



Active decarbonisation is the solution

By Wim Groeneveld

We have less than 30 years to transition to a net zero carbon world. Investors, governments and society have a key role to play. 'Global decarbonisation will happen when mass adoption of all decarbonisation technologies becomes a reality', according to Velislava Dimitrova, Portfolio Manager at Fidelity International.

You argue that most of the solutions that can enable global decarbonisation already exist today. What solutions should investors be thinking of?

'To reach net zero by 2050, we need to decarbonise every aspect of our lives. We prefer a broad range of decarbonisation themes, which includes alternative energy, e-work, e-health, alternative milk and meat, reuse platforms, building management solutions, insulation, cloud and clean transportation solutions.'

Why is global decarbonisation not yet on the horizon?

'The solutions that can enable global decarbo-

nisation almost fully exist today. Our analysis has concluded that more than 80% of decarbonisation can be achieved through wide scale adoption of these existing decarbonisation solutions, with the remaining 20% achievable through carbon capture technologies, carbon sinks and further technological innovation. However, despite the availability of these decarbonisation solutions, penetration and adoption rates are low as building scale takes a long time, and some are not yet economic.

Many decarbonisation solutions, such as renewables and industrial automation, are currently economic and operating at scale, but penetration is still low globally and we need ambitious target setting to accelerate their rate of adoption beyond the natural rate. Other solutions, at the upper end of the cost curve, such as green hydrogen and fuel cell vehicles, require significant additional investment to become economic. Global decarbonisation will happen when mass adoption of all decarbonisation technologies becomes a reality.'

What role do investors, governments and society have to play in accelerating decarbonisation technology adoption rates to enable a net zero carbon society?

'Investors have to drive the cost of capital of decarbonisation solutions down. Governments need to set ambitious targets. Society has to accelerate adoption of green technologies for us to transition to a net zero carbon world in the short timeframe we have.'

The cost of a net zero carbon society using current commercially available decarbonisation technologies at current prices, has a total price tag of \$ 144 trillion. This is because many decarbonisation solutions still have very low penetration while others are still nascent and expensive.

Investors have a key role to play in accelerating adoption rates and providing capital for decarbonisation technologies due to the vast amount of investment required. Accelerated adoption requires a further decline in technological costs, which is achieved by shareholders funding, helping to increase capacity, facilitating economies of scale and decreasing the cost of capital to fund low CO₂ solutions (as highlighted in Figure 1). All in all, this will improve the cost competitiveness of decarbonisation solutions, making them more affordable and superior to their carbon intensive counterparts.

Support of investors is only part of the solution. Governments and regulators have a key

role to play in supporting the transition by putting in place decarbonisation technology adoption targets, carbon taxes, subsidy programs and making decarbonisation policies more aggressive. Individuals have a crucial role as well, by making the right choices in their daily lives to support new low carbon solutions and being more consumption conscious.

You state that active decarbonisation and not carbon avoidance is crucial to reach a net zero society by 2050. Could you explain what you mean by that?

‘Carbon avoidance, such as focusing on companies with low scope 1 or 2 emissions, will have a limited impact on decarbonisation. Identifying and investing in companies with low scope 1 and 2 emissions will simply create a portfolio of inherently low carbon businesses – think of banks and internet companies – who may be monitoring and managing their own emissions. But these companies are doing little to address societal emissions. Carbon footprints ignore the societal impact that the company’s products have on global decarbonisation. They do not capture the positive impact that products – like insulation panels, wind turbines and reuse platforms – have around reducing carbon emissions. Many climate solutions companies prevent more carbon emissions than they generate from their operations (see Figure 2).

Aligning the world to a net zero scenario can be achieved by investing in the solutions and technologies that will drive a step change in the decarbonisation of society, as opposed to investing in low carbon footprints where the impact is minimal. We see carbon reduction, rather than carbon avoidance, as the heart of the philosophy.’

What challenges do you see on the road to global decarbonisation?

‘The main challenge on the road to global decarbonisation is the limited amount of time we have available. As we have less than 30 years to transition the world to net zero carbon emissions, we need to act fast and adoption rates need to be accelerated. To put this into perspective, full adoption of automobiles in the US took 90 years and full adoption of electric power took 47 years. We have less than 30 years to achieve full adoption of renewables, electric vehicles, and agricultural automation solutions, to name a few.

In addition, the adoption of decarbonisation technologies will present further challenges beyond the adoption of historic disruptive technologies for a number of reasons. The scale of investment across many different solutions and the scope of the problem we need to reverse, is unprecedented. It has taken us more than 150 years to get to the current dangerous level of emissions.

Whilst there are many decarbonisation solutions out there, not all of them are economic yet. Natural adoption rates are therefore not sufficient. Drastically accelerated adoption is essential to reduce net carbon emissions at scale and, as mentioned above, this is where investors, governments and society have a key role to play.’

What is the risk to investors from decarbonisation of the global economy?

‘Global decarbonisation within such a short timeframe will transform many areas of our lives and will therefore disrupt many business models along the value chains of legacy solutions such as internal combustion vehicles, coal and gas power generation or animal protein, among others. Climate Solutions can help protect client portfolios from the decarbonisation risk by investing in the disruptors – the companies facilitating the transition to a zero carbon future.’

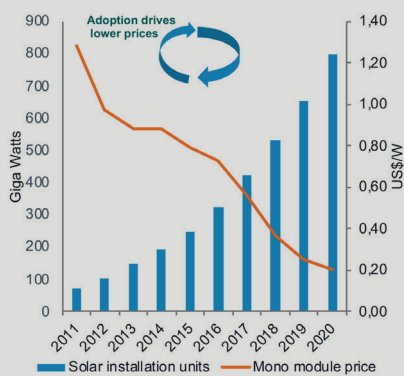


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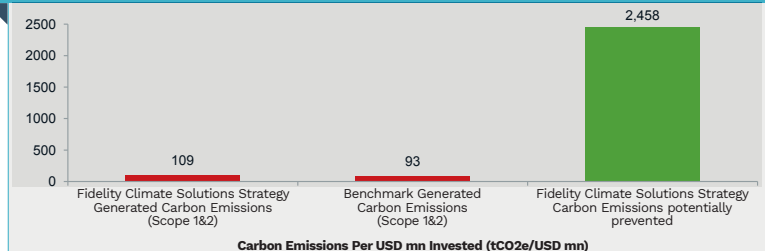
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FIGURE 1: ACCELERATED ADOPTION REQUIRES FAST DECLINE IN TECHNOLOGICAL COSTS



Source: Fidelity International, Fidelity analyst estimates (2021).

FIGURE 2: SOLE FOCUS ON CARBON FOOTPRINT IGNORES THE SOCIETAL IMPACT OF CLIMATE SOLUTION COMPANIES TO DECARBONISATION



Source: Fidelity International, S&P Trucost Limited, as at 30 June 2021.