Sustainable Infrastructure

June 2021



Funding Europe's green infrastructure finance gap





Benjamin Kelly Senior Analyst, Global Research

Ingrid Edmund Senior Portfolio Manager, Infrastructure investments

Responsible Investment has witnessed strong growth over the past five years. However, the past six months have seen it embark on a much steeper trajectory.

If we take a Google Analytics view on worldwide searches for "ESG" (environmental, social and governance) phrases, it peaked in March 2021 (Figure 1). This growth is also evident within corporate transcripts with respect to the growing usage of ESG themes (Figure 2).

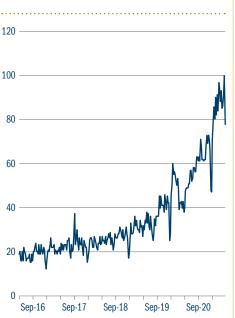
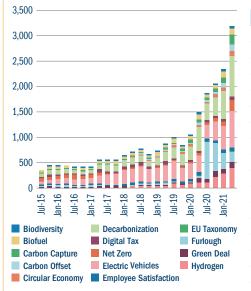


Figure 1: Google Analytics returns for ESG phrases

Source: Google Analytics, May 2021. Numbers represent search interest relative to the highest point on the chart for the given region and time. A value of 100 is peak popularity. A value of 50 means the term is half as popular. A zero means there was insufficient data for this item. Decarbonisation and EVs continue to be areas of focus Mentions of ESG Themes in event transcripts



There has been growing interest in net zero, carbon capture and carbon offsetting versus 4Q20

| | YoY change | QoQ Change |
|-----------------------|------------|------------|
| Biodiversity | 29% | 33% |
| Biofuel | 22% | -1% |
| Carbon Capture | 194% | 67% |
| Carbon Offset | 134% | 72% |
| Circular Economy | 60% | 4% |
| Decarbonisation | 81% | 49% |
| Digital Tax | 56% | 39% |
| Electric Vehicles | 99% | 51% |
| Employee Satisfaction | 33% | 31% |
| ESG | 34% | 25% |
| EU Taxonomy | 525% | 39% |
| Furlough | 327% | -29% |
| Green Deal | 46% | 19% |
| Hydrogen | 258% | 34% |
| Net Zero | 352% | 107% |
| Renewables | 16% | 7% |

Source: Alphasense (left) and Morgan Stanley (right), as at April 2021.

Figure 2: Key RI themes increasingly mentioned in company transcripts

One of the enablers of this stellar growth has been strong policy support, particularly in Europe. The build out of green infrastructure here is nothing if not ambitious. The European Union was among the first to commit to carbon neutrality – by 2050^1 – and has gone furthest in publishing investment plans to enable a green transition. Some observers estimate that up to €7 trillion in infrastructure spending will be required over the next 30 years to achieve the EU's stated goals, of which around €3 trillion will come from private sources.²

But while 2050 may seem a distant prospect, the EU does not plan to start its transformation slowly. The Green Deal, which is the cornerstone of the continent's transition to a low-carbon future, aims to deliver a reduction of 50%-55% in carbon emissions by 2030 compared with 1990 levels.³ This will not be achieved through new projects alone, developing existing brownfield projects will be key to supporting sustainable investment. For investors, Europe's gargantuan appetite for green infrastructure investment will inevitably lead to significant investment opportunities. The Green Deal's targets imply an investment gap of around €470 billion a year through to 2030.⁴ This will not be bridged without major injections of private capital alongside state spending and incentives, creating huge, multi-year investment opportunities.

Aside from environmental benefits, green infrastructure investment can also accrue economic advantages through the stimulation of economic activity – a recent IMF⁵ paper concluded that every dollar spent on carbon-neutral activities generates more than a dollar of economic activity, with this positive multiplier effect persisting for at least four years and the impact on economic activity being two to seven times larger than those associated with environmentally detrimental measures. →

Policies driving transformation

As Europe gears up to stimulate economic recovery from Covid-19, so its plans for green infrastructure investment have increased. Joining forces with the Green Deal, the EU Recovery Plan gives climate transition a central role in the continent's blueprint for economic recovery and growth, aiming to create the jobs of the future as well as positive climate and sustainability impacts, including reduced emissions, greater energy self-sufficiency and lower bills.

To support its Green Deal agenda, the EU originally intended to mobilise at least €1 trillion of public and private investment by 2030, but the stimulus package drawn up to address the economic impact of Covid-19 has boosted this. The EU Recovery Plan's additional stimulus for the period 2021-27 is expected to total around €1.85 trillion, roughly a quarter of which could be allocated to climate transition-related investments.⁶ Additionally, a €17.5 billion Just Transition Fund has been agreed as part of the Green Deal to mitigate the economic and employment impacts of Europe's climate transition.⁷

The EU's Green Taxonomy will help to drive private investment into green infrastructure. This is an ambitious attempt to classify economic activities according to their sustainability, and is intended to influence the way private capital is allocated, alongside the less prescriptive framework of the 17 UN Sustainable Development Goals (SDGs). Globally, the effort to achieve the SDGs could create more than \$12 trillion in market opportunities⁸ across four key areas – health and wellbeing, cities, energy and materials and food and agriculture.

"For investors, Europe's gargantuan appetite for green infrastructure investment will inevitably lead to significant investment opportunities"

Four major investment themes

Focusing specifically on European infrastructure, the four most notable investment themes are all central elements of the Green Deal agenda.



1. Renewable energy

The plan calls for a doubling of electricity generation from renewable sources by 2030 to help meet its emissions reduction targets. This implies a major increase in European utility companies' current rates of investment in renewable capacity and power grids. According to research carried out by the consultancy AT Kearney, annual renewables investment in Europe will rise from €60 billion in 2020 to €90 billion in 2022. By 2030, investment in European wind and solar capacity will total at least €650 billion and could reach €1 trillion.⁹ This is likely to boost utility valuations in Europe significantly, particularly given the big increase in demand that will result from the replacement of fossil fuels with electricity in transportation. It will also flow through to rising profits at equipment makers such as Danish turbine maker Vestas, which reported return on capital employed last year of around 20%.10



2. Green mobility

The transition to electric power for transport is a central element of the Green Deal, which stipulates that by 2030 at least 30 million zero-emission cars will be in use on Europe's roads,¹¹ high-speed rail travel will double across Europe and all scheduled mass transport for journeys of less than 500km should be carbon-neutral.¹² For some companies, these targets present immediate opportunities to generate attractive returns. Rail equipment makers are well positioned to benefit from the Green Deal, although an accelerated transition to electric vehicles will pose major challenges for automakers that need to develop new vehicles and ensure access to sufficient battery capacity.



3. Hydrogen as a future energy source There is growing interest in hydrogen as a clean energy source, although it remains expensive relative to others. The cost of so-called "green hydrogen" - made using renewable electricity to power electrolysis of water - has fallen thanks to dramatically cheaper renewable energy, but remains seven times higher than fossil fuels. Hydrogen is also difficult to store and transport.13 However, it has major potential in areas where electrification is not feasible, such as heavy industry, trucks, shipping and seasonal energy storage, and the EU aims to grow the share of hydrogen in the bloc's energy mix from less than 2% currently to 13%-14% by 2050.14 To realise this potential, major policy support will be necessary to encourage investment. The European Commission estimates the carbon price under the EU's Emissions Trading Scheme will need to rise from around €30 currently to €55-€90 a tonne.15 Examples of projects getting underway include Ørsted building a 1GW green hydrogen plant in the Dutch North Sea, which is slated for operations by 2030;¹⁶ and in the UK Cadent's HyNet North West project, which has been awarded £72 million in funding, partly from the UK government, to finance a hydrogen carbon capture and storage (CCS) project. It is hoped the fresh capital will accelerate the project to a final investment decision by 2023 in order for the initial phase to become operational by 2025.17



4. Building stock

Around three-quarters of the 220 million buildings in the EU are deemed energy inefficient.¹⁸ The EU's Covid-19 recovery plan will channel major investment into upgrading them, given that buildings account for 36% of the EU's greenhouse gas emissions and 40% of energy consumption. The plan's key targets call for a 60% reduction in greenhouse gas emissions from buildings by 2030 and a cut in energy used for heating and cooling of 18%. To achieve this it aims to double the renovation rate of buildings to 2% over the next decade, which will require investment of €275 billion a year. Energy efficiency standards will also be tightened.19

These themes are consistent with the opportunities we are seeing in the infrastructure space, in particular in the past 12 months those themes linked to methods of decarbonisation such as carbon capture, and solutions around decarbonsiation (both brownfield and greenfield), namely hydrogen and carbon offsetting.

Thus, the supportive policy backdrop is presenting sustainability-focused openings within the small mid-cap nexus.

Don't forget social!

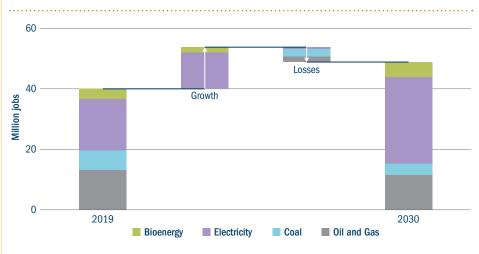
This rapid move towards net zero creates a risk that some people are left behind – perhaps those without the opportunity to reskill into low-carbon industries or unable to access the benefits of the new energy system. The Just Transition acknowledges the social implications of delivering net zero, from jobs and training to working with communities and ensuring no one is left behind (Figure 3). Working with our portfolio companies - and any future ones - to ensure we create a just transition for employees is of the utmost importance, and strategies to ensure positive social outcomes are embedded in our business plans.

Looking forward, Europe's drive to green its economy will lead to a new range of opportunities in infrastructure investment. Indeed, Europe's policymakers are aware that they cannot achieve their "The Just Transition acknowledges the social implications of delivering net zero, from jobs and training to working with communities and ensuring no one is left behind"

| 3

zero-carbon goals without attracting private investment. Given the Green Deal's ambitious timeline over the next 10 years, now is the time to be exploring the major investment themes.

Figure 3: Global employment in energy supply in the net-zero pathway, 2019-2030



Source: International Energy Agency, 2019.

¹ https://ec.europa.eu/clima/policies/strategies/2050_en

² Goldman Sachs Equity Research: The EU Green Deal, July 2020. ³ https://ec.europa.eu/commission/presscorner/detail/en/IP 20 1599

⁴ https://rethinktherecovery.org/

⁵ IMF.org, Building Back Better: How Big Are Green Spending Multipliers?, 19 March 2021.

⁶ https://ec.europa.eu/info/strategy/recovery-plan-europe_en

⁷ https://ec.europa.eu/commission/presscorner/detail/en/IP_20_2354

⁸ https://www.un.org/sustainabledevelopment/sg-finance-strategy/

⁹ https://www.handelsblatt.com/unternehmen/energie/energiewirtschaft-bis-zu-eine-billion-euro-fuer-oekostrom-energiekonzerne-planen-rekordinvestitionen/26727336.html

¹⁰ https://www.vestas.com/~/media/vestas/investor/investor%20pdf/financial%20reports/2019/q4/2019_annual_report.pdf

¹¹ Reuters, EU to target 30 million electric cars by 2030, 4 December 2020.

¹² https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A52020DC0789

¹³ https://www.energy.gov/eere/fuelcells/hydrogen-storage-challenges

¹⁴ https://ec.europa.eu/energy/sites/ener/files/hydrogen_strategy.pdf

¹⁵ https://www.icis.com/explore/resources/news/2020/08/03/10537257/eu-hydrogen-strategy-could-cause-power-and-carbon-prices-to-drop

 $^{^{16}} https://www.energylivenews.com/2021/04/01/orsted-to-build-one-of-the-worlds-largest-hydrogen-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-port/linear-plants-at-north-sea-plants-at-north-s$

¹⁷ https://www.business-live.co.uk/economic-development/72m-funding-announced-hynet-north-20193274

¹⁸ https://ec.europa.eu/energy/sites/ener/files/eu_renovation_wave_strategy.pdf

¹⁹ https://ec.europa.eu/energy/sites/ener/files/eu_renovation_wave_strategy.pdf

To find out more visit COLUMBIATHREADNEEDLE.COM



Important Information: For use by Professional and/or Qualified Investors only (not to be used with or passed on to retail clients). This is an advertising document. This document is intended for informational purposes only and should not be considered representative of any particular investment. This should not be considered an offer or solicitation to buy or sell any securities or other financial instruments, or to provide investment advice or services. Investing involves risk including the risk of loss of principal. Your capital is at risk. Market risk may affect a single issuer, sector of the economy, industry or the market as a whole. The value of investments is not guaranteed, and therefore an investor may not get back the amount invested. International investing involves certain risks and volatility due to potential political, economic or currency fluctuations and different financial and accounting standards. The securities included herein are for illustrative purposes only, subject to change and should not be construed as a recommendation to buy or sell. Securities discussed may or may not prove profitable. The views expressed are as of the date given, may change as market or other conditions change and may differ from views expressed by other Columbia Threadneedle Investments (Columbia Threadneedle) associates or affiliates. Actual investments or investment advice and does not take into consideration individual investor circumstances. Investment decisions should always be made based on an investor's specific financial needs, objectives, goals, time horizon and risk tolerance. Asset classes described may not be suitable for all investors. Past performance does not guarantee future results, and no forecast should be considered a guarantee either. Information and opinions provided by third parties have been obtained from sources believed to be reliable, but accuracy and completeness cannot be guaranteed. This document and its contents have not been reviewed by any regulatory authority.

In Australia: Issued by Threadneedle Investments Singapore (Pte.) Limited ["TIS"], ARBN 600 027 414. TIS is exempt from the requirement to hold an Australian financial services licence under the Corporations Act and relies on Class Order 03/1102 in marketing and providing financial services to Australian wholesale clients as defined in Section 761G of the Corporations Act 2001. TIS is regulated in Singapore (Registration number: 201101559W) by the Monetary Authority of Singapore under the Securities and Futures Act (Chapter 289), which differ from Australian laws.

In Singapore: Issued by Threadneedle Investments Singapore (Pte.) Limited, 3 Killiney Road, #07-07, Winsland House 1, Singapore 239519, which is regulated in Singapore by the Monetary Authority of Singapore under the Securities and Futures Act (Chapter 289). Registration number: 201101559W. This document has not been reviewed by the Monetary Authority of Singapore.

In Hong Kong: Issued by Threadneedle Portfolio Services Hong Kong Limited 天利投資管理香港有限公司. Unit 3004, Two Exchange Square, 8 Connaught Place, Hong Kong, which is licensed by the Securities and Futures Commission ("SFC") to conduct Type 1 regulated activities (CE:AQA779). Registered in Hong Kong under the ce (Chapter 622), No. 1173058.

In the UK: Issued by Threadneedle Asset Management Limited, registered in England and Wales, No. 573204. Registered Office: Cannon Place, 78 Cannon Street, London EC4N 6AG. Authorised and regulated in the UK by the Financial Conduct Authority.

In the EEA: Issued by Threadneedle Management Luxembourg S.A. Registered with the Registre de Commerce et des Sociétés (Luxembourg), Registered No. B 110242 44, rue de la Vallée, L-2661 Luxembourg, Grand Duchy of Luxembourg.

In the Middle East: This document is distributed by Columbia Threadneedle Investments (ME) Limited, which is regulated by the Dubai Financial Services Authority (DFSA).

The information in this document is not intended as financial advice and is only intended for persons with appropriate investment knowledge and who meet the regulatory criteria to be classified as a Professional Client or Market Counterparties and no other Person should act upon it.

In Switzerland: Threadneedle Asset Management Limited. Registered in England and Wales, Registered No. 573204, Cannon Place, 78 Cannon Street, London EC4N 6AG, United Kingdom. Authorised and regulated in the UK by the Financial Conduct Authority. Issued by Threadneedle Portfolio Services AG, Registered address: Claridenstrasse 41, 8002 Zurich, Switzerland.

Columbia Threadneedle Investments is the global brand name of the Columbia and Threadneedle group of companies. columbiathreadneedle.com