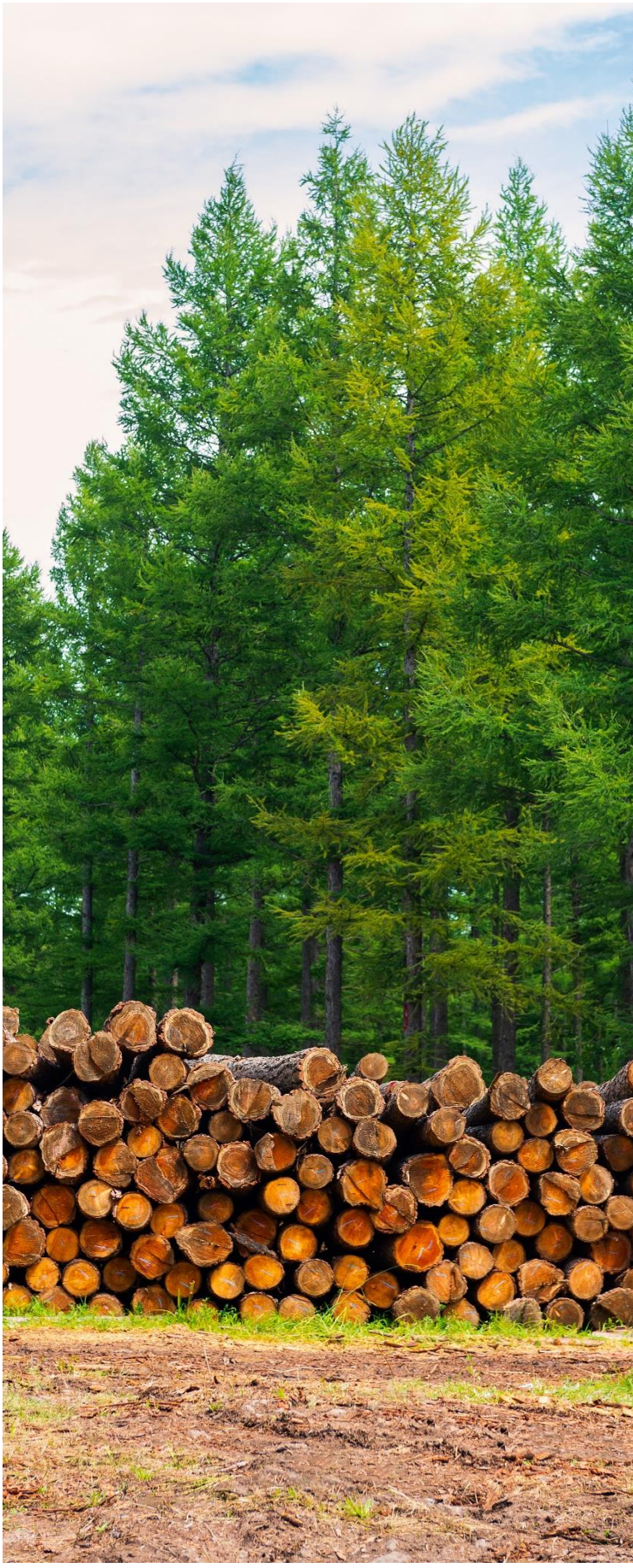
Ending deforestation

The *Glasgow Leaders Declaration on Forests and Land Use* was signed by over 110 world leaders who have committed to halting and reversing deforestation by 2030. Their commitment includes:

- Strengthening their shared efforts to conserve forest and other terrestrial ecosystems and accelerate their restoration, as well as facilitating sustainable trade and development policies, internationally and domestically.
- Empowering local communities, including indigenous peoples, to better manage and protect the forests.
- Implementing and redesigning agricultural policies and programmes to reduce hunger and benefit the environment.
- Moving financial institutions' investment portfolios away from agricultural commodity supply chains with a high deforestation risk and towards sustainable production.



Reducing methane emissions

The *Global Methane Pledge* was signed by 104 countries with the aim of reducing methane emissions by at least 30% by 2030 to tackle climate change and bring the world closer to the goals of the Paris Agreement, which was to keep the global temperature rise to below 2°C.

Accelerating clean technology and sustainable solutions

The *Glasgow Breakthrough Agenda* was signed by 35 world leaders who committed to work together internationally for the rest of this decade to accelerate the development and deployment of the clean technologies and sustainable solutions needed to meet the goals set out in the Paris Agreement, ensuring they are affordable and accessible for all. The breakthrough goals and global metrics are set out in Table 1.

Table 1
Glasgow Breakthrough Agenda: goals and global metrics

Area	Breakthrough goal	Global metrics
Power	Clean power is the most affordable and reliable option for all countries to meet their power needs efficiently by 2030	1. Annual capacity additions of clean energy (on grid and distributed), including as a share of global total electricity generation. 2. Investments in both the research, development and demonstration and deployment of clean power, enabling technology, and grids, including as a share of total power investment globally. 3. Evidence that power systems can integrate very high levels of variable renewable energy (including up to 100%) in different geographies and climates whilst maintaining a cost-efficient, secure and resilient system. 4. Rate of annual energy efficiency improvement (including for key products sold globally). 5. Relative cost, affordability and accessibility of clean power technologies (compared to alternatives).
Road transport	Zero-emission vehicles are the new normal and accessible, affordable, and sustainable in all regions by 2030	1. Share of new light- and heavy-duty vehicle sales that are zero emission. 2. Amount of available recharging infrastructure for zero-emission vehicles. 3. Investments in both the research, development and demonstration and the deployment of zero-emission vehicles and of key components such as batteries. 4. Relative cost, affordability and accessibility of zero-emission vehicles and of key comp onents such as batteries (compared to alternatives).
Steel	Near-zero emission steel is the preferred choice in global markets, with efficient use and near-zero emission steel production established and growing in every region by 2030	1. Number of near-zero emission steel plants in operation and under development, and total global near-zero emission steel production capacity. 2. Share of global steel production covered by near-zero emission steel standards. 3. Investments in both the research, development and demonstration and deployment of near-zero emission steel technologies. 4. Relative cost, affordability and accessibility of near-zero emission steel and relevant technologies (compared to alternatives).
Hydrogen	Affordable renewable and low-carbon hydrogen is globally available by 2030	1. Production cost, and cost at point of supply, of renewable and low-carbon hydrogen (and affordability and accessibility compared to alternatives). 2. Volume of renewable and low-carbon hydrogen production globally. 3. Greenhouse gas abatement, across the full value chain, from the production and take-up of renewable and low-carbon hydrogen. 4. Investments in the research, development and demonstration and deployment, of renewable and low-carbon hydrogen technologies

(Source: https://ukcop26.org/cop26-world-leaders-summit-statement-on-the-breakthrough-agenda/)

Mobilising net-zero capital investment

The Glasgow Financial Alliance for Net Zero (GFANZ) is a global coalition of leading financial institutions in the UN's Race to Zero campaign, which is committed to accelerating and mainstreaming the decarbonisation of the world economy and reaching net-zero emissions by 2050. GFANZ has announced its commitment to transforming the economy for the transition to net zero. This commitment, representing over 450 institutions across 45 countries, can deliver an estimated US$100 trillion of finance needed for net zero over the next three decades.

GFANZ facilitates its member companies to allocate capital to net-zero aligned companies and projects through four major phases – commitment, engagement, investment and net-zero alignment – represented by the following key steps:

- Building and growing existing and new net-zero alliances in the UN's Race to Zero.
- Working with multilateral development banks, development finance institutions and others to better mobilise the trillions of private capital needed to support the transition to net zero in emerging markets and developing countries.
- Working with the real economy to define net-zero sectoral pathways.
- Clearly defining financial sector expectations on real-economy transition strategies and disclosure to support investment in the transition.
- Bringing together and defining best practice for transition strategies in the financial sector.
- Further developing work on portfolio alignment metrics for financial institutions.
- Call to action to G20 governments to create the public policy necessary to build a net-zero financial system.

Accelerating the transition to clean power generation

A *Global Coal to Clean Power Transition Statement* was made and committed to by 46 countries and 26 organisations, in which they set out a shared vision of accelerating a transition away from unabated coal power generation (which is essential for achieving the goals of the Paris Agreement) in a way that benefits workers and communities and ensures access to affordable, reliable, sustainable and modern energy for all by 2030 (the UN's Seventh Sustainable Development Goal). They commit to the following actions to drive this global transition forwards:

- To rapidly scale up their deployment of clean power generation and energy efficiency measures.
- To rapidly scale up technologies and policies in this decade to achieve a transition away from unabated coal power generation in the 2030s for major economies and in the 2040s globally, consistent with their climate targets and the Paris Agreement.
- To cease issuance of new permits for new unabated coal-fired power generation projects, to cease new construction of unabated coal-fired power generation projects and to end new direct government support for unabated international coal-fired power generation.
- To strengthen domestic and international efforts to provide a robust framework of financial, technical and social support to affected workers, sectors and communities to make a just and inclusive transition away from unabated coal power generation in a way that benefits them and expands access to clean energy for all.

Accelerating the transition to green transport

Land

The *Glasgow Declaration on Zero-Emission Cars and Vans* was announced and committed to by more than 100 national governments, cities, states and major companies to rapidly accelerate the transition to zero-emission vehicles to achieve the goals of the Paris Agreement. They will work towards all sales of new cars and vans being zero emission by 2040 globally, and by no later than 2035 in leading markets.

Shipping

The *Clydebank Declaration* was signed by 22 countries to support the establishment of green shipping corridors – zero-emission maritime routes between ports. This means the establishment of at least six green corridors by the middle of this decade and more by 2030, with the aim of scaling up activity in the years that follow by, among other things, supporting the establishment of more routes, the establishment of longer routes and/or having more ships on the same routes.

Aviation

The *International Aviation Climate Ambition Coalition* was formed, representing 23 countries committed to the following actions:

- To advance ambitious actions to reduce aviation carbon emissions at a rate consistent with efforts to limit the global average temperature increase to 1.5°C.
- To support the adoption by the International Civil Aviation Organization (ICAO) of an ambitious long-term aspirational goal consistent with the above-referenced temperature limit, and in view of the industry's commitments towards net-zero carbon emissions by 2050.
- To promote the development and deployment of sustainable aviation fuels that reduce lifecycle emissions.
- To promote the development and deployment of innovative new low- and zero-carbon aircraft technologies that can reduce aviation carbon emissions.

Devising a framework for a carbon trading market

The world leaders formally approved the rules for implementing Article 6 of the Paris Agreement. The final Article 6 enables a robust, transparent and accountable carbon market, allowing governments to trade emission reductions to achieve their NDCs to the Paris Agreement. The key points agreed in Article 6 are summarised below:

- Avoiding double counting: the countries agreed on applying "corresponding adjustments", when a country hosting a carbon-reduction project must adjust its own greenhouse gas inventory to reflect the fact that the reduction in emissions (internationally transferred mitigation outcomes (ITMOs)) achieved inside its border is being credited to another country, so the emission reduction cannot be claimed twice. This can happen at government level and at company level, when a company in one country purchases ITMOs from abroad to meet compliance criteria at home.
- Clean Development Mechanism (CDM) carryover: to meet their national targets, countries can carry forwards a limited amount of certified emission reductions (CERs) generated under the CDM and registered after 1 January 2013.
- Share of proceeds: countries agreed to a 5% fee for new emissions credits at the point of issuance under Article 6.4, with the aim of generating funding for climate adaption in developing countries.

Although the finalised Article 6 provides the framework for a future carbon trading market, its successful implementation depends on how national frameworks and carbon markets develop in response.

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IMPLICATIONS FOR BUSINESSES

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Net zero as imperative for business

Although the main purpose of COP26 was to limit the global temperature increase to 1.5°C by 2050, Climate Action Tracker, a climate analysis coalition, recently announced that according to its data, the global temperature will rise by more than 2.4°C by the end of this century. There is an urgent need to pivot the situation before it becomes irreversible. Countries are taking positive steps to commit to a timeline for achieving net zero, and credible policies are expected to be published on how they will uphold their commitments. On the commercial side, stakeholders are exerting pressure on companies to get them to take more aggressive action on decarbonisation to address this issue.

Implications

- Net zero is becoming a core business principle and is prompting companies to seriously consider their "purpose and impact"
  – how they will incorporate solving social and environmental problems into their main business activities.
- Net zero is becoming the most important outcome of the business model for certain industries, such as transport, energy, construction, manufacturing, agriculture and waste management.
- Customer preferences for products and services with a low-carbon footprint will drive trends in the coming decades, and companies riding the net-zero business model will benefit from new market and investment opportunities.

Financing the transition

According to a press release from GFANZ, more than 90 of its founding institutions have already delivered on setting short-term targets. These institutions include 29 asset owners that have committed to reducing portfolio emissions by 25–30% by 2025, and 43 asset managers that have published targets for 2030 or sooner, using robust, science-based guidelines.

Implications

- Given that financial firms signed up to GFANZ also have huge investments in securities, large listed companies that are looking for investment will need to convince banks that they have devised and implemented action plans for moving their business operations towards net zero on greenhouse gas emissions and for becoming climate-change resilient. Companies that cannot demonstrate clear commitments to net zero will have limited access to capital..

Green projects driving future investment trends

The finalisation of Article 6 of the Paris Agreement removes the uncertainty about double counting carbon credits in the national carbon inventory. At the same time, the pricing of carbon credits has been reinforced by rising demand from countries to offset their NDCs.

Although the International Monetary Fund previously recommended a global average carbon price of US$75 per tonne by the end of this decade, since January 2021 the price of a carbon credit in the European market has already doubled to EUR60, with prices expected to rise further in the long run.

Implications

- The finalisation of Article 6 gives market access to countries and companies interested in attracting green investment through the global carbon market.
- The surging demand for carbon credits and support for carbon prices will drive companies to invest in green projects and related investments in order to generate revenue from selling carbon credits and, in turn, accelerate the pace at which they close in on the net-zero goal.

Preparing for transition risks

Policy risks

Countries around the globe have acknowledged the need to reduce emissions faster, and their governments are expected to soon introduce new policies for fulfilling those commitments. These new policies may include the following:

- Implementing a carbon tax to reduce greenhouse gas emissions (see "carbon taxes as a strategy" below).
- Tighter standards and measures around energy efficiency and fuel efficiency.
- Banning sales of vehicles with internal combustion engines sooner.
- Measures for restricting land use.

Legal risks

Litigation related to climate change is on the rise as stakeholders become increasingly concerned about whether companies are making a positive impact on climate. A recent Dutch court case ruled that a listed oil and gas company must reduce its worldwide carbon emissions by 45% by 2030 (when compared to 2019 levels). Coincidentally, this is in line with the message coming out of the *Glasgow Climate Pact*. Companies in the industries with intensive greenhouse gas emissions will be under close scrutiny from climate activists and will be the subject of lawsuits related to climate change.

Technology risks

Achieving a reduction of almost 50% in greenhouse gas emissions in less than 10 years would be significant for the business world. This may involve a systemic transformation of their business operations and models, based on the assumption that low-carbon resources, emission-reduction technologies and adequate renewable energies are available. Technology plays a vital role in the whole transition journey, in particular in tackling the impact of energy transition, as it would be used in researching and developing low-carbon raw materials, scaling up energy efficiencies in production processes, and designing products and services with a low-carbon footprint, among other things. Having said that, developing new technology always carries risks: the costs of research and development could be huge, the time involved is unknown and there is no certainty of success.

Transition-led inflation of energy prices

Electricity is essential for households and businesses; without it we could not sustain businesses or the world economy. However, limiting the global temperature increase to 1.5°C above the pre-industrial level requires the world to phase out the use of fossil fuels to generate energy, and the COP26 summit has strengthened the commitment to use renewable energy sources.

Implications

- The commitment to phase out coal-generated power may result in accelerating the shift from coal consumption to other natural resources, such as natural gas; accordingly, the increasing demand will drive up the prices of resources and electricity. Therefore, during the transition to clean energy, we are likely to see energy shocks or crises ripple through economies, and companies may experience higher production costs and narrower profit margins.

Rising costs of green raw materials and products

Fulfilling the net-zero commitments related to green transport and clean energy will require a huge volume of metals and minerals, such as copper, silicone, aluminium, lithium, cobalt, rare-earth elements and silver for manufacturing solar panels, wind turbines, lithium-ion batteries, nuclear reactors and electric vehicles.

Implications

- The net-zero commitments will drive up demand for materials, especially those with low carbon intensity, such as high-quality steel and scrap for making green steel, green cement and green aluminium. These will be the key raw materials for delivering low-carbon or net-zero products in the coming decades. Nonetheless, in the short term, the increase in the production capacity of these materials may not be able to keep pace with the surging demand. The commitments made at COP26 will add to this, so prices of green raw materials will rise.

Carbon taxes as a strategy

To motivate companies to rapidly reduce their carbon emissions, governments can introduce regulations, limits and taxes. A carbon tax is a form of carbon pricing that involves charging a fee for emissions or offering an incentive for emitting less.

A carbon tax is levied on the carbon emissions required to produce goods and services. The purpose is to shift the responsibility for paying for the damage caused by climate change from the public onto the producer of the emissions that create climate change. Producers may either reduce their emissions to avoid paying a higher price or continue emitting at a cost.

Although COP26 did not come to an agreement on global carbon tax practices, a carbon tax may be one of the most effective ways of reducing emissions by forcing consumers and producers to take account of the social costs of pollution that increases greenhouse gases. Having said that, every government will have its own considerations when introducing a new tax – especially regarding the potential impact on economic growth and inflation.

Based on information from The World Bank, there were at least 27 countries that had already implemented or scheduled the implementation of a carbon tax as of 1 April 2021. Depending on the level of commitment of governments and how aggressive their policies are, introducing a carbon tax remains an option for working towards goals to limit climate change and cannot be ignored.

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THE JOURNEY TO NET ZERO

THE JOURNEY TO NET ZERO

To achieve the global goal of net zero by 2050, companies are advised to speed up their process of decarbonising their business operations and models to become climate-change resilient while minimising the impact of potential policy changes and emissions-related costs. The decarbonisation journey might not be the same for every company, because different industries have different development and production processes. In general, however, companies may consider the following steps to start with:

Figure 1. First steps towards decarbonisation

A holistic review of production processes and product design

A product's carbon footprint is a combination of many factors, which may include the following:

- Burning fossil fuels during production processes.
- Lengthy production processes causing significant energy consumption.
- Use of high-carbon raw materials.
- Extensive transport upstream and downstream, causing significant scope 3 carbon emissions.

The purpose of reviewing the production process is to eliminate and streamline procedures to reduce any unnecessary energy use and carbon emissions. The aim of reviewing the product design is to assess if any raw materials can be replaced by sustainable or low-carbon alternatives in order to reduce the product's carbon footprint. Besides, scope 3 carbon emissions from transporting raw materials can be reduced significantly by sourcing materials as locally as possible.

Use energy-saving equipment and smart technology

The energy consumed can be reduced by using energy-efficient equipment certified by the Energy Star programme. The Energy Star programme is run by the US Environmental Protection Agency and Department of Energy to promote energy efficiency. Energy Star certifies products in more than 75 different categories, including computers, servers, appliances, heating and cooling systems, and lighting.

There has been an increase in the use of smart technology in energy management. Smart lighting, learning thermostats and a new generation of sensor-based heat ventilation and air conditioning (HVAC) systems are designed to automatically maintain ideal conditions in spaces and keep energy use to the optimum level. In addition, sensors and meters connected to the internet of things (IoT) can monitor energy consumption and performance for better energy management.

Use renewable energy

Many companies are currently using electricity generated from fossil fuels, such as coal or natural gas. To reduce the carbon emissions involved in using electricity, companies may consider purchasing electricity from renewable power sources.

The ability to purchase renewable energy depends on it being available and accessible. In Hong Kong, for example, the electricity generated by existing providers does not all come from a renewable source. Therefore, some companies have also invested in building commercial solar panels on the roofs of their properties to generate electricity for day-to-day use.

Carbon offset

Many companies are currently using electricity generated from Having taken the above steps to reduce carbon emissions, any residual emissions can be offset by purchasing carbon credits to achieve net-zero carbon emissions. Currently, in Hong Kong, carbon credits can be purchased from electricity providers such as CLP.

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