



## NO TIME LIKE THE PRESENT

March 2021

We are at a unique stage in our history. Never before have we had such an awareness of what we are doing to the planet, and never before have we had the power to do something about that. Surely, we all have a responsibility to care for our Planet. The future of humanity and indeed, all life on earth, now depends on us.” David Attenborough’s words will resonate with any viewer of his spectacular tv programs, but these words are beginning to be heeded by global leaders as we strive for a healthier planet and more importantly, a sustainable one.

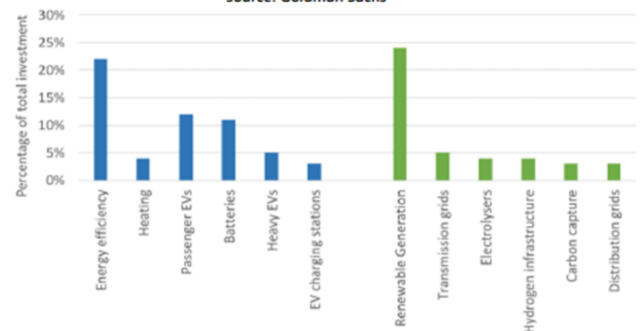
At the heart of this is how we produce sustainable energy and how we use energy more efficiently to reduce our carbon footprint, mitigate climate change and accelerate a global transition to clean energy. 2020 was a crucial year, as policy makers globally promoted an acceleration of the transition to renewables, whilst supporting an economic recovery via post-COVID stimulus packages and satisfying social demand for a cleaner sustainable energy future. We believe that this represents a long-term structural shift and one that warrants serious consideration for any investor.

### WHAT HAS BEEN PROMISED?

**US:** President Joe Biden unveiled last month up to \$3 trillion in spending on efforts to boost the economy, including rebuilding ageing infrastructure and investing in technologies to reduce greenhouse gas emissions. Funding will be directed to the electricity grid, energy-efficient affordable housing, electric vehicle charging stations, and other clean energy priorities. The package will be split between two bills, starting with legislation that incorporates Biden’s Build Back Better agenda (\$7.3 trillion committed) and supports his goal to achieve carbon-free power generation by 2035 and net-zero emissions by 2050. The President has also re-joined the Paris agreement following President Trump’s withdrawal in the last term.

**Europe:** The EU announced its Green Deal in 2020 along with its €750 billion fiscal European Recovery Fund which looked to promote a Green recovery following the COVID crisis. Alongside this, the EU plans to achieve ‘climate neutrality’ by 2050. Goldman Sachs have estimated that the EU will spend €10 trillion between 2020 and 2050, and the investment will be split broadly between Consumption (Demand) and Renewables (Supply) activities:

**EU Green Deal investment of Eur10trn (2020-2050)**  
source: Goldman Sachs



**UK:** The 2021 Spring Budget saw a pledge to support the move towards near-zero emission and an infrastructure bank to invest mainly in green projects. Among other announcements that will directly affect the UK’s net-zero transition are plans to issue £15 billion of green sovereign bonds this financial year and to allocate £1 billion of funding to net-zero innovations. The new National Infrastructure Bank will be backed by £12 billion in initial capital and £10 billion in government guarantees in a bid to unlock as much as £40 billion of private finance to support Downing Street’s ‘levelling up’ agenda and net-zero emission goals. The Chancellor stressed the bank, which will be based in Leeds, would have the UK’s “green industrial revolution” at the heart of its remit, providing a mechanism for accelerating investment in new renewables, grid and hydrogen infrastructure.

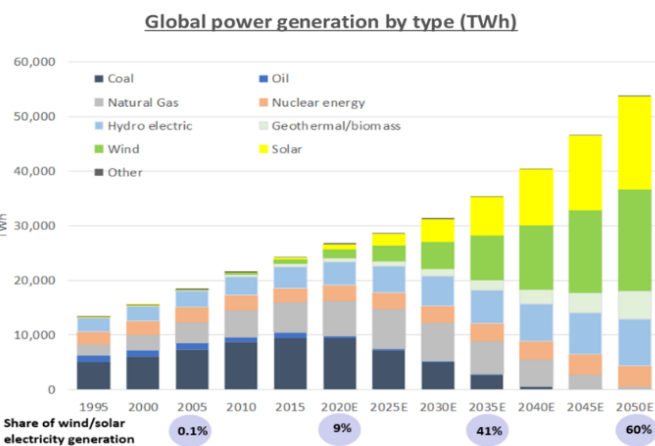
**China:** Following the approval of China’s 14<sup>th</sup> Five-Year Plan, President Xi Jinping has indicated that they aim to see CO<sub>2</sub> emissions peak before 2030 and become ‘carbon neutral’ by 2060. With China accounting for 28% of global CO<sub>2</sub> emissions, its carbon neutral pledge is fundamental to achieving worldwide net-zero emissions. In the wake of China’s commitment, we have seen neighbouring Asian economies following suit with Japan committing to net-zero greenhouse gas emissions and South Korea to carbon neutrality by 2050. The three Asian economies together accounted for around 40% of all global carbon emissions in 2019.

Alongside this, many corporations are making their own pledges to reduce carbon emissions, with the technology and finance sectors leading the way. Apple and Microsoft have indicated that by 2030 they will be carbon negative, removing more carbon from the atmosphere than they emit and by 2050 they will look to remove more carbon from the atmosphere than they have emitted since they were founded. Within financial services, 73 companies including Blackrock and Vanguard have committed to support the goal of net-zero greenhouse gas emissions by 2050. These firms manage c.\$32 trillion between them, which is around 40% of global assets under management.

We will see further commitments later this year because in November, Glasgow will host the 26<sup>th</sup> UN Climate Change Conference of the Parties and, following the Paris Agreement, it requires all countries to submit long-term decarbonisation plans to 2050. Alongside this, members must propose financial support to countries deemed most vulnerable to climate change.

### WHAT IS THE EFFECT OF THIS ON THE ENERGY MARKET?

The outcome of a sustained shift to renewable power generation will see a change in how energy is created. Today, the majority of global power is generated by coal and natural gas (35% and 24% respectively) whereas renewable generation (wind and solar) is less than 10%. However, by 2035, it is estimated that wind and solar will have grown to around 40%, increasing to around 60% by 2050.



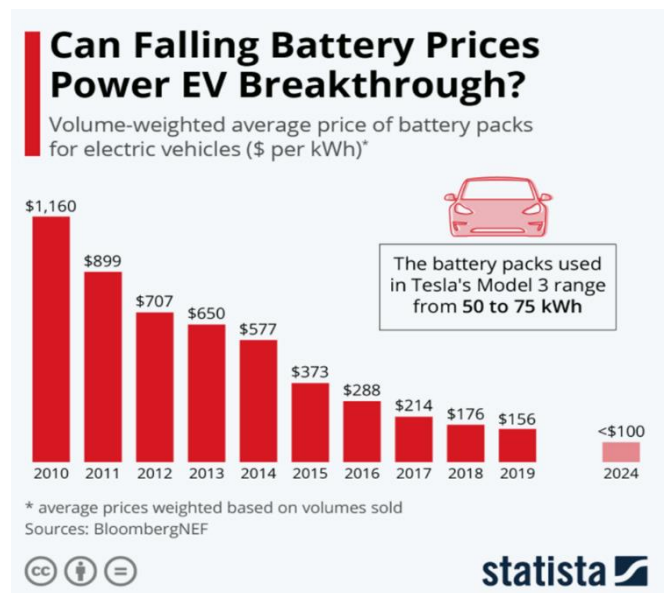
Sources: BP Statistical Review; Guinness Asset Management forecasts

It is a measure of the rapid change already seen that last year the UK went for over two months without using electricity generated from burning coal and during this period 37% of Britain's electricity came from renewable energy!

The COVID pandemic has had a number of short-term and long-term effects on the global energy market and the energy transition. Most notably causing global energy

demand to contract by over 5% in 2020 when compared to 2019 as a result of lockdowns and reduced transportation. A net benefit of this has been lower CO<sub>2</sub> emissions (down nearly 7% on 2019 levels) although these emissions will rebound once economies unlock and transportation resumes.

More worrying on a longer-term basis is the fact that investment across the entire energy industry is likely to be down 18% in 2020 versus 2019; energy investment was already at the low end of the required range to facilitate the energy transition in full. According to a report by the Energy Transitions Council, published in September last year, achieving net-zero emissions by 2050 would cost an estimated \$1-2 trillion per year, or 1-1.5% of global GDP, so the energy transition is a huge task and extremely capital intensive.



Renewable generation is a key part of the solution, but the displacement and more efficient use of existing energy sources is just as critical, and arguably more urgent, in achieving these goals. The International Energy Agency (IEA) refers to the theme of energy efficiency as being the 'first fuel' that should be considered in delivering the energy transition. The economic benefit of achieving greater energy efficiency is very significant in the near term. The 0.8% improvement in energy efficiency in 2020 meant that the world generated around \$1 trillion more GDP for the same amount of energy used in 2019!

The energy transition will see energy demand being 'electrified' as it moves away from predominantly hydrocarbon fuels and gases towards the consumption of electricity directly. The battery industry is critical here in that it will serve electric vehicles and also provide a stationary energy storage solution in electricity grids, allowing variable renewable energy (i.e. solar & wind) to play an expanding role in the global power stack.

The catalyst for greater battery use has been the sharp falls in the cost of manufacturing as significant economies of scale from mass battery manufacturing have seen costs lowered by 90% from 2010 to 2020. As these costs are expected to fall further, this will allow electric vehicles (EVs) to compete on price with traditional engine vehicles without subsidies. It is estimated that this will lead to an acceleration in the uptake of new EVs, with around 20% of new passenger vehicles sales being electric in 2025, rising to around 50% in 2030. On this basis, there will be nearly 300m electric vehicles on the world's roads by 2030. This level of electric transportation would displace nearly 3m barrels a day of world oil demand in that year!

It will be a challenge for governments to balance their books whilst ensuring this transition happens. IMF research suggests that one solution could be to impose more stringent taxes on fossil fuels in order to meet their net-zero commitments. Higher environmental taxes could help counter the loss of revenues as consumers switch from polluting and tax-paying petrol and diesel cars to largely tax-free electric vehicles. Without offsetting tax increases elsewhere, the move to electric vehicles will leave a sizeable gap in government revenues.

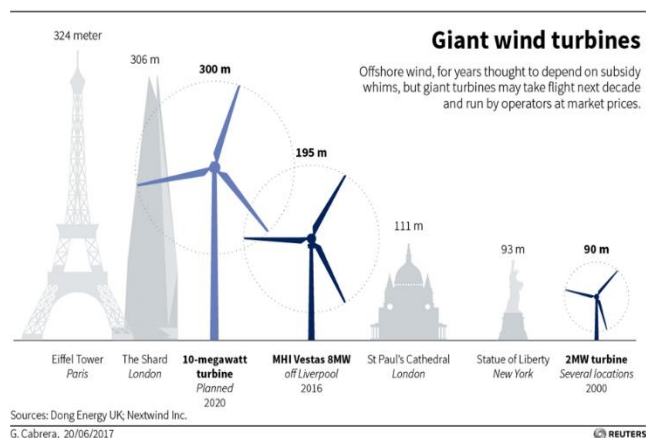
On top of this, further intervention above and beyond what has already been promised will be required to make the saving of energy a necessity for companies and individuals rather than an optional extra.

#### WHAT IS THE IMPACT ON INVESTMENT MARKETS OF THIS ENERGY TRANSITION?

In recent years, climate change has become the biggest theme in environmental, social and governance (ESG) strategies, which themselves are becoming an increasingly popular investment segment. Alongside this, climate change is being seen more and more as an investment opportunity as investors look for companies that will aid or benefit from the transition to a low carbon economy.

Sustainable Energy equities have benefited from this and delivered a very strong return in 2020 with the index (iShares Global Clean Energy) returning 141% while an index of global equities (MSCI World) returned 15.9% in

USD terms. This significant outperformance has led to most sub-sectors trading on a premium rating to the wider energy market, but it can be argued this premium is justified as the sustainable energy universe has a more attractive growth outlook than global equities and one that could be sustained for a several decades.



In particular, Europe and the UK should continue to be beneficiaries as we see increased investment into this area. Europe is already home to leading wind turbine manufacturers (Vestas, Nordex and Siemens Gamesa) while its power generators include “super major” leaders in green production (Enel, EDP, Iberdrola and Orsted). Similarly, in the UK, we have already seen significant capital raised into the renewables sector and it is home to 19 investment companies with a combined market value of c.£12 billion.

It feels like 2020 was the year when the world properly woke up to the dangers of climate change and the structural shift that is needed to provide all of us with a cleaner, more sustainable future. With the tailwind of continued and, in some cases, renewed government support (most notably from the US in a post-Trump era!), this momentum should continue over the years to come, and with it the opportunity set and investment case will continue to grow.

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