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ENERGY FUTURES

COP 26: Aspiration and Reality

By Derwin Jenkinson and Steven Bryan

Introduction

The greatest challenge facing the global energy sector is limiting global warming to 1.5-2 degrees above pre-industrial levels by 2030 and achieving net zero by 2050. How will governments facilitate the delivery and funding of the transition to clean energy, given increasing global demand and energy security concerns? While there's been good progress with some renewable technologies, such as wind and solar, others—including hydrogen, carbon capture, battery storage and EV charging networks—are still at early stages of development, investment and deployment. A sharp acceleration is needed—and must be financed. Governments will need to lead in rolling out regulatory initiatives to fund directly and incentivize private sector investment into these sectors.

Banks, capital markets, investment funds, and corporate sponsors are reallocating significant capital into assets that meet ESG criteria. At the same time, regulatory changes are being implemented to combat "greenwashing" by market participants, including the creation of the International Sustainability Standards Board and new transparency requirements in the EU and UK for fund managers' ESG investment policies and asset allocation.

Proven returns on renewables as an asset class, combined with reallocation of investment portfolios in line with new ESG regulations and frameworks, suggest that there is no shortage of private capital available.

The view from COP 26

The goal of limiting global warming by 1.5 degrees is "on life support". That verdict on COP 26 from UN Secretary General António Guterres did not come as a surprise to many. It also spoke volumes that the president of COP 26, Alok Sharma, had to fight back tears as a result of having to dilute the commitment terms at a very late stage in negotiations. Despite ambitions for the conference, securing new and meaningful commitments was never going to be easy. Non-renewable energy supply is still deeply embedded within our regulatory, fiscal and financial systems. For example, global levels of carbon emissions have continued to rise in recent years (ignoring reductions associated with the pandemic) despite previous climate conferences; global fossil fuel subsidies were USD5.9 trillion in 2020, according to a recent International Monetary Fund working paper[1]; Moody's Investors Service calculates that banks, asset managers and insurers in the G20 still have USD22 trillion of exposure to carbon intensive industries, representing roughly 20% of their investments. There were significant pledges made to reduce methane emissions and to end and reverse deforestation. However, that the Prime Minister of the United Kingdom, often cited for boosterism, could only award COP 26 a score of "more than 6 out of 10", reflects the constraints of seeking to achieve geo-political consensus, and the challenge of delivering and funding energy transition within the context of increasing global demand, particularly in high growth economies, and widespread concerns about energy security.

Amongst the more contentious items on the agenda were proposals for so-called "reparations" for countries suffering climate loss and damage most acutely (which were not agreed) as well as the failure to provide USD100 billion per annum of climate finance for developing economies by 2020, a commitment that had originally been agreed at the Copenhagen conference in 2009. That target is now not expected to be met before 2023. The headlines were of course dominated by China and India agreeing only to a "phasing down" (not "out") of coal power. China is well-known to have the greatest total volume of carbon emissions (10bn tonnes in 2020). Less well-known is that, although emissions per capita in the US are reducing (14.24 tonnes in 2020), they are still twice those in China (7.41 tonnes) and eight times those in India (1.77 tonnes)[2]. Understandably this means that achieving an equitable distribution between mature and developing economies of the cost and rate of decarbonisation is a complex undertaking.

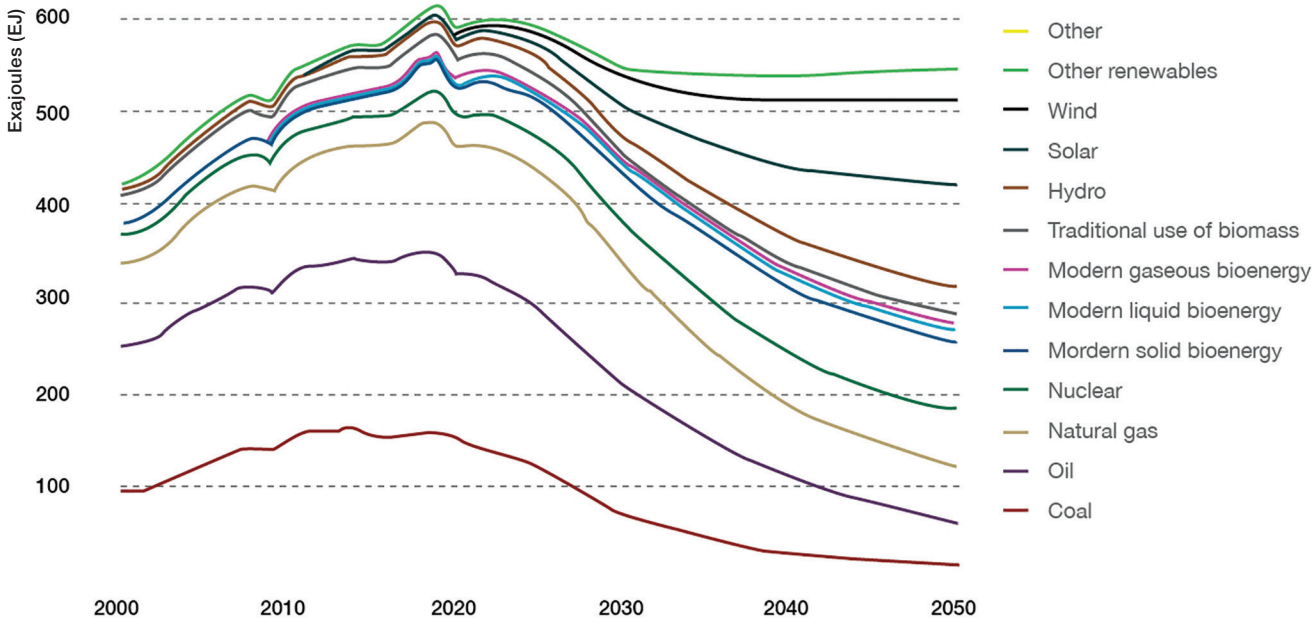
The scale of the challenge is made evident by the level of reliance that is currently placed on conventional energy sources in order to meet global demand. That needs to be factored into any energy transition planning to have any chance of being realistic. According to a report[3] published by the International Energy Agency (IEA) in advance of COP26, that reliance will continue for another decade or more, even in the "Net-Zero Emissions by 2050 Scenario".

1 Still Not Getting Energy Prices Right: A Global and Country Update of Fossil Fuel Subsidies (imf.org). September 2021.

2 "Our World in Data" based on the Global Carbon Project 2021

3 International Energy Agency: Special Report October 2021: Net Zero by 2050 A Roadmap for the Global Energy Sector.

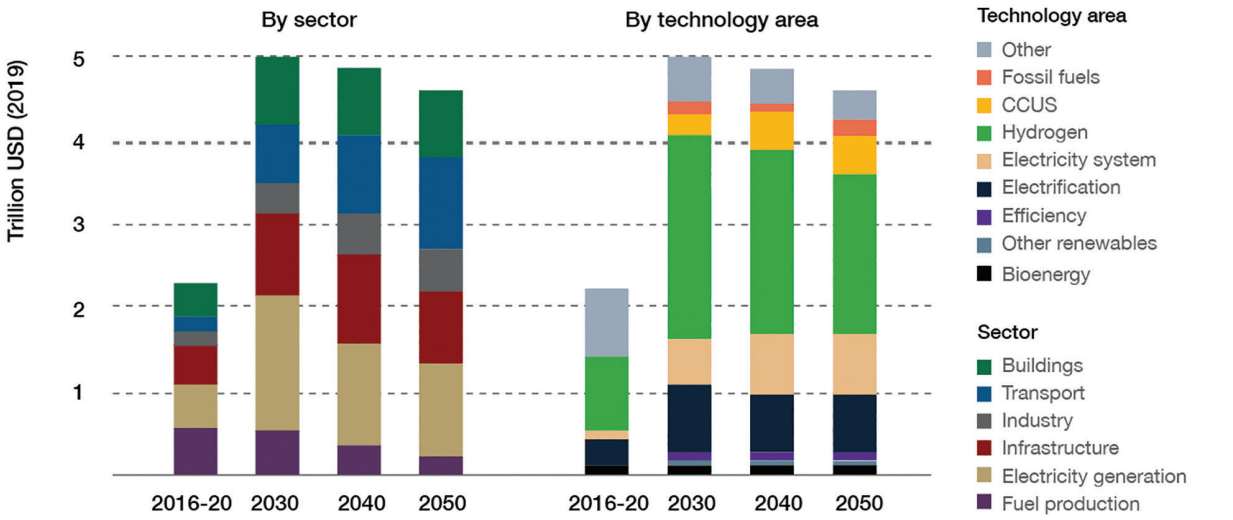
Total energy supply in the NZE



Renewables and nuclear power displace most fossil fuel use in the NZE, and the share of fossil fuels falls from 80% in 2020 to just over 20% in 2050.

To achieve the Net-Zero Emissions by 2050 Scenario the IEA forecasts that USD5 trillion in annual capital investment across all energy sectors and technologies will be needed by 2030. That compares to USD2 trillion of capital investment on average over the last five years.

Annual average capital investment in the NZE



Capital investment in energy rises from 2.5% of GDP in recent years to 4.5% by 2030; the majority is spent on electricity generation, networks and electric end-user equipment.

Notes: Infrastructure includes electricity networks, public EV charging, CO_2 pipelines and storage facilities, direct air capture and storage facilities, hydrogen refuelling stations, and import and export terminals for hydrogen, fossil fuel pipelines and terminals. End-use efficiency investments are the incremental cost of improving the energy performance of equipment relative to a conventional design. Electricity systems include electricity generation, storage and distribution, and public EV charging. Electrification investments include spending in batteries for vehicles, heat pumps and industrial equipment for electricity-based material production routes.

How will that investment be delivered? Good progress has already been made in some renewables technologies, such as onshore and offshore wind and solar. These have been developed at scale and have an established operating track record, in many cases exceeding original lifecycle forecasts and at reduced costs. Generally early stage investors in these technologies have been suitably rewarded, although governments often played a critical role in funding the high risk construction phase of larger projects or in providing very generous subsidy regimes. However, other technologies and infrastructure such as hydrogen, carbon capture, battery storage and EV charging networks are still at very early stages of development, investment and deployment. In some cases the underlying revenue model and use-case has not yet been fully demonstrated. Governments have been rolling out initiatives and funding to incentivise investment into these sectors, albeit at varying speeds. However, the pipeline of investible projects is still very limited and very much jurisdiction specific. A sharp acceleration in the development and roll-out of these technologies is needed to have any prospect of delivering net zero emissions based on current strategies. Those strategies will also need to be funded and financed.

Funding the delivery model

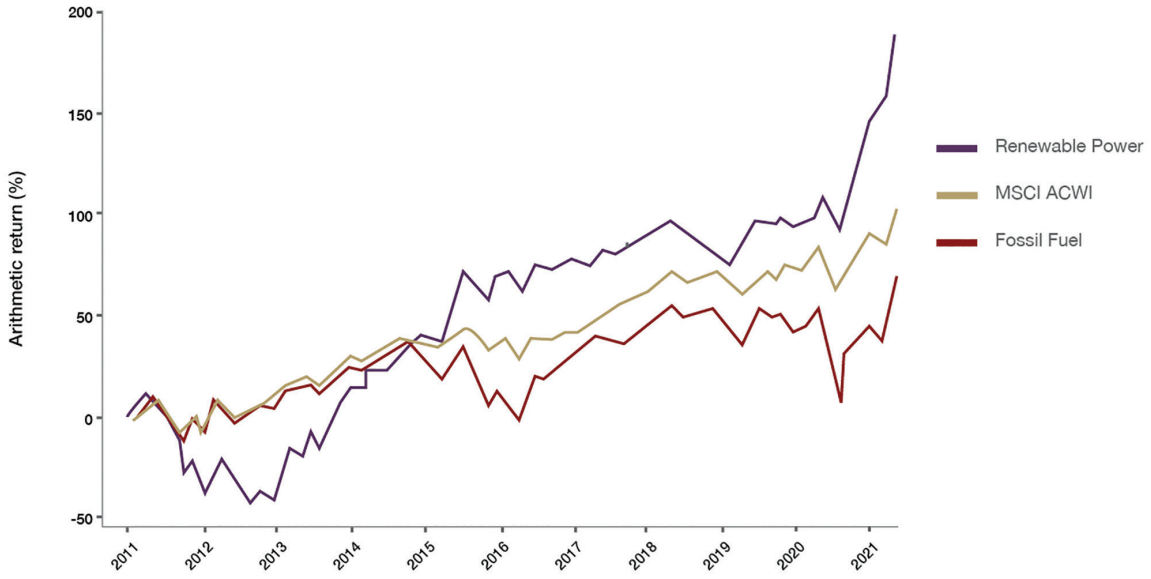
All energy and infrastructure assets are ultimately funded by government (i.e. taxpayers) or consumers (e.g. through utility bills). The delivery and funding model for the capital investment associated with energy transition commitments varies for each jurisdiction, and depends on a range of factors from local climate (e.g. which dictates the most appropriate sources of renewable energy, such

as solar, wind or hydropower) to the capacity and willingness of governments and consumers to fund those costs. Some of those models are significantly more advanced than others. For example many mature economies, after governments initially offered generous subsidies, have already moved to reduced or subsidy-free revenue mechanisms for established renewable technologies. This includes, for example, the United Kingdom which has had legal commitments to reduce carbon emissions since the Climate Change Act in 2008. More recently forecasts under the UK's 6th Carbon Budget, covering the years 2033-2037, are for a 78% reduction in emissions compared to 1990 levels. Effectively this accelerates the 2050 target by 15 years. How the UK Government proposes to achieve this is described in its "Net Zero Strategy: Build Back Greener" report published in October, shortly before COP 26. Hydrogen and carbon capture are now a central focus for that strategy. In our next article in this series we will take a closer look at performance and outlook for each of the key sub-sectors and how they are being funded.

Financing the delivery model

During COP 26 Mark Carney, as chair of the Glasgow Financial Alliance for Net Zero, announced that USD130 trillion of capital is now committed to net zero. The methodology for that calculation is disputed, but it reflects a very significant and clearly observable trend to reallocate capital into assets that meet Environmental, Social and Governance (ESG) criteria. It suggest that there is, at least theoretically, sufficient capital available to meet the investment requirements described above. But doing so will also depend on there being sufficient investible opportunities and an acceptable rate of return on investment. To date investments into renewables are reported to have outperformed market equivalents (see illustration below)[4]. The weight of capital investing in the sector in recent years has resulted in ever more competition for energy transition assets. This has lifted asset valuations even if IRRs based solely on project revenues are otherwise flat. So, whilst the sector is currently benefiting from a massive surge in investment, despite some of the technology and revenue risks, an increasing number of investors are concerned that the sector is overheating and that returns, given the high prices being paid, will not match expectations.

Global Markets Portfolio 10-Year Monthly Returns



4 Clean Energy Investing: Global Comparison of Investment Returns. A Joint Report by the International Energy Agency and the Centre for Climate Finance & Investment March 2021.

An end to "Greenwashing" in sight?

There were other significant announcements that were timed to coincide with COP 26. One of the most notable, made by the IFRS Foundation Trustees on 3 November 2021, was the creation of the International Sustainability Standards Board (ISSB). The intention is for the ISSB to deliver a comprehensive global baseline of sustainability-related disclosure standards that provide investors and other capital market participants with information about companies' sustainability-related risks and opportunities to help them make informed decisions. The aspiration is to create a set of sustainability standards of equivalent global standing to the International Accounting Standards issued by the International Accounting Standards Board. Investors have expressed concerns about "greenwashing" ever since green loans first emerged; likewise the self-selection and certification of compliance with other sustainability KPIs widely seen in the market. With more than 40% of syndicated loans now reported to include ESG margin ratchets there is a very obvious need for standardisation to properly price the cost of capital seeking sustainability linked returns.

Conclusion

Governments, multilaterals and other bodies such as the IEA are increasingly producing detailed and individually coherent strategies for delivering net zero which acknowledge our reliance on carbon sources in the short to medium term. Proven returns on renewables as an asset class, combined with re-allocation of investment portfolios in line with new ESG regulations and frameworks, such as the ISSB, suggest that there is no shortage of private capital available to meet the level of investment in energy transition that is required. This will no doubt depend on the sector continuing to deliver an acceptable return on capital. The most significant challenges remain increasing the pipeline of large-scale investment opportunities, domestic government funding and policies to incentivize deployment of private capital, together with achieving geopolitical consensus on how to meet global energy transition objectives and who will bear the costs.

To discuss any of these issues and how they may impact your business, please contact Derwin Jenkinson or Steven Bryan.

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