

An aerial photograph of a city, likely New York City, viewed from a high altitude. The city's grid pattern and buildings are visible through a layer of white clouds. A large, white, diagonal graphic element, resembling a stylized 'Z' or a series of parallel lines, cuts across the image from the top right to the bottom left. The sky is a mix of blue and white, with some lens flare effects.

# Regnan Global Equity Impact Solutions Strategy

Quarterly Impact Report

Q1 2021

Brought to you by J O Hambro Capital Management

**Regnan**



The first quarter of 2021 saw a divergence between supportive fundamentals across themes and a more challenging equity market backdrop for our holdings that has favoured early stage cyclicals. Nevertheless, the acceleration across our investment themes has been clear, with some notable news flow over the quarter, and it is great to see some of the positive real-world benefits of the companies in the portfolio permeate to the economy.

While COVID-19 remains a challenge globally, we continue to see strides made with regards to increasing production of vaccines, enabled in part by two of our holdings in the **Health & Wellbeing** theme. These holdings have both continued to play a crucial role in helping to scale up vaccine production for COVID-19 through their solutions enabling biologics development and manufacturing.

The COVID-19 pandemic is catalysing action on climate change, which we are seeing play out through our **Energy Transition** theme. In Europe, carbon prices under the EU's Emissions Trading Scheme continued to rise to historic levels of above €40/tonne at the quarter-end, putting long-term pressure on harder to decarbonise sectors, such as steel and cement, to look for emission-reducing solutions. We initiated a position in a company with an innovative cement manufacturing approach that cuts emissions compared to traditional Portland cement. You can read more about this innovative business later in this report.

Global passenger electric vehicle (EV) sales increased 47% to more than 3 million in 2020<sup>1</sup>, providing strong evidence of an acceleration of our **Future Mobility** theme, with EV adoption rising as global automotive sales contracted 15%. This momentum continued in Q1 2021: global EV sales in January and February represented 5.4% and 5.2%, respectively, of total global new vehicle sales, ahead of the 2020 adoption rate of 4.2%.<sup>2</sup> UBS reverse engineered the new VW ID.3 to reveal that one of our holdings in this theme is a key enabler as one of the largest third-party contributors to the ID.3's EV powertrain. It has reported accelerated order intake of its high power pure electric components.

Among the many lessons from the COVID-19 pandemic is the heightened need for skilled medical personnel. This is one of the reasons why we initiated a position in a US-listed Brazilian education company focused on training doctors, with a key part of its offering focusing on digital solutions. We now have two holdings in our **Education** theme, and we see it as particularly important in contributing towards an increase in the number of physicians in Brazil, particularly in the mid-to-low income regions. Further detail on this company is included in the stock case studies that follow.

The "American Jobs Plan" stimulus package is pointing to increased support for solutions across most of our themes. **Water** was one of the key focus areas, with a commitment to spend \$56bn on water infrastructure.<sup>3</sup> This includes a \$10bn plan to tackle PFAS pollution (polyfluoroalkyl substances, also known as "forever chemicals"), for which one of our holdings is among the leading solution providers.

We hope you find the following thematic article of interest. It is a summary of a broader research piece, '[H<sub>2</sub> beyond CO<sub>2</sub>: Filling the gaps in the environmental case for hydrogen](#)', which we recently published. Current excitement about the possibility of hydrogen (H<sub>2</sub>) becoming a major energy source in the future is predominantly based on its potential contribution to global decarbonisation goals. Most ESG analysis of H<sub>2</sub> focuses solely on the potential greenhouse gas emissions savings that could be achieved. In this detailed report, we consider the other environmental impacts of H<sub>2</sub>.



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<sup>1</sup>BNEF, [www.bnef.com](http://www.bnef.com).

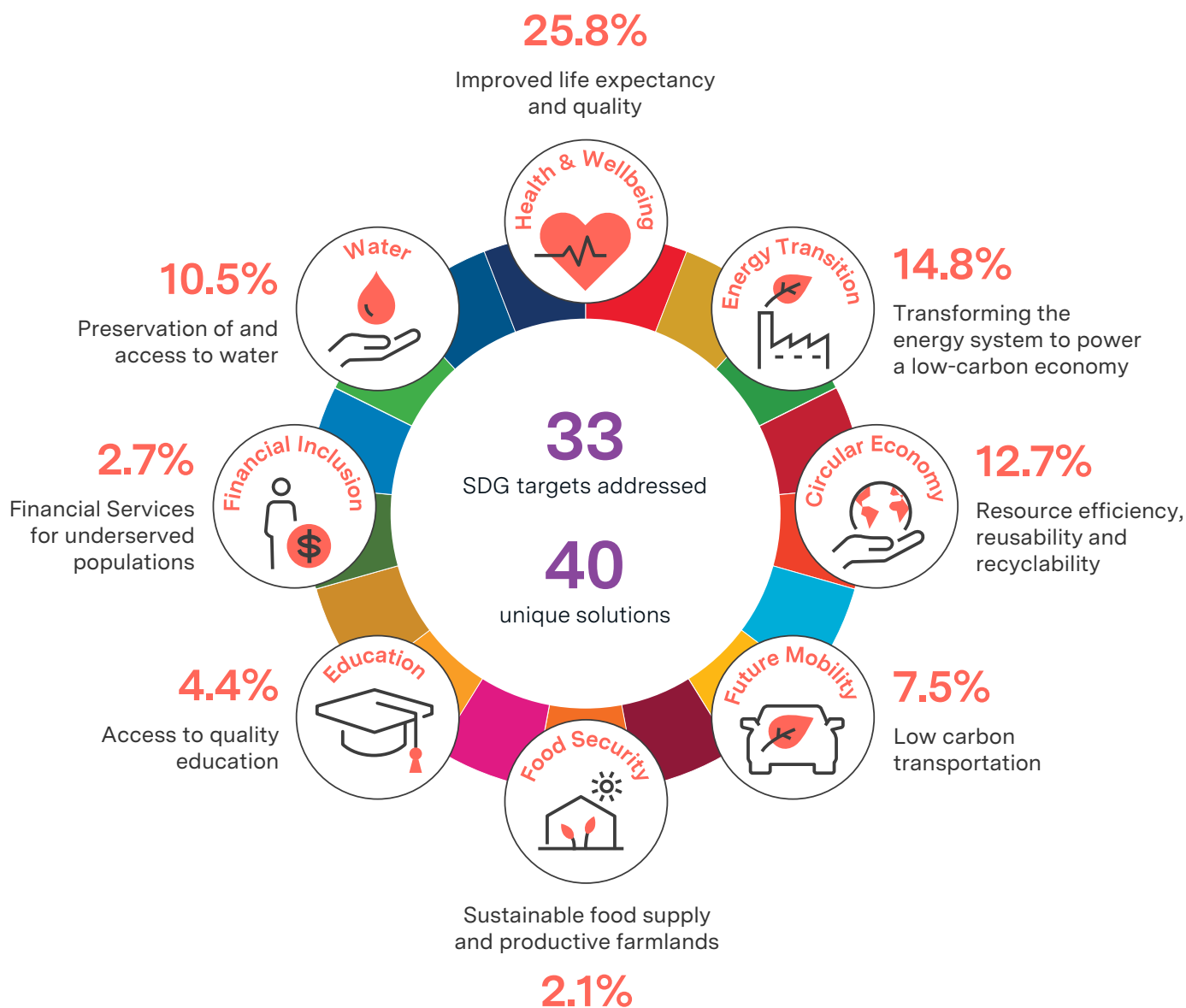
<sup>2</sup>EV Volumes, BEV and PHEV only, [www.ev-volumes.com](http://www.ev-volumes.com).

<sup>3</sup>White House, [www.whitehouse.gov](http://www.whitehouse.gov).

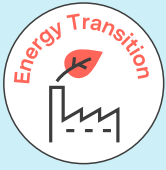
The Regnan Global Equity Impact Solutions strategy is a solutions-first strategy. It is focused on investing in mission-driven businesses that address underserved environmental and social challenges and deliver real, systematic change for the better. The team aspire to demonstrate that investing for impact not only makes good environmental and social sense; it also makes good financial sense. The intention is to broaden the appeal of impact investing and redirect capital towards impact investing. We aim to do this by delivering our investors market-beating long-term returns, because we have identified 'system changers' that innovate, disrupt and ultimately produce positive environmental, social and financial outcomes.

## Regnan Global Equity Impact Solutions

### Portfolio exposure by impact theme



Source: Regnan/JOHCM as at 31 March 2021. Note: Thematic exposure attribution to eight impact themes based on estimates of company revenues or other relevant metrics. Cash position: 2.90%. Neutral impact (13.5%) is estimated where revenues not directly tied to any theme. Negative impact (3.0%) estimated where revenues may be detrimental to UN Sustainable Development Goals (SDG).



# THEMATIC FOCUS ENERGY TRANSITION

## Hydrogen's role in the SDG agenda

**The world economy needs to reach net-zero emissions by about 2050 to limit global warming by 1.5 degrees Celsius.**

Nations' Sustainable Development Goals (SDG), the global agenda launched in 2015 to tackle the world's toughest environmental and social challenges by 2030. The energy transition spans multiple SDG targets across climate change, human health, ecosystem preservation and poverty alleviation. Energy transition is also one of the investment themes of the **Regnan Global Equity Impact Solutions strategy**, prompting our interest in deeply understanding potential risks and unintended consequences – the subject of Regnan's 'H<sub>2</sub> beyond CO<sub>2</sub>' report.

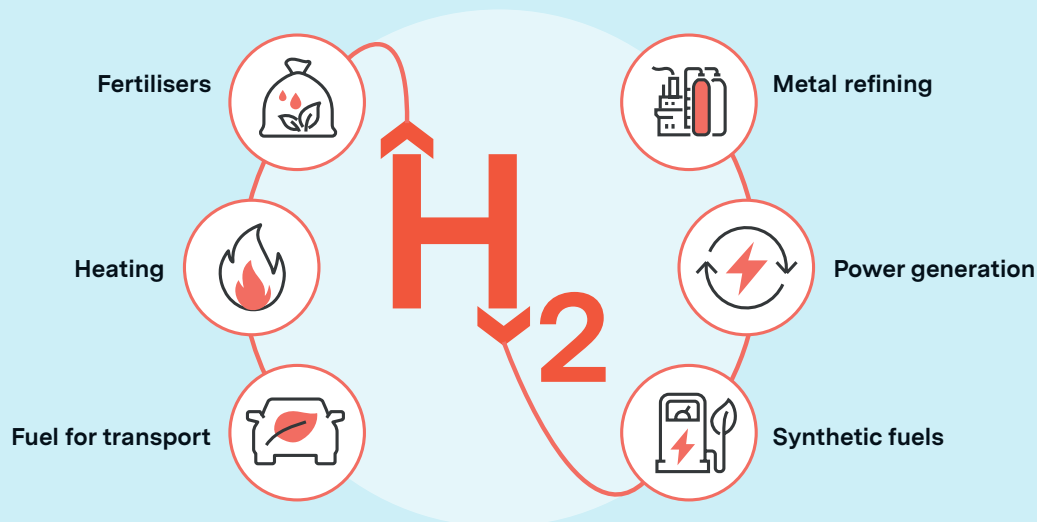
It also needs to reduce energy-related air and soil pollution, which harms ecosystems and humans. It needs to do this while providing access to energy to a larger proportion of the growing global population. These interconnections put the energy transition question at the heart of the United



### Key findings

All the studied technologies can provide strong carbon benefits, with potential to achieve close to zero direct emissions H<sub>2</sub> production. For water electrolyzers, this is achieved by using renewable energy (green hydrogen), and, for SMR, by coupling with carbon capture and storage (CCS) (blue hydrogen). However, CCS entails greater uncertainty given the few storage facilities developed to date.

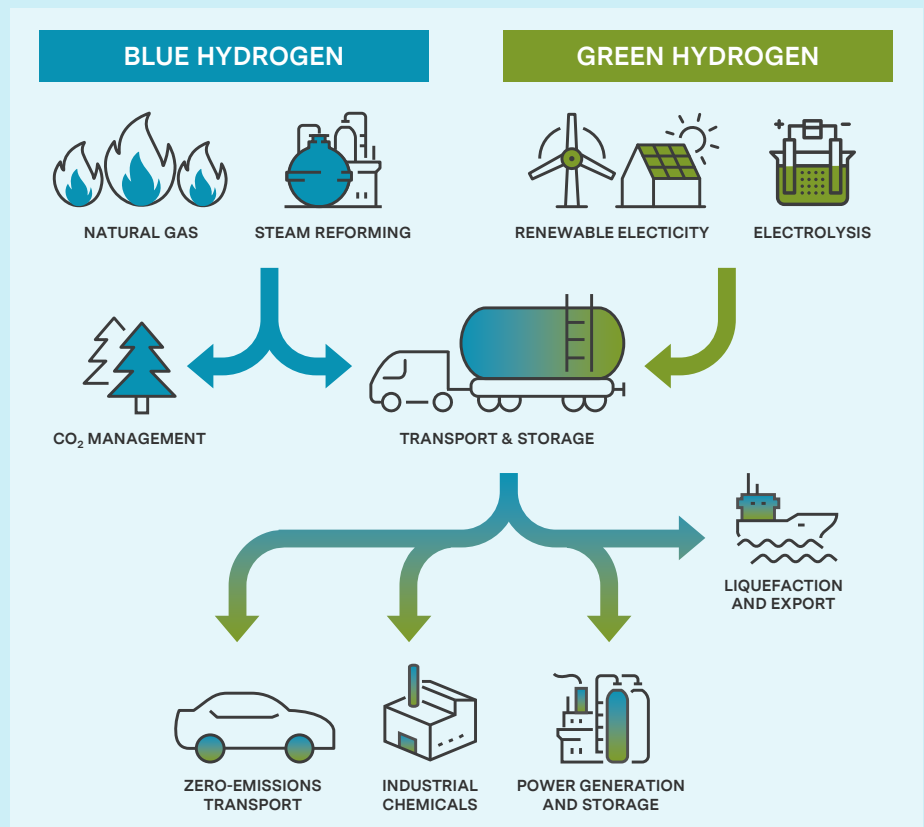
**In theory, hydrogen could be used for many sectors:**



**In practice, hydrogen's appeal depends on two critical factors: how it compares to other decarbonisation options, and how much zero-carbon hydrogen production can be ramped up to meet demand.**

Today very little of current hydrogen production is made by water electrolysis powered by renewables, generally called "**green hydrogen**". Most of the hydrogen produced today is made through the reforming of gas. This results in emissions of methane and carbon dioxide, two greenhouse gases. And a third of hydrogen produced is used in fossil fuel refining processes. Indeed, hydrogen producing companies in Europe are among the continent's largest emitters of greenhouse gases. Hydrogen from steam methane reforming could become low-carbon if emissions are captured and stored during production – generally called "**blue hydrogen**". This could work as a low-carbon solution, although much work remains to address issues across the full lifecycle profile. Notable concerns are methane leakages during the production and transport of gas, uncertainties on carbon storage, the pollution potential in the supply chain and a relatively large water consumption.

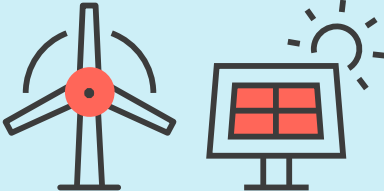
Things are about to change radically as renewable energy capacity ramps up. Wind and solar installed capacity has already grown seven times in the 10 years to 2019, according to Bloomberg New Energy Finance. Countries like Denmark, the UK and Spain are generating more than a third of their electricity from renewable energies. Large renewable energy projects, such as gigawatt-scale offshore wind farms, are the most likely candidates for pairing with hydrogen production through electrolyzers. In Europe, the offshore wind resource in the North Sea is conveniently located close to heavy industrial hubs. In China, about 4% of wind production was curtailed in 2019 at times where supply exceeded demand, according to China's National Energy Administration. This excess production could be used instead for hydrogen production.



## Hydrogen production needs to be assessed beyond just carbon and across all sustainability dimensions.

Investors and companies need to avoid locking in sustainability problems later down the line – as happened with other technologies initially promoted as impact solutions, such as earlier generations of biofuels (deforestation contributing to global warming, food price inflation and biodiversity loss), liquified natural gas (methane leakages contributing to global warming), and bioplastics (lack of suitable composting or recycling infrastructure).

Wind and solar installed capacity has already grown **7x** in the 10 years to 2019



Countries like Denmark, the UK and Spain are generating more than **1/3** of their electricity from renewable energies

Regnan's 'H<sub>2</sub> beyond CO<sub>2</sub>' report, looks beyond carbon emissions analysis alone and:

- Presents investment relevant insights from our comparison of three key production technologies, considering performance today as well as how the positioning of each will evolve over time.
- Provides current and future estimates across all key environmental factors for our focus technologies.
- Identifies management practices that responsible investors should look for in hydrogen producers to minimise risks and maximise positive impact.

This analysis supports comprehensive evaluation of hydrogen solutions applying the Regnan SDG Taxonomy, a central part of the structured investment process which underpins the Regnan Global Equity Impact Solutions Strategy.

For other Regnan research reports, please see [Regnan-johcm.com](https://www.regnan-johcm.com).



## Case Study #1

CASE STUDY

This company's activities contribute to the following SDG targets and Regnan themes:

TARGET 3.8

TARGET 8.6



### Theory of Change

This company is the leading provider of undergraduate medical courses in Brazil (c.10% market share). Brazil has amongst the lowest level of medical density (2.1 physicians per 1,000 inhabitants, which reduces to 1.3 excluding the capital's physicians, versus an OECD average of 3.4). While the population of Brazil is rapidly ageing, the pressure on medical services will only increase. The company is helping to address this unmet need through its plans to grow in this space with the addition of new medical seats, supported by the government's Mais Medicos (More Doctors) programme. There is exceptionally strong demand for medical seats, with five applications for each seat, and occupancy rates in medical schools are therefore at or close to 100%.

### Brazil has amongst the lowest level of medical density at 2.1 physicians per 1,000 inhabitants

#### What the company does

The company is the largest medical education group in Brazil (2,303 medical seats) and is present throughout the doctor's journey: from graduation and residency to postgraduate and continuing education. The company was formed through the merger between NRE Educacional and Medcel. Between them they have trained more than 10,000 doctors in the various phases of their academic and professional lives. They have a clear mission of improving the quality of medical education and contributing to widening access to the provision of health services and quality of life in communities where it is present.

The company continues to grow its medical seat footprint. Additionally, it has invested into a digital strategy to support physicians beyond their medical education through recent acquisitions. For example, PEBMEB's Whitebook & Nursebook is helping enable improved quality of care on the front line by providing doctors and nurses with the information they need to make the best diagnosis. Meanwhile iClinic is supporting the digital transformation

of healthcare, improving operational efficiency of medical practices and patient care through digital health records and data analytics.

Leading provider of undergraduate medical courses in Brazil

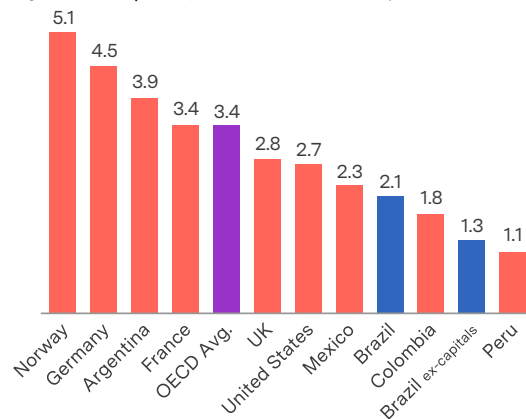
**c.10%** market share

### Why the company is in the portfolio

The company is helping to address the unmet need of medical professionals through its plans to grow in this space with the addition of new medical seats, supported by the government's Mais Medicos programme as well as through acquisitions. The company's operations are intentionally concentrated in regions where Brazil is most lacking in education and healthcare. M&A activity is also focused in these regions, which have the lowest number of doctors per head of population. The company's solutions are improving the quality of medical education in Brazil. This is backed up by its strategy, which aligns management KPIs to minimum educational quality scores for acquired institutions. 100% of the company's revenues are tied to education or improving productivity and outcomes for patients through their digital strategy. This company is unique in providing broad solutions to support medical professionals from student to professional throughout their careers.

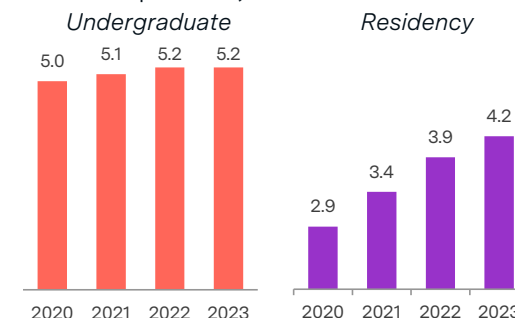
### Opportunity for medical schools

Figure 1: Medical density (Physicians per 1,000 inhabitants)



Source: INEP, Bank of America.

Figure 2: Applicants per seat in the Brazilian market (candidates per seat)



Source: INEP, Bank of America.



## Case Study #2 CASE STUDY

This company's activities contribute to the following **SDG targets and Regnan themes:**

<b>TARGET 7.6</b>	<b>TARGET 8.4</b>	
<b>7 AFFORDABLE AND CLEAN ENERGY</b> 	<b>8 DECENT WORK AND ECONOMIC GROWTH</b> 	

### Theory of Change

Cement is the source of 8% of greenhouse gas emissions globally. Currently there are few decarbonisation options, meaning that the sector is coming under increased pressure to innovate. This company has developed one of the few scalable low-carbon solutions, with a clinker-free process that reduces emissions by 5x while providing superior technical performance. This approach is in contrast to the ones favoured by industry incumbents. These are focused on improving existing processes, but these changes are slower, have high costs and result in lower carbon abatement.

**The company has created a clinker-free manufacturing process that cuts emissions by one-fifth**




### What the company does

The company designs, manufactures and sells clinker-free cements. Traditional cement, called Portland cement, is made from ground clinker. The clinker is obtained from limestone taken from quarries and then heated in furnaces at 1450 ° for 18 hours. This heating step, as well as the chemical reaction from making clinker, are responsible for 90% of the CO<sub>2</sub> emissions linked to cement. Being clinker-free, the company has operations that require much less energy and natural resource extraction (limestone) than traditional cement manufacturing. It means the process is not detrimental to air quality (no ovens or chimneys) and results in five times less CO<sub>2</sub> compared to traditional cement manufacturing. A significantly lower carbon footprint helps create sustainable cities.

### Why the company is in the portfolio

Cement represents 8% of global greenhouse gas emissions and the industry has seen little innovation to decarbonise processes. The company has created a clinker-free manufacturing process that cuts emissions by one-fifth while keeping high technical performance. This process should see a strong rise in demand as construction companies need to decarbonise.

Rising CO<sub>2</sub> prices resulting from the EU Emissions Trading Scheme (ETS) are likely to see cement prices rise to compensate traditional cement companies for costly adjustments to their manufacturing processes (such as the addition of CCS). In our view, this will enable the company to capture an increasing green premium for its products.



**Cement is the source of 8% of greenhouse gas emissions globally**

The clinker-free technology promotes the circular economy by using local resources and co-products from other industries, which helps limit the impact on natural resources. A highly automated manufacturing process ensures attractive unit economics, with lower capex requirements for new plants and low operating expenses, which we expect to deliver high returns as the company scales up.

Commercial opportunity is expected to be driven by expansion of production facilities, an international licencing model and increase in the EU ETS price of carbon.

We expect the lower carbon footprint of the company's products will become increasingly attractive as governments turn their attention to large scale infrastructure projects in an attempt to reinvigorate economies in a post-Covid world, whilst also seeking to minimise the environmental impact of such large scale development.

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