Frontier International

European mid-market infrastructure thematics

December 2020

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Introduction

Every year Frontier undertakes a physical trip to Europe to meet with the infrastructure investment community, including investment managers, research houses, investment banks and corporates, to understand the state of the market and thematics and to find new investment opportunities for our clients. In 2020 Frontier undertook a 'virtual' trip to Europe, meeting with a large subset of infrastructure managers operating in the mid-market European infrastructure segment.

Isabelle Demir

Head of Real Assets

Isabelle joined Frontier in 2018 as Head of Real Assets. She leads our research into infrastructure, real estate, agriculture and private equity sectors, and brings over 18 years combined experience in corporate finance and investments.

Manish Rastogi

Principal Consultant

Manish Rastogi is a Principal Consultant and infrastructure specialist with Frontier Advisors having joined the firm in August 2017. He provides infrastructure consulting and investment support to Frontier clients and also undertakes manager research.

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Martin Thompson is a Senior Consultant at Frontier, having joined the firm as an Associate in 2009. Martin provides consulting support to a number of clients and undertakes investment and manager research.

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Introduction

Without doubt, the year 2020 will go down in history as one marred by the COVID-19 pandemic, sending many global economies to the precipice of a recession and having a devastating impact on global citizens. Amidst the chaos European governments responded to the crisis with a package of initiatives including health measures, new vaccine discovery efforts and fiscal stimulus to save lives, jobs and livelihoods, respectively, but were ultimately unable to avoid recession fears.

However, the pandemic has strengthened the resolve of the European Union (EU) to engineer a 'green economic recovery' that will assist Europe's fight against climate change, transition the 28-nation bloc to a low carbon economy, while creating new jobs and innovation for Europe. EU's green economic recovery hinges on large-scale investments in green infrastructure and energy transition, which have already begun in earnest.

This time around, the EU does not need to sell the plan to its citizens and institutions. The European infrastructure community has grasped the opportunity and is actively investing in the green infrastructure trends of today and tomorrow, and this is no more evident than in mid-market European infrastructure.

The European mid-market infrastructure segment is interesting in many ways:

- Europe has historically provided a deep and broad opportunity set for investments ranging in the tens to hundreds of millions of Euro, a sweet spot for mid-market managers. Interestingly, deal activity was not significantly impacted during the pandemic.
- The European Commission (EC) has put in place numerous policy and funding initiatives to support the development of new infrastructure. The 'Europe's Green Deal' has prompted mid-market infrastructure managers to increase their investments in renewable energy technologies, energy efficiency and transition and sustainable transport.
- The pandemic has accelerated behavioural changes as people were forced to work from home (WFH) and shop online, thus pushing the need for an ever increasing digitised economy and creating a significant demand for high speed communication infrastructure (optic fibre networks, data centres and cell towers). In addition, European investors are actively supporting the rollout of renewable energy infrastructure to support the decarbonisation theme espoused by the EU.
- The green recovery will also hasten the need for infrastructure of tomorrow such as Electric Vehicle charging and ancillary networks and hydrogen powered eco-systems to support a circular economy.
- European investors are also more attuned to their ESG obligations than investors elsewhere, in line with their climate-aware and social investments.
- Last, an attractive infrastructure ecosystem exists in Europe today with the rise of local mid-market managers, vibrant secondary market for trading of assets and recycling of capital, and the presence of European pension funds and global investors with significant capital to deploy.

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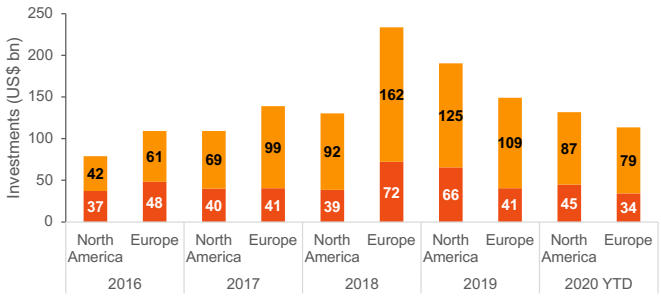
European Infrastructure market development

The European infrastructure environment is vast, largely well-developed and sophisticated. And given the Europe Union (EU) and other non-EU states have strong sovereign, legal, regulatory and policy co-ordination frameworks, it has long been a destination of choice for regional and global infrastructure investors. The European infrastructure market is second only to North America, in size, with approximately US$150 billion of infrastructure investments executed in calendar year 2019 and US$113 billion of deals closed in the calendar year to date to November 2020.

Chart 1: Greenfield and brownfield investment trends in Europe and North America

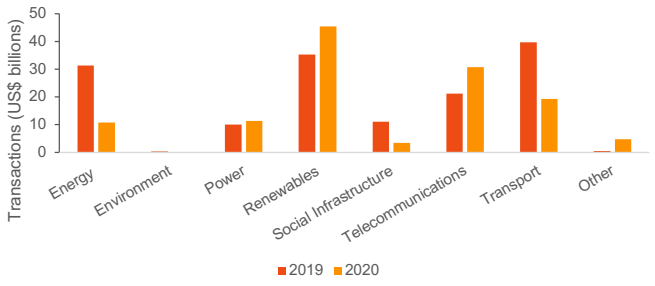


Source: Inframation

On current trend, Europe is expected to invest US$12.8 trillion into infrastructure between 2016 and 2040, but it is, in fact, in need of US$14.8 trillion over that period. This equates to an additional US$83 billion per annum gap for private capital to bridge.

The European Commission has put in place a range of policies to attract private capital towards sustainable investments whether that is in decarbonisation of the economy (renewable energy generation), technology (optic fibre and 5G infrastructure), energy transition (smart metering, electric vehicles), utilities (water, electricity networks) or social infrastructure.

Chart 2: Transaction volume by sector



Source: Inframation

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EU policy and directives

Prior to the onset of the COVID-19 pandemic, EU had kickstarted policy and financial packages for a new green growth model for Europe. However, during the height of the COVID-19 pandemic, the EU bolstered policy and stimulus support for Europe with a specific focus on sustainable green growth and recovery plan, which provides policy certainty and a future path for investors.

Table 1: Select EU policies for sustainable growth, economic and social recovery

EU priorities	Policy objective	Commitments and stimulus
The Green Deal	• Plan to make EU's economy sustainable by moving to a clean, circular economy. • Support industry to innovate. • Invest in environmentally-friendly technologies. • Roll out cleaner, cheaper and healthier forms of private and public transport. • Decarbonise the energy sector. • Improve energy efficiency of buildings. • Improve global environmental standards.	• Mobilise EUR1.0 trillion of sustainable investments to 2030.
2030 climate target plan	• Net-zero greenhouse gas emissions by 2050. • 50% - 55% cut in greenhouse gas emissions by 2030 (compared to 1990 levels).	• Just transition mechanism – up to EUR150.0 billion to alleviate socio-economic impacts.
COVID-19 recovery plan	• Total EU budget spending of EUR1.85 trillion for 2021-2027. • Help repair the immediate economic and social damage caused by the pandemic. • Kickstart the economic recovery and prepare for a better future. • Next Generation EU grants and loans to support renewables (wind and solar) and invest EUR150 billion in energy transition technologies.	• Next generation EU - new recovery financings of EUR750.0 billion. • Multi-annual financial framework – EUR1.1 trillion targeted reinforcements to long-term budget.
Connectivity for a European gigabit society	• Roll out optic fibre and 5G to boost fixed and wireless network connectivity. • Four key goals by 2025: - All European households to have access to at least a 100 Mbps connection. - Schools, universities, research centres, transport hubs, hospitals, public administrations and enterprises to have access to at least 1.0 Gbps connectivity. - Uninterrupted 5G coverage to be available in all urban areas and all major terrestrial transport paths. - Access to data connectivity everywhere people live, work, travel and gather.	• Connecting Europe Facility (CEF2) of EUR3.0 billion to support digital connectivity infrastructure. • France: EUR20.0 billion of public and private investment in FTTH and FTTN broadband. • Italy: EUR5.0 billion to address high-speed broadband market failures. EUR1.6 billion to develop rural broadband.

Source: European Commission.

Current infrastructure investment themes

Renewable energy

Europe has been a pioneer and a leader in the implementation of renewable energy generation from the installation of the first offshore wind farm off the coast of Denmark in 1991 to the design of the 'Feed-in-Tariff' (FiT) mechanism in Germany in 1991, to Portugal achieving the lowest cost solar photovoltaic (PV) park globally in mid-2019. Over the last 30 years, EU has encouraged adoption of renewable generation technologies such as PV solar, onshore and offshore wind, hydro plants and biofuel plants. In fact, the share of renewable energy in EU's total energy consumption increased from 9.6% in 2004 to 18.9% in 2018. The EU has set a binding target of at least 32% of its energy mix to be derived from renewable energy by 2030.

Hence, it is not surprising that European and global investors have been ardent supporters of European renewables industry.

Based on resource potentials, the 'Nordics' continues to be attractive for hydro and wind (onshore and offshore); while Spain remains attractive for utility-scale solar investments; and the North Sea is popular for offshore wind facilities.

Discussions with infrastructure managers suggests Germany, France, Spain and UK are competitive regions for investments, with returns for operating assets typically in the mid-single digits.

Infrastructure managers are focussing on developing renewable energy platforms to achieve reasonable returns including a development premium.

Revenue structures have also evolved from an initial reliance on FiT schemes to bilateral power purchase agreements (PPAs) with utilities and corporates to market auctions and regulatory tariff schemes.

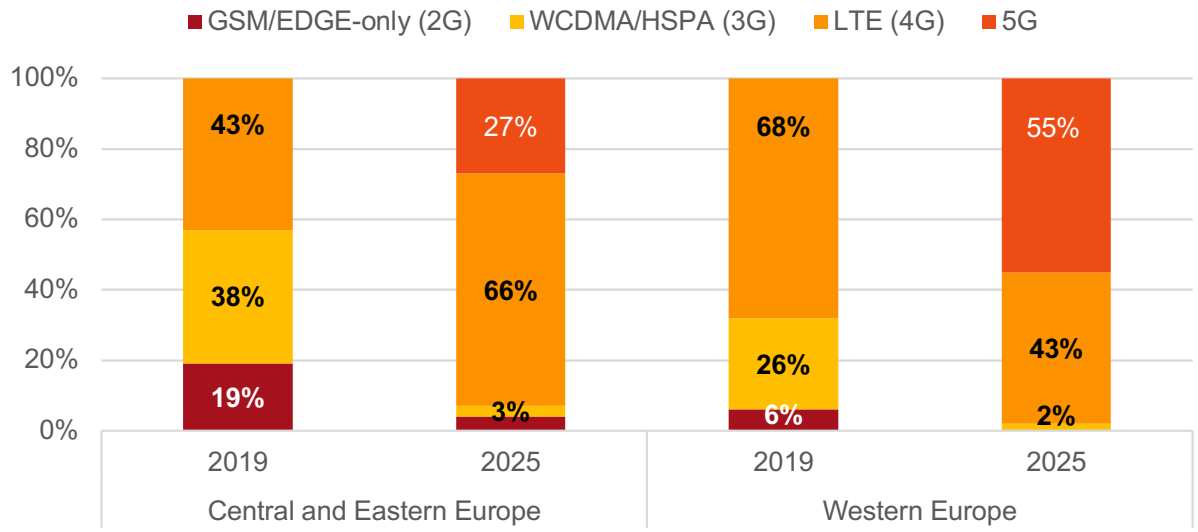
However, renewable investments in Europe are not without risk. France plans to retrospectively cut FiT subsidies granted to solar projects between 2006 and 2010, in order to save EUR2.0 billion annually. Spain and Italy had enacted similar moves to cut PV solar subsidies in 2010 and 2014, respectively, which materially impacted new investments in those countries for several years that followed. Such a moves create sovereign risks for long-term investors.

Digital infrastructure

Based on the digital connectivity policy, a number of EU nations tendered concessions to private developers (many of which included mid-market European and global infrastructure managers) to build ultra-fast optic-fibre FTTH and FTTN networks in semi-urban and rural areas.

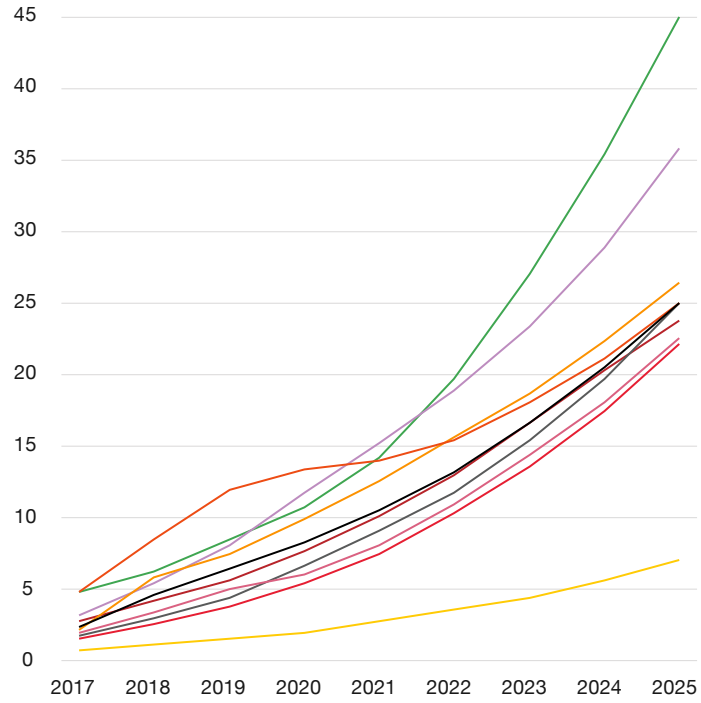
- UK, Spain, Italy, France, Germany, Portugal, and Benelux had granted concessions to infrastructure firms in the last several years. These markets have experienced a boom in secondary trading of fibre network companies over the past 12 months.
- Given the rising demand for high-speed broadband for work-from-home and e-commerce during the COVID-19 pandemic, valuations for fibre assets have increased significantly forcing a number of investment managers to focus on greenfield fibre concessions in the Nordics and tier-2 EU markets (Central and Eastern Europe).
- Infrastructure managers believe there are still plenty of opportunities to acquire valuable fibre assets from cash-strapped European mobile network operators, who need to divest and lease back these assets to fund large and expensive 5G network rollouts by 2025.
- The higher bandwidths provided by 5G and growth in internet-of-things (IoT) devices is expected to lead to a four to five fold increase in traffic data usage in Europe by 2025.

Chart 3: Mobile subscriptions by technology



Source: Ericsson mobility report, June 2020

Chart 4: Mobile traffic data per smartphone (GB/month)



Regions	2019	2025	CAGR 2019–2025
North America	8.5	45	32%
Western Europe	8.2	36	28%
North East Asia	7.5	27	23%
India	12	25	13%
South East Asia and Oceania	4.6	25	33%
Global average	7.0	25	25%
Central and Eastern Europe	5.8	24	27%
Latin America	3.9	22	34%
Middle East and North Africa	5.0	23	28%
Sub-Saharan Africa	1.6	7.1	28%

Source: Ericsson mobility report, June 2020

- Data centres is another segment of digital infrastructure that has experienced heightened activity on the basis of increased data demand, privacy, localisation, data security and safeguarding rules in Europe. Managers and investors have sought to acquire hyperscale and wholesale data centre assets with long-term off-take agreements with global technology and industrial firms. However, rising competition for limited number of data centre assets has compressed returns.

Rail transport

Following the rail privatisations in the UK and Europe, investments in rolling stock companies (ROSCOs), that lease back rail cars to train operating companies, has been a prominent investment theme for numerous mid-market UK and European managers.

- In the UK, ROSCOs had secured long-term concessions and these continue to receive investment by UK-based PPP-based managers. However, returns have compressed as weighted average lease expiries shorten and the government's franchise model is abandoned. As a result some managers are factoring in lease renewals at market rates beyond current leases which presents merchant and obsolescence risks.
- The current COVID-19 enforced lockdowns in Europe had seen patronage decline materially and there are also questions on future patronage recovery. In addition, governments' significant financial support to the rail franchisees is likely to raise question marks for the future of the rail leasing model.
- Some UK-based managers are aiming to replicate their success with UK ROSCOs in continental Europe, which had already been an active market for some time. Germany awarded several new PPP-style ROSCO concessions in 2020.

PPP / social assets

The UK has experienced a material decline in new PPP/PFI concessions following the government's decision in 2018 to abolish PFI contracts for infrastructure construction projects due to the poor outcomes experienced by governments in the past, and the bankruptcy of high profile contractors such as Carillion in 2018.

- A handful of dedicated PPP/PFI focussed managers, predominantly in the UK, are focussed on trading and acquiring assets in the secondary market.
- New greenfield PPP concessions are still being awarded in mainland Europe in France, Italy for hospitals, schools, car parks and accommodation, as well in Germany for ROSCOs.
- PPP/PFI assets in the secondary market typically trade for mid to high single digits returns.

Infrastructure investment themes of the future

Europe's "Green Deal" and associated policies have set the stage for infrastructure managers to invest in and support sectors we believe will be the infrastructure themes of the foreseeable future. While energy transition has been talked about as an area with great potential, policy requirements will now force European industry and consumers to make that a reality. In addition, we believe electric vehicle (EV) infrastructure, smart metering and hydrogen infrastructure will also become commonplace within the next decade.

Energy transition

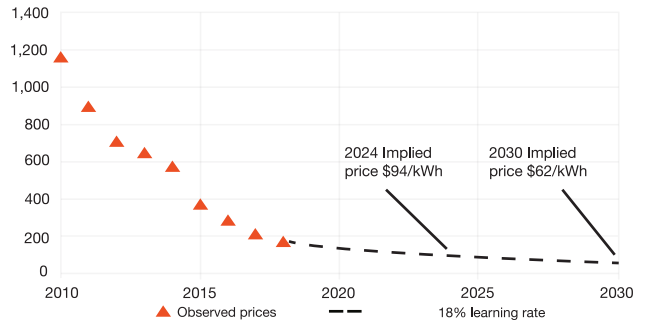
Energy transition is the global energy sector's shift from fossil-fuel (coal, oil, gas) based systems of energy production and consumption to renewable energy sources. The increasing penetration of renewable energy into the European energy supply mix is the key driver of energy transition that is commonplace across Europe today. However, clean power generation is only one part of the energy transition equation. EU's strict policies will mean that European industrial firms will drive the development and mass adoption of electric transportation (cars, buses, trains, trucks, etc.), battery storage, coupled with greater use of technologies such as smart meters to improve energy efficiency. Hydrogen as a renewable fuel source will also be part of the energy transition scheme in Europe. Numerous managers we met have made or are considering making investments into energy transition thematics, which bodes well for energy transition infrastructure in the future.

Battery storage

To decarbonise the European energy system, large amounts of new energy storage will be required. Although battery storage has long been viewed as the missing link between intermittent renewable power and constant reliability (base load power), falling costs are opening up the potential for broader use of batteries. Managers are increasingly integrating large scale lithium-ion batteries with utility scale solar assets, particularly in Spain and/or supporting standalone battery projects.

At current observed costs of c.US$180/KWhr, standalone batteries are not price competitive in electricity generation. However, they are often utilised and compensated for ancillary services such as providing balancing capacity to the electricity market operator, and there are market mechanisms to support their use throughout Europe. Further decline in costs is likely to increase their application in both utility scale projects as well as behind-the-meter applications.

Chart 5: Lithium-ion battery price outlook (real 2018 US$/kWh)



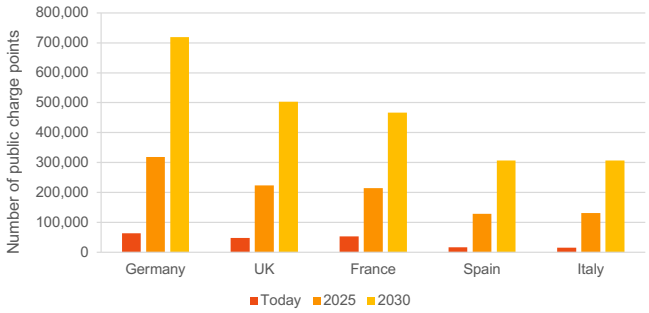
Source: Bloomberg NEF

Electric vehicle charging infrastructure

As the average cost of lithium-ion batteries continues to decline, and coupled with EU policies on the transition to cleaner fuels for transport, European industrial firms and consumers are increasingly turning to electrification of transport fleets, making the transition to EVs an attractive investment opportunity.

- A number of mid-market managers mentioned their interest in investing in EV charging infrastructure. While the rollout of EV charging infrastructure is taking place as pilot projects or at small scale in specific European cities, the pace of development is expected to increase dramatically over the coming decade in line with expected increase in adoption of EVs.

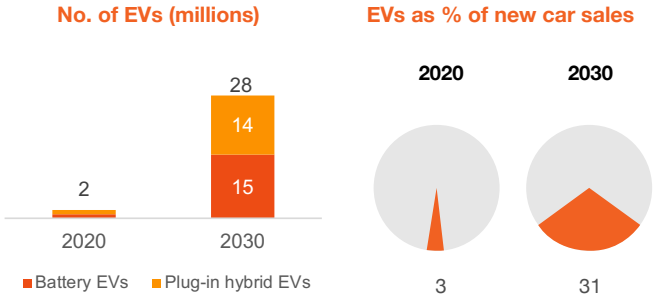
Chart 6: Need for public charging infrastructure in selected European countries



Source: Transport & Environment (2020). Recharge EU: How many charge points will Europe and its Member States need in the 2020s

- While EVs only make up c.3% of total passenger vehicle sales in Europe today, this is forecast to increase to c.31% by 2030 as highlighted in Chart 7. For example, 23,158 electric cars were registered in Germany in October 2020, 365% growth from October 2019, pointing to a positive trend in the adoption of EVs.

Chart 7: Share of electric vehicles in the EU



Source: McKinsey & Co

- Historically, investing in EV charging infrastructure has been regarded as risky due to the cost of installation and connection and the potential for unreliable demand. At the same time, the lack of EV charging infrastructure has deterred many consumers from purchasing EVs due to concerns around the availability of charging points. There is also technological risk, with various charging standards available that support slow, fast or superfast charging, and the EV mileage also typically decreases with the increase in speed of charging.

- A number of managers are turning their attention to this with 'smart money' investing in a technology standards agnostic fashion (owning the servicing and operating rights with the technology risk being borne by the procurer/customer), or bidding on concessions that are remunerated on an availability basis by local municipalities. Recent examples of such investments include an EV charging infrastructure concession awarded by Metropole du Grand Paris, an administrative body encompassing the city of Paris, to Cube Infrastructure Managers.

Smart meters

Smart meters are an essential element of the smart grid future in Europe. Real-time monitoring is expected to benefit both utilities (electricity, gas and water) and consumers with consumption and cost savings, integration of variable renewable energy sources (for electricity networks), and introduction of new services.
The official smart meter rollout commenced in Europe over a decade earlier with private companies and utilities leading the process.

- The smart meter rollout has made slow progress to date, with only 123 million EU households covered versus a target of 200 million EU households by 2020.
- Based on an updated schedule, the EU expects 223 million electricity smart meters (77% penetration rate in the EU) and 51 million gas meters to be deployed by 2024 at an aggregated investment of EUR38 billion and EUR9 billion respectively, and 266 million electricity smart meters (92% penetration rate) to be deployed by 2030 at a total aggregated investment of EUR46 billion. Within the EU, six nations (Estonia, Finland, Italy, Malta, Spain and Sweden) have already completed their electricity smart meter rollouts.
- In the last few years numerous infrastructure managers (MIRA, KKR, Arcus, Equitix, Meridiam and Foresight) have invested in the smart meters segment by acquiring smart meter installation firms, primarily in the UK and France. Infrastructure investors are attracted to the long-term, contracted revenue streams from the utilities, as well as the growth prospects (additional deployment) in the segment. Germany, Greece, Portugal and the UK are expected to provide ample opportunities in the near future and significant capital is expected to be deployed to meet EU's deployment expectations.

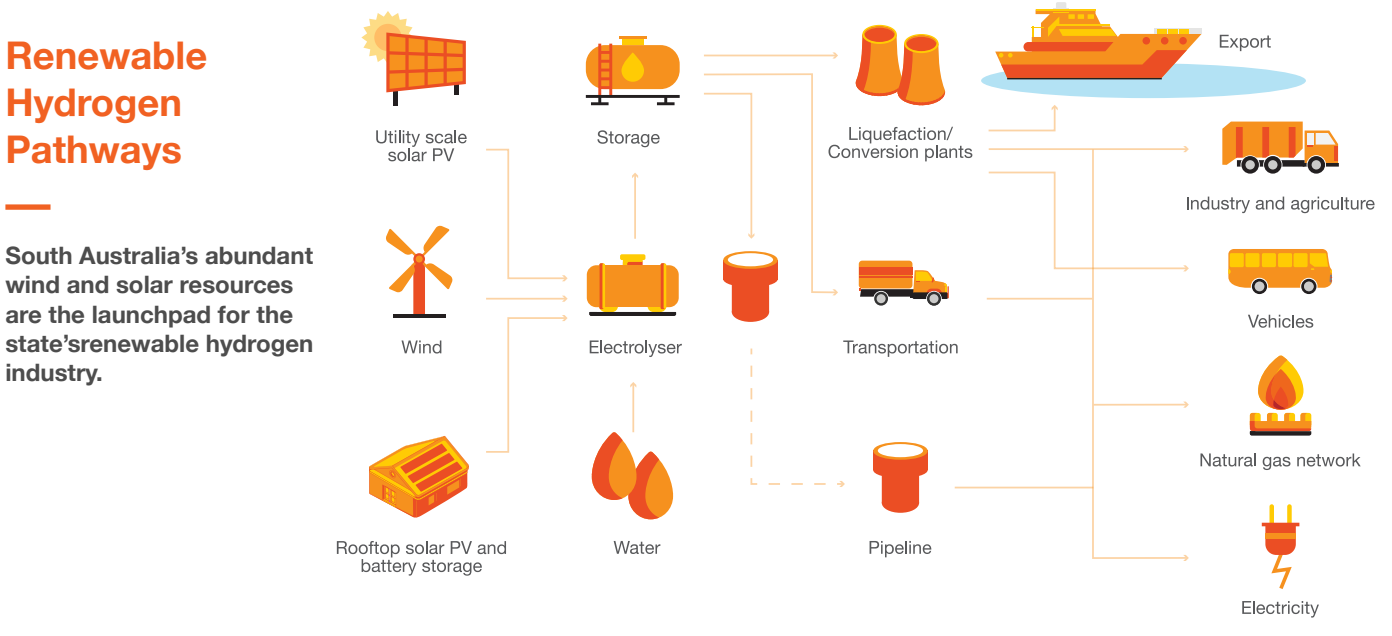
Clean hydrogen infrastructure

The Green Deal envisions clean, renewable hydrogen as a vital element of the European integrated energy system and the EU has ambitious plans to position itself as the world leader in the development of the hydrogen economy. According to the EU Hydrogen Strategy, cumulative investments in renewable hydrogen could reach up to EUR180 – 470 billion by 2050, when the EU expects hydrogen to comprise 13-14% of Europe's energy system. Within this, investment of EUR24 – 42 billion are expected by 2030 just to support the installation of 40GW of renewable hydrogen electrolysers.

Hydrogen has many uses but it is being contemplated as a transport fuel, heating fuel, a way to store energy (hydrogen batteries), or as an industrial feedstock. When it is produced using renewable energy, hydrogen becomes a renewable fuel source for use at a later time. Hydrogen energy can be stored as a gas and even delivered through existing natural gas pipelines. When converted to a liquid, hydrogen can also be transported on trucks and in ships, effectively making it a tradable energy commodity.

- If clean hydrogen is integrated into the energy system, it will enable large scale investments in infrastructure including electrolysers; renewable energy generation; hydrogen gas storage, transmission pipeline and transport infrastructure; hydrogen liquefaction plants; carbon capture systems; and EVs, batteries and EV charging infrastructure.
- Infrastructure managers in Europe are starting to incorporate clean hydrogen into their investment strategies and to date have made investments in hydrogen fuelled trains (SL Capital), as well as conversion of traditional gas pipelines to duel fuel transport pipelines and hydrogen power plants (Meridiam).

Chart 8: Renewable hydrogen infrastructure requirements



Source: Government of South Australia Hydrogen Roadmap, September 2019, QIC

Other sectors on a watching brief

A notable observation from our virtual trip was the continued expansion of the infrastructure asset class. While infrastructure managers have previously invested in fish farms and crematoriums, the child care sector is a recent example where a number of infrastructure managers have made investments. There is strong public and political support for child care as a social service (particularly in France and the Nordics), but revenues are heavily dependent on government subsidies, and the child care sector is susceptible to vacancy risk (as was the case during the recent COVID-19 pandemic). It remains to be seen whether further infrastructure capital will flow in to this segment, given it has historically been dominated by private equity investors.

Change in manager landscape

Frontier has a long history of undertaking manager research on European mid-market infrastructure. This is reflective of the rich and broad mid-market opportunity set within Europe. Over the last few years, it has become evident the managers landscape has changed with many managers who had previously been active in European mid-market now targeting large-cap assets, which has meant a new group of managers has moved in to fill the void.

A key driver of this change appears to be the strong demand for infrastructure allowing managers to raise increasingly large funds. As fund sizes have increased, the managers have migrated to targeting larger and larger deals. Infrastructure investors such as Antin, Ardian, EQT, Macquarie, KKR, iCON had previously attained significant success in the mid-market space. The successful performance of their earlier funds has led to strong demand from investors for their latest offering thus leading to larger fund raises. However, we are of the view that success in the small to mid-market space does not necessarily equate to similar success in the large-cap market.

Another dynamic we have witnessed is managers moving into new and/or adjacent infrastructure sectors (ROSCOs, data centres crematoriums, child care), even though previously a key selling point for those managers was being a specialist in specific sectors (roads, airports, storage, renewables). Drivers of this trend appear to include less opportunities in specific sectors relative to the managers' increasing fund sizes, managers leveraging their presence in the market to broaden their offering, and a need to target riskier sectors to maintain targeted returns for investors. Managers now targeting the mid-market appear to fit into several categories:

- **Sector specialists:** Those with a sector focus in assets that only exist in the mid-market (e.g. renewables, PPPs). Such strategies are forced to target smaller deal sizes, though fund sizes may still increase and in some cases, platforms can be used to create additional scale.
- **Stunted growth:** Those with relatively slow fundraising. This could be a result of poor historical performance, unexceptional team, a strategy or structure that is not widely attractive, or business uncertainty.
- **New market entrants:** Many appear to be start-ups from team members that have left other successful managers, though some are also newer infrastructure teams within larger organisations.
- **EU development funds:** Several managers were incepted by European institutions to fulfil EU objectives rather than on purely commercial grounds, hence, these firms have not aggressively fundraised.

Another notable trend over the medium term has been the rise of local European managers. Traditionally mid-market infrastructure was dominated by the infrastructure arms of large non-European banking or asset management firms, such as Macquarie. However, over time there has been a shift towards more boutique-style firms or local asset management firms developing their own infrastructure offerings.

While difficult to quantify, there does seem to be an increasing level of sophistication amongst European managers. This trend has been ongoing for some time and the shift to strengthen asset management capabilities has continued. The move into new sectors and niches, has also necessitated more capability in deal sourcing, structuring, execution and asset management.

Infrastructure managers are also becoming increasingly multicultural, which may be in part due to the shift to more local European firms, but also a result of managers developing their capabilities. In the early days of the European infrastructure market, firms were quite Anglo-centric, particularly Australian and British, due to their early mover advantage (Macquarie, IFM Investors), but the teams are increasingly representative of the nationalities of key European infrastructure markets. This is valuable due to the local and personal networks required to source deals across the European mid-market space, especially outside of highly competitive auction processes.

While London remains the key hub for infrastructure within Europe, Paris is clearly the main centre in continental Europe and it is growing. However, managers are headquartered widely across Europe and most have multiple offices across different European countries.

We have no doubt the market will continue to evolve over time as demand for European infrastructure continues to remain strong.

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Impact of COVID-19 on European infrastructure

A key topic of discussion with managers was how the COVID-19 pandemic has impacted their assets and investment processes. At a high level, impact on performance was relatively limited due to the mid-market having relatively limited exposure to heavily impacted sectors, particularly airports.

Assets in the transportation sector (or in ancillary sectors) were adversely impacted. Airports, ferries, toll roads, rail cars, fuel pipelines and jet fuel storage suffered from patronage and volume declines, respectively. However, the level of impact depended on the nature of the assets and contractual structure underpinning earnings. For example, UK rail car assets were not materially impacted because of the nature of the leasing arrangements (government lease contracts based on availability), despite significant falls in patronage.

A notable characteristic of most transportation assets (except airports) was a rapid rebound in patronage as the first wave of lock downs in Europe were scaled back. In some cases, toll road traffic rebounded to almost pre-COVID-19 levels within the space of a week.

Operational focus and asset management increased materially across the portfolio. For example, healthcare assets such as hospitals ensured business continuity plans were tested and monitored to prepare for the increase in demand, being on the front line of the pandemic. Other areas of operational focus included ensuring physical access to assets could be maintained to ensure essential services could remain operational despite the lockdowns. This was particularly the case for energy generation assets.

Deal sourcing has continued, with most managers noting a relatively smooth transition to undertaking remote due diligence. However, in most cases, work on potential opportunities had started prior to the pandemic, hence, some face-to-face meetings (for sourcing, relationships and/or due diligence) had already taken place. It was clear that those managers with teams on the ground across Europe had an advantage relative to those managers solely dependent on advisors or those that operated from a London or Paris headquarter only.

ESG

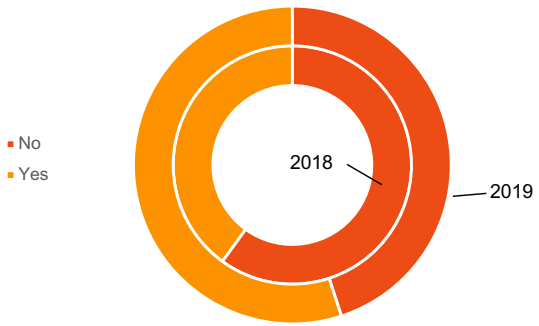
All managers Frontier met with over the course of the virtual trip acknowledged the importance of ESG and sustainability. Typically, larger firms have greater internal ESG capabilities.

Our key observations included:

- All managers were PRI signatories.
- Many managers explicitly considered the alignment of their assets with the UN sustainability development goals.
- European managers' focus on ESG matters seems to be notably higher than the focus of Australian managers (and significantly higher than that of managers in the US).
- Several investment strategies were purely focused on ESG themes such as sustainability, development, renewable energy or energy transition. The managers of these strategies were much more explicitly focussed on ESG matters.
- Almost all managers included renewable energy as one of their target sectors. Indeed, the two sectors with the greatest focus were renewable generation and telecommunications (more specifically optic fibre broadband, which has important social equality benefits).
- Some managers noted their participation in the GRESB infrastructure survey, but most were silent on the matter.

A key factor behind the European managers' greater focus on ESG matters appears to be the ever-increasing focus on ESG and climate change by European institutional investors, especially pension funds. Chart 9 highlights how consideration of ESG risks by European pension funds has increased over past years. Since European infrastructure managers source most of their capital from within Europe, having solid ESG credentials is becoming an increasingly important issue.

Chart 9: Does the scheme consider ESG risks?



Source: Mercer 2019 European asset allocation survey

The increasing focus on ESG by European institutions is being driven by the EU and its ESG related regulation. As an example, the EU regulation on sustainability-related disclosures, which comes into effect on 10 March 2021, aims to enhance transparency regarding the integration of ESG matters into investment decisions and recommendations.

Moreover, EU nations have typically been supportive of renewable energy and this is only set to continue. For example, the European "Green Deal" has enshrined carbon neutrality as its centrepiece, which will require all EU nations to adopt a variety of renewable energy strategies, in order to achieve the required greenhouse gas emission reductions. Hence the opportunity set for environmentally positive infrastructure investments is strong and only likely to increase.

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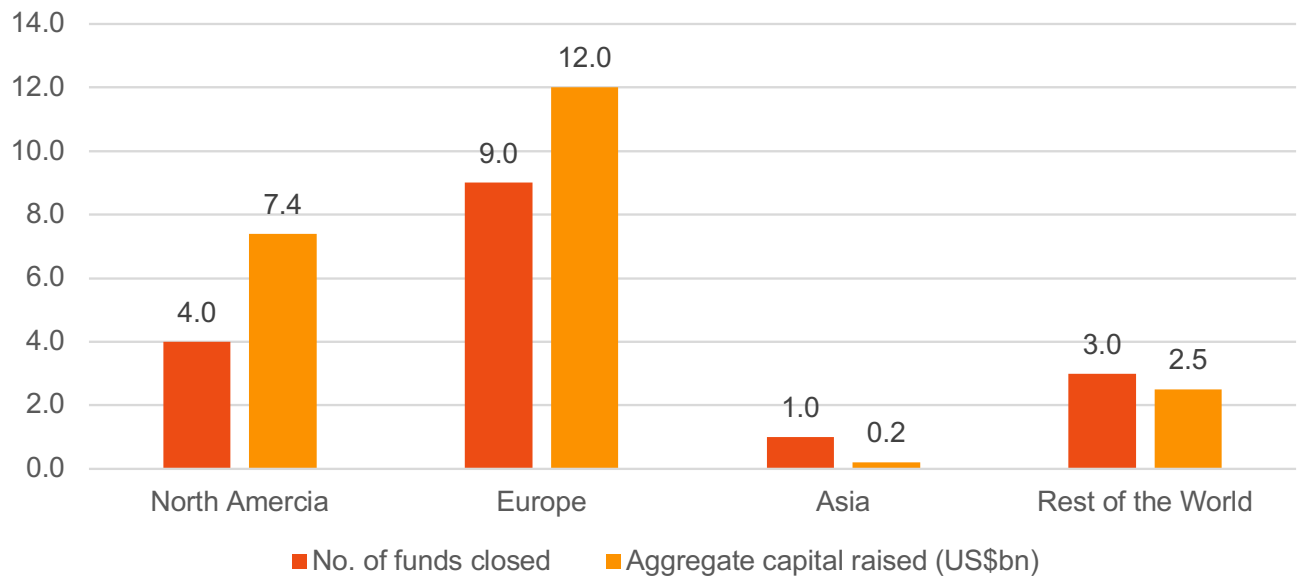
Capital allocation to European infrastructure

With policy certainty and a positive and welcoming investment climate in the EU, there has been no shortage of capital seeking investments in Europe and we believe fund raising will remain strong in the foreseeable future as new infrastructure thematics emerge.

Our discussions with managers indicated that European pension funds and institutions remain the dominant investors, followed by North American pension funds (particularly the Canadian funds). Moreover, there is new interest emerging from Asian investors, particularly Korean and Japanese investors, who are pro-actively allocating capital to core, direct infrastructure opportunities or to European managers for indirect exposure.

Chart 9: Unlisted infrastructure fundraising in Q3 2020



Preqin Pro, 3Q'2020

The final word

In summary, European mid-market infrastructure is an attractive segment for investors considering making a new or another allocation to unlisted infrastructure. It incorporates a large opportunity set in a broad number of sub-sectors, supported by political, structural and regulatory tailwinds. The European "Green Deal" calls for a significant decarbonisation of the European economy through a range of green infrastructure investments including renewable energy generation, transition to clean energy and ubiquitous broadband connectivity.

Our virtual trip highlighted that many local European infrastructure managers have emerged over recent years and become sufficiently sophisticated to help fulfil EU's decarbonisation and infrastructure investment objectives. We believe, EU's policy cohesion and directive will enable European industrial firms and managers to achieve global leadership roles in the creation of green economies and new sectors such as clean hydrogen infrastructure.

We believe, Australian and Asian investors will benefit from an allocation to European mid-market investments to access:

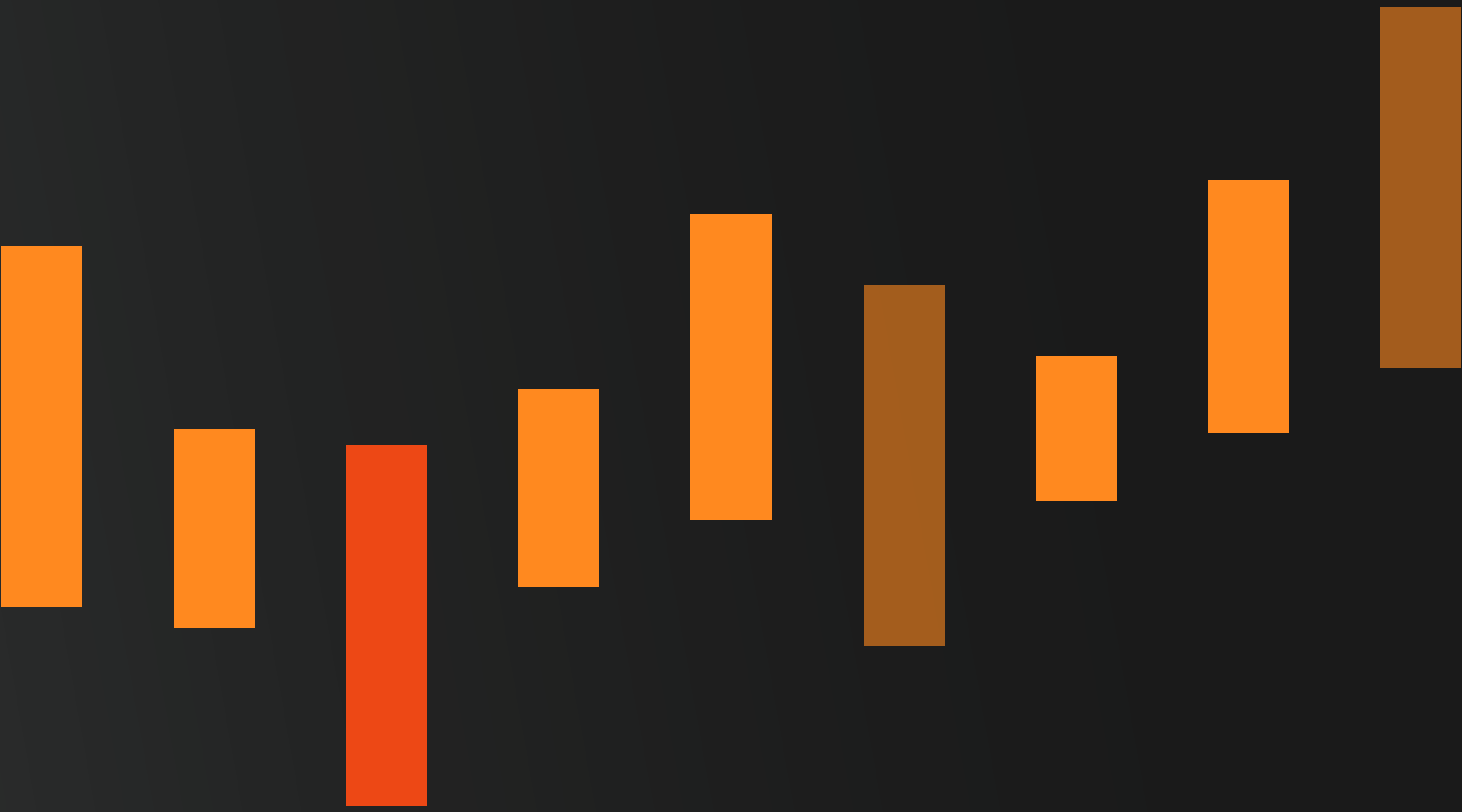
- Diversification from traditional infrastructure sub-sectors (airports, toll roads, mid-stream) common in Asia Pacific.
- Attractive risk-adjusted returns in proven OECD markets.
- A blueprint for infrastructure of the future that Europe's policy setting, and industry will compel Australia and Asia Pacific nations to adopt in the future.

Want to learn more?

Please reach out to Frontier if you have any questions or visit frontieradvisors.com.au for more information.

Appendix: Notable European infrastructure transactions in 2020

Transaction	Country	Sector	Financial close	Acquirer	Vendor	Transaction size (US$m)
Renewable						
Cap Vert Energie (CVE) (50% Stake)	France	Portfolio	Oct-20	Intermediate Capital Group	Cap Vert Energie	NA
FORTE Vannkraft (Formerly OBAS Energi)	Norway	Hydro	Apr-20	Fontavis	OBOS Energi	NA
VSB Group	Germany	Onshore Wind	Apr-20	Partners Group	VSB Energies Nouvelles	NA
Mitsubishi German Offshore Wind Transmission Line	Germany	Offshore Wind	Apr-20	Copenhagen Infrastructure Partners	Mitsubishi	NA
Telecom						
Eurofiber (25% Stake)	Netherlands	Fibre Network	Oct-20	PGGM	Antin Infrastructure	NA
Inwit Joint Venture	Italy	Telecom Towers	Oct-20	Ardian Infrastructure	Telecom Italia	1,903.7
Telefonica Germany Towers	Germany	Telecom Towers	Sep-20	Telxius	Telefonica	1,793.7
Next Generation Data	United Kingdom	Data Centre	Jul-20	Vantage Data Centre UK Bidco Limited	InfraVia	412.6
Arqiva Towers	United Kingdom	Telecom Towers	Jul-20	Cellnex	FSI, Macquarie, CPP Investments, IFM	2,519.2
Deutesche Glasfaser	Germany	Fibre Network	May-20	SWEN Capital Partners	Reggeborgh Group, KKR	3,065.5
Wireless Infrastructure Group (93% Stake)	United Kingdom	Telecom Towers	Mar-20	Brookfield Infrastructure	3i Infrastructure	454.4
Towers of Portugal/ OMTEL (ToP)	Portugal	Telecom Towers	Jan-20	Cellnex	North Haven, Altice, Horizon Equity Partners	896.1
Energy transition						
Electric Vehicle Network EV Portfolio	United Kingdom	Electric Vehicles	Aug-20	SEEIT	Electric Vehicle Network	65.5
Viridor Sale	United Kingdom	Energy from Waste	Jul-20	KKR	Pennon Group	5,290.3
Allego EV Charging Stations Concessions	Belgium	Electric Vehicles	Apr-20	Allego	-	NA
Pod Point	United Kingdom	Electric Vehicles	Feb-20	Pod Point	EDF Renewables, Legal & General Capital	NA



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