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BBVA – extending sustainable finance beyond just dark green

BBVA, a pioneer of sustainable finance, has bolstered its track record with the launch of sustainability advisory services this year. The banking sector will be a crucial enabler for facilitating sustainability-linked goals, BBVA's heads of ESG and structured & project finance advisory tell *IJGlobal*.

A look at BBVA reveals a microcosm of how the world has changed over the last few decades. The bank boasts a number of pioneering achievements, not least becoming the first Spanish financial institution to adopt of the World Bank's Equator Principles in 2004.

"The Equator Principles were really the first step that the banks took towards sustainability. Today it's part of the day to day business of the banks," says Enrique Bofill, Head of Sustainability Advisory at BBVA Corporate & Investment Banking. "Banks can be an important part of the sustainability solution by channelling financial flows to the right companies and to the right projects."

Since the early days of the Equator Principles, BBVA has integrated sustainability into everything it does: from a net zero commitment within its own organisation, to innovation in all of its wholesale banking sustainable products, ranging from bonds to loans to a sustainable framework for its transaction banking solutions, as well as offering more specific products like green derivatives and green FX transactions.

BBVA has been a frontrunner in sustainability for a long time. In 2007, BBVA participated in the world's first green bond issuance. More recently, it provided the first green loan to a utility – a €500m debt facility for Iberdrola – and the first green loan to a corporate in Mexico. The bank was also among the first private lenders to issue its own social bond to alleviate the impact of the Covid-19 crisis, and it is well on track to achieving its pledge of mobilising €100 billion of sustainable finance by 2025. BBVA's aim is to have a sustainable alternative to all of its products in the next few years.

This year, BBVA set up its Global Sustainability Office and launched a specialised sustainability advisory service.

Enrique Bofill

"Banks can be an important part of the sustainability solution by channelling financial flows to the right companies and to the right projects."

The advisory service supports clients on ESG targets, benchmarking KPIs with peer companies, reporting transparency, sustainable finance products and other objectives. "Through the strategic dialogue with our clients, we want to help them improve their sustainability profile and propose clear roadmaps on how to do it," says Bofill.

If the Equator Principles marked the beginning of the sustainable finance journey, the tipping point was much more recent.

The United Nations Framework Convention on Climate Change has been around since 1988, but the inflection point of the sustainability movement didn't come until 2015 – with the launch of the Sustainable Development Goals and the Paris Agreement. At last, social demand, political sentiment and financial clout appeared to be aligned, giving ESG even more momentum.

In December 2018, BBVA joined 4 other international banks in the Katowice commitment – a joint effort to adapt lending portfolios to the Paris Agreement. In turn, the Katowice commitment helped inspire the Principles for Responsible Banking – this time signed by 132 banks – in September 2019.

"If we want to control climate change, then the 2020s will be critical," says Bofill. "Our stakeholders demand action – not only our clients, investors and regulators, but also ourselves as BBVA employees and the rest of the communities where we live."

In recent years, the energy transition has become a tangible part of the global economy, with fossil fuel energy players diversifying into renewables and industrial groups making net zero commitments. Meanwhile, a growing number of funds are integrating sustainability into their investment strategies.

On the financing side, the more rigorous ESG requirements set out by the financial community and regulators have made certain infrastructure and energy projects less eligible for financing – most obviously coal-fired power plants. This has disrupted the traditional business of a number of sponsors, but it is also a challenge for some developing countries that still need to develop reliable and cheap power generation into their energy mix.

But as some sectors are phased out, new opportunities emerge. BBVA's structured

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finance business has benefited from growing demand to introduce sustainability considerations in non-recourse financings. For financial advisers, alongside technical and environmental consultants, this also requires devoting more time to the preparation of ESG aspects in view of increasingly demanding lender due diligence processes.

"A relevant aspect in the credit chain and due diligence process with respect to ESG considerations, is still driven by the Equator Principles guidelines," says Javier Fidalgo, Head of Structured Finance & Project Finance Advisory.

"This has been getting more and more sophisticated since 2004. Today there are a number of additional considerations with respect to the Paris Agreement that are progressively being integrated, but right now in infrastructure financing this is the most demanding aspect in top of any institutional policy that may apply to some sectors (e.g. coal)."

From a corporate strategy and investor perspective, ESG is a risk management tool, and there is a growing body of research that finds ESG securities and indexes can outperform the market. While the jury is still out on this "greenium," it is easy to see the argument that proper ESG risk management helps future-proof a business.

Going forward, sustainability principles applied to structured financing solutions will also need to be extended beyond just the obvious sectors – and from green sectors to social sectors. "The starting point for sustainable finance was to focus on renewable energy projects, but BBVA is broadening its approach to public transport systems, hospitals and social infrastructure," says Fidalgo.

"We are currently running a social and green certification process under our advisory assignment for the refinancing of a hospital in Iberia," says Fidalgo. "And sustainability represents an increasing number of opportunities, with the market volume for sustainable-labelled structured bonds and loans only set to grow – not only in Europe, but globally as other countries catch up."


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While BBVA's European clients tend to be more advanced in terms of ESG adoption – partly in anticipation of the implementation of the EU's sustainable finance regulations next year – the degree of sophistication in each region varies from company to company.

Outside of Europe, BBVA's core business includes Mexico, Turkey, the US, Colombia, Peru and Argentina. In Latin America, some of BBVA's clients are taking their first steps in ESG awareness, transparency and targets, while other clients – especially large multinationals that are already experts in ESG – are seeking to increase their use of sustainable finance products. Another regional difference is that there is more of a social angle to ESG initiatives in Mexico and South America, whereas Europe's focus tends to be on climate change.

"Our wholesale clients have varying levels of awareness and sophistication when it comes to sustainability. We want to partner with all of our clients in their transition towards a more sustainable future – not just the greener ones," says Bofill.

"Some clients are worried about what they are going to gain from these products. They are very focused on pricing and one of the things that we try to convince them of is that, while pricing is very important, it is not the only variable in decision-making because we think the use of sustainable finance should be coherent with your business strategy."

Looking to the future, BBVA emphasises the importance of transition strategies and – in addition to environmental concerns – the growing role of social matters. The bank anticipates more standardisation – in ratings, reporting and issuing principles – as well as the development of new types of ESG securities, such Green IPOs.

The future also holds a shift in focus from dark green investments to other colours. "We think the solution to the climate change problem comes from brown companies that are seeking to transition to a more sustainable economy," says Bofill.

BBVA's ESG Track Record

- **2004** – first Spanish financial entity to sign Equator Principles
- **2006** – signed Principles for Responsible Investment
- **2014** – signed Green Bond Principles
- **2016** – led first green bond transaction for Iberdrola
- **2017** – signed first bilateral green loan for a utility globally with Iberdrola
- **2018** – among the first banks to publish sustainability pledge
- **2018** – BBVA joined 4 other international banks in the Katowice commitment
- **2019** – signed the Principles for Responsible Banking with 131 other banks
- **2020** – mobilised €40 billion of sustainable finance to date; adopted sustainability as one of the 6 strategic priorities of BBVA; committed to being carbon neutral at the end of this year; created a Global Sustainability Office
- **2025** – mobilising €100 billion of sustainable finance ■


We want to partner with all of our clients in their transition towards a more sustainable future

The ESG policy tsunami – making landfall 2021

If sustainable investing reached a critical mass in 2020, then the movement shows no sign of slowing in 2021. Alongside growing investor enthusiasm, a new driving force will enter the picture next year – the EU's incoming sustainability reporting rules, writes *IJGlobal* Funds Editor **Ott Tammik**

Institutional investors – notably publicly-backed pension funds – are more vocal than ever before about their commitment to sustainability. And they are being heard – given the vast amounts of capital they supply to Wall Street and the City. Environmental, social and governance (ESG) issues have become a prerequisite for investing, and in no year has that been clearer than in 2020.

"In our experience, in terms of the intensity of interest from investors and also the requirement of investors to evidence ESG performance, I'd say 2020 bears no real comparison to 2019 or 2018," says Jonathan Maxwell, chief executive and founder of London-based Sustainable Development Capital LLP (SDCL).

"There would be plenty of investors with us that could not, and would not, have invested had it not been an ESG-compliant proposition. And that is completely different from the world two years ago."

While 2020 was also the year of Covid-19 and Black Lives Matter, the flow of sustainability-related business news has been hard to keep up with.

It's only scratching the surface to note GE's exit from the new-build coal-fired power plant market, Brookfield's appointment of former Bank of England governor Mark Carney as head of ESG, China's commitment to become net zero by 2060, Tesla's incredible stock price rally, and the record number of sustainability funds that have launched this year.

Looking ahead into the new year, having a Democrat in the White House is likely to bode well for the sustainability cause, perhaps bringing the US back to the Paris Agreement. This would stand in stark contrast with recent US policy positions – not least the Securities and Exchange Commission's rejection of formal ESG guidelines.

In the meantime, the EU has stepped in to become the global leader on sustainability, with far-reaching implications even for non-

EU companies and financial firms doing business in the EU. First outlined in 2018, the EU's Sustainable Finance Action Plan will require companies and fund managers to begin filing detailed disclosures, starting in 2021, about their business's impact on the environment.

Five years on from the Paris Agreement and the UN Sustainable Development Goals, it appears social, political and financial interests are broadly in alignment.

Whereas the 2010s were the decade of renewables, the 2020s are poised to see sustainability initiatives extended across a wide range of other sectors, such as electric vehicles, energy efficiency and hydrogen. And if one considers that after all the huge amounts of investment in renewables, wind and solar still only make up just 9% of global power generation – and moreover that power generation accounts for just a fraction of carbon emissions – then the incredible scale of this investment universe starts to become clear.

Legislating sustainability

The Sustainable Finance Action Plan, which currently consists of three major regulations, will require financial firms and corporations to submit regular reports about their impact on the environment and climate change.

The new EU rules are part of the union's strategy for achieving the UN Sustainable Development Goals and the Paris Agreement.

"Global emissions must drop by 50% over the next decade for the world to have a chance of staying at 1.5 degrees of global warming and thus avoid the most catastrophic consequences of climate change," EU documents say.

Under the new regulations, fund managers will need to begin making sustainability disclosures, annual reports, and both organizational and portfolio-level evaluations based on new ESG criteria called the EU taxonomy.

The core components of the Sustainable Finance Action Plan include:

- Sustainable Financial Disclosure Regulation (SFDR) – requires investment firms to disclose sustainability and risk aspects of their investments
- Non-Financial Reporting Directive (NFRD) – requires corporations to publish data about their impact on ESG factors
- Taxonomy Regulation – provides a sustainability classification system for investment firms
- additional reforms such as an EU Green Bond Standard and a Financial Services Ecolabel

Several years in the making, this huge regulatory undertaking will be rolled out over the course of 2021.

The disclosure regulation will be the first to be implemented, in March 2021. It will require fund managers to determine the extent to which sustainability objectives fit into their strategy. The more important sustainability is to a fund's strategy, the more thorough the disclosures need to be. Products specifically marketed as sustainable funds will face the strictest requirements.

"Fund and asset managers are busy recategorizing their products to determine which bucket each one falls into under the disclosure regulation," says Vanessa Havard-Williams, global head of environment and climate change at Linklaters.

The taxonomy rules, which are due to be implemented in late 2021, will also include sector-specific thresholds: for instance, sustainably produced power is defined as below 100 grams of emissions per kilowatt-hour, whereas in the transport sector it's 50 grams per passenger kilometer (reducing to zero by 2025). The detailed evaluations will even consider factors such as the rare earth metals that need to be mined for wind turbine manufacturing.

With the initial focus being environmental sustainability, in 2022 the EU will also introduce social and governance standards.

Ultimately, the aim of the regulations is to bring consistency to the ESG space – where hundreds of different methodologies have been developed in recent years – and to cut down on greenwashing.

Although the Sustainable Finance Action Plan will not force companies to become more sustainability-minded, it will introduce a whole new level of transparency, giving investors a much clearer picture of the companies and funds that they invest in.

The EU is not the first to adopt such measures – that honour goes to New Zealand – and others such as the UK and Canada are developing their own sustainable finance regulations. But given the EU's reputation as a regulatory superpower, its rules are bound to have global implications, as they have had for data privacy and telecoms standards.

Asset managers prepare for new era

A few years ago, it was not at all clear that the EU's new sustainability proposals would be successfully implemented. There have been disagreements over the pace of implementation, the complexity of the reporting requirements, and the classification of certain technologies, such as natural gas. Over 100 respondents to a EU policy consultation that is currently under way oppose a proposal to create a separate taxonomy for pollution-linked market activities.

But Europe's private sector appears, on the face of it, to be broadly supportive of the general thrust of the regulations.

This is reflected in the level of voluntary reporting that companies are undertaking and initiatives such as the Sustainable Development Investments Asset Owner Platform, which launched last year with the backing of pension fund managers APG, PGGM, AustralianSuper and BCIMC.

From its origins in morally-driven investment strategies that avoided "sin stocks", ESG has filtered into the more opaque private market, where ESG considerations are now seen as critical for mitigating risk and even boosting returns.

"If [private equity firms] haven't built environmental, social and governance standards into their investment strategies already, GPs are fielding uncomfortable calls from their limited partners and employees asking why not," a report by Bain says.

One organization involved in the expert committee helping to develop the new EU regulations is Principles for Responsible Investing, a UN-backed member and grant-funded organisation that represents more than 3,000 investors. Will Martindale, PRI's director of policy and research, says the investment industry has been receptive to the Sustainable Finance Action Plan.

"There is an acknowledgement within the investment industry that we do need to have a common language in how we understand what's environmentally-sustainable and what's not," says Martindale.

"If an investor is very new to the taxonomy process, I think it's understandable that they consider it to be somewhat complex, but a recent exercise by PRI signatories demonstrates that the taxonomy framework can be operationalised, and offer important insights for investors beginning their taxonomy preparation."

For investors, the implications of the regulation will vary greatly depending on a fund's size, portfolio diversity and objectives.

Yet even fund managers with sustainability objectives say they can no longer take investor demands for disclosures on ESG metrics for granted.

Infrastructure – a natural fit

"Infrastructure has probably the most direct impact on the environment, be it energy or highway or an airport," says Gordon Bajnai, the global head of infrastructure of Campbell Lutyens, a placement agent. "By its nature, it also always has some kind of cooperation with the public sector and typically services broad public demand."

Bajnai says that when Covid-19 hit global markets in early 2020, investors feared that ESG's significance could decline as businesses fight for survival and refocus priorities. But in a recent industry survey by Campbell Lutyens, 68% of limited partners said that their sustainable investing allocations would increase in the medium term – supporting the conclusion that the crisis has accelerated capital flows into ESG investments.

In the recent GRESB rankings, which evaluate real asset investors based on their ESG performance, Arcus Infrastructure Partners was the highest ranked fund manager in the infrastructure sector.

"Infrastructure is uniquely placed because it's at the heart of everyone's day-to-day life," says Neil Krawitz, a partner with Arcus Infrastructure Partners. "And because of the significant scale of the business, it's possible to deploy significant amounts of capital as a driver of sustainability. Not all forms of private equity have that ability to influence huge change."

"If an investor is very new to the taxonomy process, I think it's understandable that they consider it to be somewhat complex."

Will Martindale, PRI's director of policy and research

Arcus' current investment portfolio includes fibre, smart meters, cold storage and logistics companies – all of which, the firm argues, have qualities that are essential to sustainability.

While the most straightforward green investment target is renewables – the "low-hanging fruit" of sustainable investing – the insatiable appetite for renewable energy assets will inevitably lead to prices overheating, several investors were quick to point out. But the sustainability mindset, including social and governance factors, needs to move beyond just the power sector, they say.

On the other end of the spectrum, those in the fossil fuel business face mounting pressure. Export finance agencies and commercial lenders are increasingly turning away from the oil and gas sector. New coal-fired power projects are dead in Europe. Some market participants are more keen than others to support natural gas – as a cheap and relatively clean transitional energy source.

"Clearly there are certain assets that could potentially deliver declining returns as we move forward and as trends evolve in the marketplace, you could get yourself invested into a stranded asset," says Ted Frith, COO of GLIL, an infrastructure investment platform created by the Greater Manchester Pension Fund and the London Pensions Fund Authority.

"So on one hand it's about avoiding negative impact on your returns and on the other hand it's also looking at it from a much more positive light and these trends that we're seeing in the world are providing new opportunities to pension funds and other investors. EV charging points or renewable energy – that just wasn't there 20 years ago. We are also concerned about making a positive contribution to the social fabric of the country as a whole." ■

The global **ESG scrabble**

The challenge of ESG and how the market is delivering change – *IJGlobal* Asia Pacific senior reporter **Dave Doré** delves into approaches being taken and how the process yields value

A survey released in January 2020 by Macquarie Infrastructure and Real Assets (MIRA) reveals that investors value the benefits of environmental, social and governance (ESG) integration in investment decision-making. Most aim to bring more resources to ESG.

Sustainability consultant ERM's survey of private equity investors, released in October 2020, also shows that ESG considerations offer value creation and investment opportunities during the next 3-5 years.

However, many institutional investors and asset managers wrestle with how to initiate and sustain an ESG programme in asset allocation, portfolio management and securities selection.

IJGlobal spoke with infrastructure investors about their ESG policies, strategies and practices in the investment cycle – from fund structuring to fundraising and acquisition to divestment.

Each has a responsible investment policy with a responsible investment team that interacts regularly with transaction and asset management teams. Each insists that incorporating sustainability into resource allocation and decision-making is a journey.

Self-reflection is a beautiful thing

Chris Leslie, MIRA's global head of sustainability and executive chair for MIRA Americas, draws on psychology's 4 stages of competence to frame the learning process about the skill and value of ESG integration.

"We take an integrated approach to ESG and sustainability," he says. "The first stage of ESG integration – unconscious incompetence – is when you don't know what you don't know and you wonder how it all works.

"Think of driving a car. We start out terrible yet we don't even know we're terrible. Compare that to the last stage – unconscious competence – where we get in the car and just drive, not really thinking about the clutch as we shift gears."

"We have a good sense of what we need to do and how to do it," confides MIRA's New York-based global head of sustainability. "But we know we are on a journey and haven't done it all yet. The task lies in continuing to educate our people on how to do things and the opportunities inherent in sustainability. We have been managing ESG risks for many years and it's through understanding the risks that these opportunities become clear."

Linking macro with micro

A trend among investors is to have responsible investment policies at the asset-class level, including public equities, passive investing and infrastructure. Infrastructure investors require processes to identify ESG trends at the sector (oil and gas, transport, power, water, etc) and geographical levels. The motivation is to assess the scale and scope of the ESG risks and opportunities for quicker, more effective decision-making. In turn, the evaluation of micro and macro ESG issues will drive the innovation of

Chris Leslie

"The first stage of ESG integration – unconscious incompetence – is when you don't know what you don't know and you wonder how it all works."

the investor's business model, product development and value proposition.

"At BlackRock Alternatives Investors – our alternatives platform – we continue to remain focused on developing ESG tools, processes and procedures to ensure our approach to

ESG integration is a journey in 4 stages:

Unconscious incompetence
- Mistaken intuition
- Question process of ESG integration and its value in investment decision-making

Conscious incompetence
- Mistaken analysis
- Appreciate the process of ESG integration and its value but just not skilled at it

Conscious incompetence
- Correct analysis
- Skilled integration of ESG in investing but requires high levels of concentration and effort

Unconscious incompetence
- Correct intuition
- ESG integration becomes second nature and can be performed while undertaking others task

ESG is embedded in our business and we have a strong governance framework around it," says Teresa O'Flynn, managing director and global head of sustainable investing for BlackRock Alternatives Investors.

When Jon Collinge joined alternative asset management HRL Morrison & Co in April 2018, the firm didn't have a dedicated sustainability team. While the firm had long been implicitly considering ESG issues in its investment decision-making, client expectations about ESG had matured such that the entire investment cycle was under scrutiny. The heightened scrutiny necessitated a more structured sustainability programme.

Twelve years at a Sydney-based real asset developer, including managing sustainability of the investment management business, taught the Morrison & Co sustainability director to envision fund-specific sustainability strategies. "The more generic you are with your sustainability ambitions, the less likely you will get engagement," says Collinge. "If I pitch a generic sustainability programme to fund managers, without even touching on their specific assets, the portfolio managers would eventually realise they don't have to commit to anything."

Collinge's most important early win with this approach was gaining approval in December 2018 by Utilities Trust of Australia (UTA) trustee board for its sustainability strategy, including goals, objectives and targets. He adds, "Nobody likes a target more than a fund manager, especially when we can use those targets in KPIs connected to remuneration."

In comparison, each investment strategy including infrastructure has its own ESG policy and integration statement at BlackRock, which has developed a comprehensive ESG toolkit, including detailed ESG due diligence questionnaires. A senior investment professional drives the ESG agenda within each business and ensures it is part of the investment approval.

O'Flynn adds: "We also include ESG risk dashboards in our portfolio reviews with our risk team and chief investment officer portfolio review process."

Filling the coffers

The dynamic between allocators and infrastructure investment managers has intensified during the past 5 to 10 years. Many pension funds in Australasia and Europe and some in the US and Asia have long been asking whether potential general partners considered ESG factors in investment decision-making. The manager, most times, would dutifully respond, "Yes, most definitely" and the ESG box would be ticked.

"Now I'm having 2-hour deep dives to explain our approach," says Mary Nicholson of MIRA, which manages Macquarie Asia Infrastructure Fund 2 – the 2020 GRESB infrastructure leader of Asia and Oceania and Macquarie European Infrastructure Fund 4 – the most improved European fund. "There's been a steady evolution. This movement began in Europe and Australia, but we're seeing real change in Asia and the Americas as well."

MIRA's London-based head of responsible investment remarks: "Investors are increasingly interested in case studies about how project companies have implemented ESG strategies and improved their performance. What once used to be a quick validation that we considered ESG as part of our investment approach then evolved into questions about whether or not we participated in ESG benchmarks like GRESB. Now investors want us to walk them through the details of a GRESB report about a particular sector, which represents a huge change in the level of interest."

GRESB is an investor-led rating organisation specialising in real assets. It rates real estate and infrastructure funds and their underlying assets on ESG performance. GRESB management and Summit Partners announced in November (2020) that they were collaborating to acquire GRESB from its US parent Green Business Certification Incorporated (GBCI).

"Super funds and other institutional investors have even commented that in our fundraising pitch the ESG slides should be further forward in the slide deck," adds Collinge. "However, some LPs still don't consider [ESG] which is surprising."

Morrison & Co Growth Infrastructure Fund in August (2020) reached its third and final close with A$580 million ($416 million). "ESG was a hot topic [during the fundraising]," comments Collinge. LPs were concerned with climate change, health and safety, and diversity and inclusion, especially gender, notes the sustainability director.

Acquiring the asset

Infrastructure investors have evolved more sophistication in ESG screening and evaluating the opportunity set, conducting due diligence and closing the transaction.

Regardless of the asset class, discerning which ESG issues are material to an asset's value is more art than science today. A touchstone of ESG integration is standardising the collection, analysis and reporting of material ESG data. While initiatives to bring a consistent approach to ESG data have proliferated, infrastructure investors must prioritise some over others.

Investors are eyeing the Task Force on Climate-Related Financial Disclosures (TCFD), created in 2015 by the Financial Stability Board. TCFD is developing


Teresa O'Flynn

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Jon Collinge

"The more generic you are with your sustainability ambitions, the less likely you will get engagement."

consistent climate-related financial risk disclosures for use by companies, banks and investors in providing information to stakeholders.

"Access to ESG data is often cited as a hurdle in private markets investing," says O'Flynn. "I think the issue is more ESG data has to be manufactured in private markets, including in infrastructure. It's an intensive raw data gathering exercise."

Morrison & Co's Collinge estimates that ESG integration in the infrastructure asset class is generally 5 to 7 years behind the use of ESG factors in real estate investment. He says part of the reason is that real estate across a limited number of subsectors, including industrial, office, commercial, residential and mixed, is much more comparable than infrastructure. "Your airport is not anywhere near the same as the airport next door," Collinge says.

He emphasizes Australia's history of sustainability ratings in real estate, dating back to the mid- to late-1990s. He credits the simple combination of sustainability ratings and rankings as instrumental to motivate decision-makers to change material business practices. As the early systems evolved, the "competitive spirit" of chief executives drove a desire to climb the rankings.

Jonathan Waite, responsible investment manager at APG Asset Management Asia, agrees that the real estate asset class offers a relatively easier pathway to ESG integration compared to infrastructure. The more homogenous nature of real estate assets and the large number of assets allows for more robust data analysis.

"While someone in the [real estate] industry would likely say the difference between a logistics centre, commercial mall and residential block complicates ESG integration," Hong Kong-based Waite says, "the ESG issues across those assets are quite similar."

The breadth of coverage by GRESB supports the notion that infrastructure generally lags real estate in its uptake on ESG. The investor-led ESG rating organisation specialising in real assets analysed responses from 118 infrastructure funds, 426 infrastructure assets and 1,354 facilities during its 2020 cycle. In comparison, GRESB assessed 1,229 portfolios worth more than $4.8 trillion assets under management.

Waite, however, emphasises the comparison with real estate can be overwrought. The amount of ESG data in infrastructure may never approach that of real estate. "Look around Hong Kong and count the number of buildings. Then think about the number of investable infrastructure assets in comparison."

Technology may help bridge aspirations with reality. "We believe that technology has an important role to play in helping extract and report ESG data in an efficient way for private markets including infrastructure investing," notes O'Flynn, who has been with BlackRock for nearly a decade. "This is something we are very focused on via our eFront platform."

Conducting due diligence

APG's responsible investment team has a role across the infrastructure investment cycle. Strategic and tactical discussions about ESG routinely happen between Hans-Martin Aerts, managing director and head of infrastructure investments for APG Asia Pacific, and APAC head of responsible investment and governance YK Park, along with Waite, who is responsible for private markets.

Broader ESG issues may weigh heavier early in the cycle as portfolio managers gather information about the investment landscape. As the deal team's pipeline narrows, a strategic conversation about climate change may evolve into a balanced discussion about the physical risks of climate change in a particular location and climate change's impact on a subsector's business model.

"What might the long-term impact of autonomous or electric vehicles be on toll ways?" asks Waite. "The new vehicles will still drive on the same road as today's cars."

While conducting due diligence on a potential investment, APG undertakes an ESG assessment. Waite notes 2 important decisions. First, the responsible investment team in coordination with the deal team determines the scope of the assessment. Not all ESG issues materially affect an infrastructure asset's long-term performance and valuation. Here materiality is the driving factor. Second, the team chooses whether to manage and execute the ESG study internally or externally.

Closing the deal

Valuation is the confluence of narratives and numbers. Sometimes buyers have heard the story and like what they hear – so much so that it sends a target company's offer price into the stratosphere. Infrastructure investors must decide the degree to which a target company's anticipated ESG performance is already embedded in the offer price. In many cases, strong ESG performers epitomise the canard that a great company isn't always a great investment.

"There's been a steady evolution. This movement began in Europe and Australia, but we're seeing real change in Asia and the Americas as well."

A new climate change investment framework by Asian Infrastructure Investment Bank (AIIB) and Amundi allows investors to measure issuer performance against the Paris Agreement's 3 objectives. Investors can systematically acquire equity interest in A-list issuers, or those that are already performing well on all 3 objectives, and B-list issuers, or those that are moving in the right direction but are not yet A-list issuers. The framework encourages the integration of climate change risks and opportunities into business practices by targeting the engagement of B-List issuers to help them transition to A-List credentials.

APG's responsible investment team either approves or disapproves the investment. "We do have the power to disapprove if the investment doesn't meet our criteria," says Waite. The Dutch pension fund manager identifies conditions to close and recommendations to enhance ESG strategy, management and performance. Those conditions and recommendations form the tactical backbone of APG's monitoring of an engagement plan with the new portfolio company.

Being a good steward

Driven by demands of clients, general partners are increasingly requiring portfolio companies to collect and report on ESG strategy and performance.

BlackRock Alternative Investors embeds ESG data collection into the underlying asset management agreements to manage and track ESG performance. "ESG reporting is a key element of our onward reporting to our clients," remarks O'Flynn. "Overall, our approach can be broadly summarised under a 3-part framework: transparency; investment process or the how; and insights, that is ESG data or the what."

APG shares a similar approach with portfolio companies.

"ESG integration is not about making judgements across all infrastructure but about comparing the ESG risks and opportunities among comparable facilities or assets," says Waite. "The granular details matter and we're always looking at a comparison of investments we've already held, often using GRESB data."

He adds: "A cornerstone of our conditions is to get our portfolio companies to report their ESG strategy and performance or at least have a plan to report within 12 to 18 months."

Although infrastructure funds may hold securities at the corporate- and project company-level upwards of 10 or more years, responsible investment teams hit the ground running. Many have adopted the M&A industry's practice of developing 100-day implementation plans for portfolio companies.

Nicholson and her colleagues work with the new portfolio company, such as hyperscale data centre platform AirTrunk, to achieve early wins that are often identified during due diligence. Beyond this initial transition period, the responsible investment team works directly with portfolio companies to embed practice and share sustainability initiatives among peers.

MIRA's Leslie, who has been with Macquarie for nearly 3 decades, highlights the opportunity assets like data centres have to improve their performance on energy and water efficiency. "Many of our existing assets in the sector utilise renewable energy and deploy methods that massively reduce the amount of water in the cooling process," he says. "We share those technologies among our businesses."

The executive chairman of MIRA Americas also underscores the knowledge sharing that is occurring within the industry about the circular economy. Apple is working on better designing the iPhone's end-of-life. In a similar vein, MIRA portfolio companies in the roads subsector are drawing from experiences in India and France where other MIRA investments are recycling asphalt, says Leslie.

> *"We aim to become a lot more data driven about the physical risks of climate change and their impact on our current and future holdings."*
>
> **Jonathan Waite, responsible investment manager at APG Asset Management Asia**

Strategically, APG like many investors also has a series of evolving engagement themes across asset classes. Waite mentions working with portfolio companies to enhance their understanding and management of climate risk and ESG data collection, often advocating the deployment of an environmental and social management system at portfolio companies.

Goodbyes are never easy

A fortunate vendor works with a portfolio company to implement fully their ESG policies, strategies and plans. A buyer across the table values the target company's executed sustainability programme and assesses that either the growth of cash flow will accelerate, cost of capital will decrease or asset utilisation will improve. Since ESG initiatives may take years to achieve results, the target company normally has not fully executed its plans when it goes on the auction block.

Responsible investment teams are increasingly contributing to the target company's full potential plan. They can engage the board to approve the sustainability programme and implementation plan to attract investors that incorporate ESG considerations. Teams can help M&A advisers understand how to position target companies in terms of its ESG evolution and anticipated outperformance.

Brookfield owns Dalrymple Bay Infrastructure (DBI) – the world's largest metallurgical coal export terminal, handling 15% of global metallurgical coal in 2019. The Canadian asset manager raised A$656 million from an IPO in December (2020), valuing DBI at A$1.28 billion. Brookfield retained 49% of the company, which began trading on ASX from 10 December. The IPO prospectus includes a 7-page section on ESG. The section comprises DBI's ESG and governance frameworks, sustainability strategy, and performance measures about worker safety and greenhouse gas emissions.

"Although in many cases we may not have gone as far as we might have wanted to during our period of ownership, we are positioning assets for sale by highlighting ESG opportunities in progress that could be realised by the purchaser," says Leslie. "Often among those, for example, is a change in management culture. We need to educate potential purchasers on those types of value-add opportunities, which may not be immediately obvious to them."

Moving forward

ERM's recommendations for private equity investors to realise sustainability's potential are:

- setting a strategic vision and fostering a culture that sees ESG as a significant value creation opportunity
- moving due diligence from compliance to ESG best practice to generate superior returns
- ensuring companies become ESG strong during ownership to benefit from a higher exit multiple
- establishing the firm's ESG investment strategy and process for identifying ESG market trends

MIRA's Nicholson expects that, in addition to decarbonisation and the energy transition, the nexus between infrastructure and the Sustainable Development Goals (SDGs) will climb public and private sector agendas.

O'Flynn anticipates the standardisation of ESG information and disclosure in public and private markets to accelerate. The deadline is 31 December (2020) to respond to the IFRS Foundation's public consultation on the role it might play in the convergence of globally recognised sustainability reporting.

"In the meantime, we expect companies to accelerate their efforts to publish sustainability data and contextual information under existing frameworks and standards," says the BlackRock managing director.

Climate change will continue to be an important focus for APG. The investment team anticipates improving their analytical capacities of climate risk. Waite adds: "We aim to become a lot more data driven about the physical risks of climate change and their impact on our current and future holdings."

Infrastructure investors are also publicly consulting on TCFD until 27 January 2021. The task force aims to understand the forward-looking climate data that asset owners, investment managers, banks and other financial institutions disclose and use. ■

Energy Efficiency: have your cake and eat it

IJGlobal funds reporter **Arran Brown** delves into the opportunity and challenges ahead for energy efficiency as it builds momentum as an asset class

Imagine extreme heatwaves at least once every 5 years blighting billions; severe drought and water scarcity threatening hundreds of millions more people; a 50% reduction in the geographic range of flora and fauna; fires, floods, extreme weather; two-thirds of the world's coastlines affected by elevated sea levels; oceanic dead zones unable to support life; hits to GDP, food security, and soaring disease rates…

Such is the legacy of failing to keep global temperature levels below 2 degrees according to the Intergovernmental Panel on Climate Change.

And yet there is unlikely salvation from all that catastrophe in the form of a lightbulb. Hyperbole aside, replacing traditional lightbulbs with efficient ones illustrates the outsized effectiveness energy efficiency (EE) measures can have: a 70-90% reduction in power consumption.

Energy efficiency is the Swiss Army Knife of the energy transition, the multitool to tackle climate catastrophe. There are myriad methods for achieving energy efficiency, but one vital result: a drop in CO2, the gas responsible for rising temperatures.

Moreover, such measures can be implemented for profit. Investment in the sector to date has been the preserve of just a handful of dedicated players. To illustrate, the energy efficiency fund universe saw a proportionally-significant expansion with the launch of 2 new strategies in November 2020.

Still rather few considering the opportunity is enormous. A sleeping great, green giant with an appetite for many billions of investment every year.

Projections by the International Energy Agency show that capital backing energy efficiency will match then overtake renewables spending by 2030. Almost $1 trillion is forecast for the sector by 2040, supporting almost 60 million jobs.

Returns on energy efficiency projects are in line with renewables investments – high single-digits are achievable.

Managers and institutional investors have the opportunity to ride the wave of a significant decade of focus in this field. Respectable returns and a boost to ESG credentials are the prize for partnering to address the deficiency in energy efficiency.

Applications

With energy efficiency, more is less – energy efficiency measures allow for the same or better performance with less energy consumption.

It is for that reason that the International Energy Agency described gains in energy efficiency as the 'first fuel' of a sustainable global energy system, i.e. as source of energy in its own right.

Another critical advantage of such measures is that the reduction in net energy consumption allows for an increase in the proportion of energy supplied by renewable energy sources and storage systems, further eliminating recourse to carbon-intensive energy.

Measures also benefits energy security. Jonathan Maxwell, chief executive and founder of Sustainable Development Capital, says: "We keep getting close to the maximum levels of generation to meet supply in the UK, but there is grid instability. The increasing penetration of renewables, which we all celebrate, creates a degree of volatility of supply on the grid. So resilience becomes a bigger topic."

Consumers of energy, be they businesses or households, also benefit from implementing EE technologies through reductions in overall energy bills.

What, then, constitutes an energy efficiency measure?

There are numerous technologies and techniques that address energy consumption where there is excess energy waste whether at the point of production or consumption.

Buildings account for 40% of primary energy consumption in the EU and US, and as such are major targets for reducing consumption and emissions.

Heating and cooling structures will be a significant area of efficiency drives as billions more in emerging and developing economies increase demand for indoor climate control.

Improvements to building envelopes (walls, roof, windows e.g.) can be made and include the addition of insulating materials, and 'tightening' to reduce air inflows and outflows, thereby lowering heating and cooling costs.

Heat pumps may be installed – these are an alternative heating method which works by transferring heat from cooler to warmer environments with a far higher degree of efficiency to electric resistance heating.

These form part of wider opportunities across mechanical systems in buildings: the installation of efficient heating, ventilating, and air condition (HVAC) systems by retrofit or at the point of construction.

Buildings can benefit in other ways. Lighting is a favourite example: a simple exchange of incandescent bulbs for LED lamps can reduce energy consumption enormously. Outdoor lighting can benefit too.

In industrial, business, and healthcare settings, implementation of cogeneration or combined heat and power engines can provide heat and power simultaneously on-site. Trigeneration models provide cooling in addition.

Such a measure is an example of decentralised energy, an essential component of the energy efficiency strategy. Some fuels in centralised power stations produce efficiency as low as 31% (average world average efficiency for coal-fired stations according to Energie-Fakten).

Moreover, the transmission and distribution of power from centralised power sources leads to energy losses in the single digits (one estimate is 6% and 4% respectively lost through heat).

Decentralised energy, then, can reduce wastage by producing energy needs on site with cleaner fuels such as gas or biomass, and use waste heat from power generation for heating.

Another decentralised energy technique is the installation of solar panels on rooftops wherefrom energy can supply the building.

Franco Hauri

"Building a pipeline really comes down to selecting and building relationships with partners."

Heat networks such as district heating and cooling are another effective method of boosting efficiency, particularly when combined with power generation with high levels of heat wastage.

Efficiency in transport following the anticipated growth of electric vehicle adoption and wider electrification of transport and hydrogen fuels produced through renewables will be key themes in years to come.

It is patent from the wide range of energy efficiency options that to implement them all would be costly. Homeowners, businesses, and other entities can scarcely countenance even one. It is here the investment opportunity lies.

Players

There are two principal strategies for investment in energy efficiency: acquisition and refinancing of existing, yielding assets and financing of new efficiency projects backed by long-term contracts.

This, along with the diversity of energy efficiency technologies, creates scope for a varied ecosystem of strategies.

To date there are two LSE listed vehicles: the SDCL Energy Efficiency Trust (SEEIT) launched in 2018, and the Triple Point Energy Efficiency Infrastructure Company which launched in November 2020.

The private fund side is dispersed across Europe.

Since 2011, the European Energy Efficiency Fund (EEEF) has fostered energy efficiency and renewables through public-private partnerships within the EU with large sponsors like the EIB, European Commission and Cassa Depositi e Prestiti (CDP). It has provided debt and equity, to municipal, regional, and private partners such as utilities and energy service companies (ESCOs), and has committed €200 million since inception.

In 2012, Sustainable Development Capital (SDCL) launched the UK Energy Efficiency Investments Fund, a private equity infrastructure fund backed by the UK Government and EIB. It launched a listed vehicle, SDCL Energy Efficiency Income Trust (SEEIT), in 2018.

Amber Infrastructure has two UK Government-backed vehicles: the London Energy Efficiency Fund (LEEF) which dates from 2011 and the Mayor of London's Energy Efficiency Fund (MEEF).

SUSI Partners has two dedicated energy efficiency funds – SUSI Energy Efficiency Fund I and II – which launched fundraising in 2013 and 2018 respectively, but it has decided to continue EE activity as part of its SUSI Global Energy Transition Fund, which incorporates renewable generation and storage into the strategy.

In Spain, Suma Capital has also launched two strategies. Suma Capital Energy and Environment Fund I (SCEEF I) launched in 2014 and the second iteration in 2017 (SCEEF II).

Fondo Italiano per l'Efficienza Energetica launched in 2014 as the first such Italian vehicle. It held a first close on its second vehicle in August 2020 with €127.5 million of a €175 million target.

The latest entrant to the private European fund space is Aquila Capital, known already for its renewable investment activity, which announced its maiden investment through the Aquila Capital Energy Efficiency Strategy in November 2020.

There is another major contingent to the players in this space: energy service companies (ESCOs) and technology companies. All investment houses involved in energy efficiency agree that strong relationships with these entities is essential.

Franco Hauri, senior investment manager within the Aquila Capital energy efficiency team, explains what they are and why these relationships are the lifeblood of EE vehicles.

"Building a pipeline really comes down to selecting and building relationships with partners. Fundamentally there are two types: energy service companies, they are in the hundreds in European countries and an important source of deals; technology suppliers are also important.

"Historically they have focused on selling products, but there is a trend among these suppliers to transform the product into a service. The trend is to support product sales through a financing solution and position their products as a service (light, heat e.g.). It's possible to forge right of first refusal agreements with some of these companies."

This service can include connecting a client of an ESCO with a fund manager with deeper pockets than they have, an important strategy for some investors in the space.

Clients form the wide base of the triangle, the multitudes of residences, businesses, industrial actors, state institutions in health and education, municipalities and other government bodies that benefit financially and existentially from energy efficiency upgrades.

Strategies

The variety of energy efficiency fund strategies is a pleasing parallel to the variety of efficiency measures available. There are listed and unlisted players, hyper-local and global target areas, 'greenfield' and 'brownfield'.

One common deal model for developers of projects involves a fund providing capital to an ESCO to implement an energy efficiency measure on behalf of a counterparty seeking cost reduction. Yield is generated through long-tenor agreements connected to supply of energy, heating, lighting for example.

The share of savings can be fixed and defined upfront – paid, for example, on a quarterly basis or in a variable way, or as a PPA (i.e. selling to a client who pays a defined price across the duration of the contract).

SUSI Partners describes this as the "off-balance sheet contracting model" or "tri-partite transaction structuring". The fund takes on project risk for transactions involving energy service companies and their customers, thereby funding projects without impacting customer balance sheets.

This is an attractive proposition for investors. As Joanne Patrick, director of Amber's London Energy Efficiency Fund (LEEF) and Mayor of London Energy Efficiency Fund (MEEF), explains: "Investors can leverage off the upfront scoping and due diligence work that we as the fund manager do. We do a lot of the heavy lifting that they would otherwise have to do in house."

These two funds exemplify hyper local fund styles, though such a description ought not lead one to doubt the opportunities afforded by such vehicles. The model largely provides debt to public sector counterparties (local authorities, education, health, not for profits) with some allowance for SMEs and ESCOs (30%).

LEEF was established in 2011 through the European Commission's Joint European Support for Sustainable Investment in City Areas (JESSICA) initiative to stimulate investment in underserved segments of the energy efficiency and low carbon sectors. At the end of its investment period, the fund had invested c.£90 million by 2018 in 13 projects.

It focuses on energy efficiency retrofit to existing buildings, building controls, communal and district heating and cooling, and small-scale renewable energy in Greater London.

Peter Radford, investment director at the Amber evokes the entrepreneurial spirit Amber's strategy necessitated as newcomers to the field in the early 2010s: "As well as approaching ESCOs that were active at the time in energy efficiency we went direct to a lot of the largest estate holders in London."

"One of the things we did back then was look at a full building retrofit rather than specific technology like LEDs. That did give you a slightly different payback profile. Back in 2011 this was stepping into a new world for some because they hadn't looked at their building stock and energy bills in that way."

The award of the MEEF mandate to Amber in 2018 has subsequently brought an expansion of its low carbon remit to include alternative fuel charging infrastructure, e-mobility, and street lighting. It was also designed as a 20-year fund for extended project payback periods so that it could fund longer term projects such as district heating.

On the strategy's geographical remit and potential for replication, Patrick says: "Some may argue it is a constraint, because people want this kind of investment all over the country. However, having already allocated nearly all of the initial public sector funding two years into a five-year investment period, demand in London is clearly there. The distinguishing feature of our MEEF fund is the blending of public sector funding with private capital to bring about as much investment in the sector as quickly as possible. I see a lot of interest from cities up and down the UK in this type of model."

Triple Point's recently listed offering launched in November 2020, and takes the UK as its investment domain. The company, which has wider investment interests in housing and energy, won a Europe-wide competitive process in 2018 to set up the process for projects to apply for grants toward soft loan finance for heat network development in the UK. It developed its strategy with this expertise under its belt, and 10 years managing investments

"We see quite a lot of existing operational projects as well as exciting new-build opportunities."

in solar, hydro, CHP, gas peakers, and anaerobic digestion.

The fund is looking for operational projects predominately (75%) in low carbon heat such as combined heat and power and heat networks – heat accounts for a third of all UK carbon emissions – social housing retrofit and industrial energy efficiency, and distributed generation.

Jonathan Parr, partner and head of energy at Triple Point, describes the UK pipeline: "We see quite a lot of existing operational projects as well as exciting new-build opportunities. In the pipeline there's a good mix of projects across assets like heat networks, combined heat and power plants held by investors seeking an exit, and opportunities to acquire existing energy efficiency projects aggregated by a developer looking for a refinance before going to secure additional assets."

The fund will use savings-based contracts to allow end users to replace equipment, again without having to pay the cost up front. Instead, it will recoup the cost from a portion of the savings from the energy bill.

Availability contracts are offered by Triple Point too; an example is a tomato growing business to which it provides heat, energy, and CO2. Off-take agreements for generated energy also form part of the strategy.

Triple Point plans to distinguish itself through deal flow sourced from strong relationships with local authorities which may yield sponsored heat networks, housing associations in need of retrofit, which in itself would be a substantial portfolio.

Aquila Capital's vehicle, which aims to back projects to the tune of €50-70 million per annum during the investment phase, has a pan-European remit. It plans to address the built environment, transport, and industry with energy efficiency measures and decentralised power generation.

Alex Betts, senior investment manager at Aquila, is confident that many commercial and industrial clients are now amenable to energy efficiency projects.

"Company boards have a focus on reaching net zero as part of their strategy, and you can't get to that point without an energy efficiency strategy. You improve your productivity and savings. The question is do you provide that capital yourself or seek third party capital."

Colleague Franco Hauri explains how Aquila will differentiate itself with those companies in mind: "We have a truly pan-European focus and are willing to finance smaller opportunities – 80% of projects in the non-residential space require investment between €100,000 and €3 million. The opportunity with this geography and segment is enormous."

Listed entity SEEIT has the broadest reach to date, having struck deals in North America, Europe, and its first in Asia this year.

Chief executive Jonathan Maxwell explains why the company chose a listed product having managed a private EE fund: "Private markets in general are very good at building things whereas public markets are extremely good at owning infrastructure. Having stable, predictable revenues is what you need as a public vehicle. They're two quite different markets. In the private markets you can focus on the shorter term, higher risk part of the project lifecycle, whereas in the public markets you can take a much more efficient, longer-term view to owning the operational cash flows."

Roughly 75% of the portfolio benefits from availability (light or energy as a service), regulated or fixed payments. The remainder is capacity-based contracts, and a small amount from ancillary services.

Existing renewable energy funds, provided they can make the connections, may implement energy efficiency and renewable strategies concurrently as SUSI has done with its Global Energy Transition Fund.

Challenges

EE investing isn't as easy as renewables investing, perhaps part of the explanation why there are so few funds comparatively speaking. Part of the difficulty is the nature of striking deals in energy efficiency.

All the managers spoken to acknowledge greater complexity in negotiating to meet the requirements of at least three counterparties.

"Company boards have a focus on reaching net zero as part of their strategy, and you can't get to that point without an energy efficiency strategy."

Beyond that "Each project is unique and it is necessary to fit the solution to the requirement specific to that building or heat network," says Peter Radford.

The greater deal volume with smaller payback in EE compared to energy efficiency adds to the idea that the area is a challenge.

Aquila's Alex Betts agrees, but nevertheless highlights advantages: "What is interesting about this area is that individual projects, while they're being done for the largest corporates in the world, can be relatively small. That's part of the reason this segment has taken longer to get going. We are not moving large amounts of money in individual projects, but there is a great deal of value in aggregate.

"The returns have similar risk/reward characteristics to renewable projects. Arguably some of these projects are lower risk because there isn't the same exposure to commodity prices. They are resilient and reliable. You're delivering a saving irrespective of the weather!"

Visibility is often cited as an issue for the sector, and arguably one of the reasons for the failure of the European Union to meet its 20% improvement energy efficiency target this year, though it will meet greenhouse gas and renewable ones.

Renewable generation was the focus of the previous decade, but, as Triple Point puts it, the greenest energy is that which is never used. Investors are comfortable with owning physical assets, but owning a contract can feel synthetic.

Jonathan Parr elaborates and also sees advantage where others do not: "Energy efficiency, which is all about reducing energy use, is not as easy a concept to understand as renewable energy generation, which essentially involves putting more power onto the grid. I would say that energy efficiency is in the same space that renewables was in in the UK about 10-12 years ago. There was little penetration for solar in the UK, but the feed in tariff changed everything.

"We can deliver all of our energy needs in the UK through reducing the waste. There has been a great rejection of single-use plastics; people have become aware of what gets sent to landfill and what impacts society more generally. I think the same is true of energy, but because it is largely invisible it's more difficult to see. Precisely because it has been underserved in the last decade, means there is a good opportunity in the space."

An evolving sector

The field is a lot more disaggregated. One can put a great deal of money into an offshore wind array quite quickly. The market is still being established for EE, and the opportunities are getting larger. Driving significant value through aggregating portfolios of assets, and driving it further through that portfolio effect will be the mission of EE fund managers.

At any rate, several events are certain to make the space more visible in the next 10 years, including the election of Joe Biden as a US president sympathetic to green causes.

'Policy earthquake' the Renovation Wave from the EU will deliver refurbished and improved building stock in the EU as part of its European Green Deal with billions earmarked for the space. About 75% of buildings in the EU are energy inefficient at present. It marks a fundamental acceptance that EE offers the best means of reducing emissions.

This may go some way to cracking the domestic retrofit nut, which is yet to be cracked by an investment fund.

The EU has now set a 32.5% improvement in EE compared to business as usual by 2030, and managers surveyed are optimistic the target can be reached.

With growing political support, additional managers launching vehicles, and consciousness of the sector developing among institutional investors the energy efficiency green giant is stirring. ■

Relentless rise of **green bonds**

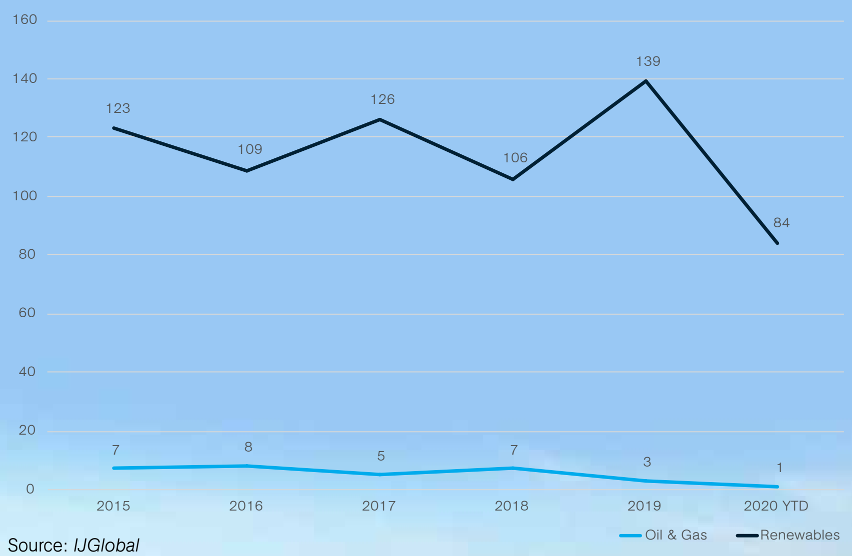
The *IJGlobal* data team tracks the last five years of activity in the European O&G sector, contrasting that with the growing popularity of renewables… matched only by the rise in green bonds

Over recent years, there has been a marked decline in European oil and gas financing, a steady downward trend that is matched by the relentless rise in popularity of renewable energy, matched only by the upsurge in popularity of green bonds.

IJGlobal data indicates an overall decrease in terms of O&G project finance deal volume, with 2020 (year to date) having the lowest results for the last five years. It has been a period of much more modest results for the sector with only 31 completed project finance deals. However, there were three outstanding deals: $30.2 billion Yamal LNG development in Russia, the $13.5 billion Johan Sverdrup Oil Field in Norway and Quad Gas Group's $7.3 billion acquisition of 61% in National Grid's UK gas distribution assets.

It comes as no surprise that since 2015, the top three countries with the most O&G deals to reach financial close are Russia with 6, Norway on 5 and the UK with 3.

Number of PF primary financings in Europe



Source: *IJGlobal*

The only closed O&G deal in Europe in 2020 so far is the $1.52 billion Polimery Police project in Poland, majority owned by Grupa Azoty, and was financed by seven local banks, joined by Santander, BNP Paribas, EBRD and ICBC.

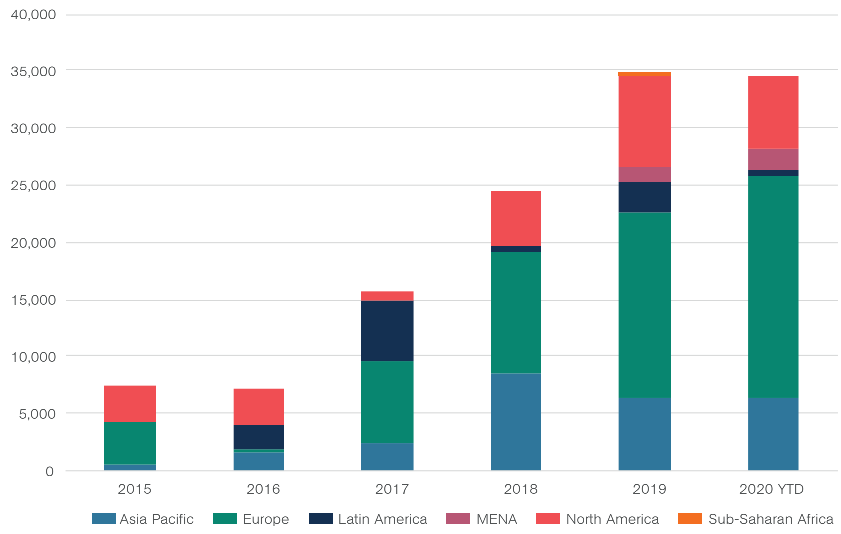
IJGlobal data also suggests that there are currently only four active deals in the European O&G sector. Furthermore, in April 2020 it became clear that sponsor Novatek will delay its final investment decision on the biggest project in the region – Arctic 2 LNG – which involves the construction of three liquefaction trains of roughly 6.6 million tons per annum each on Gydan Peninsula in the north of Siberia, Russia.

However, over the same time period – the past five years – European renewable energy activity has been dominated by onshore wind (55%) and solar PV (22%) deals, according to *IJGlobal*'s transaction database.

The UK has most closed deals with 136, followed by France (87), Spain (71), Germany (69), Ireland (48), Italy (47) and the Netherlands (47). When it comes to renewable energy transactions closed in 2020 alone, Spain holds first place with 14, while the UK comes next with 11.

Since 2015, a single biomass project made it into the top 30 renewables deals by transaction value, while all the rest are offshore wind developments. Most of the high-value renewables transactions in the period are in the UK, France and Germany, with the biggest one being the first two stages of the 3.6GW Dogger Bank wind farm off the Yorkshire coast, which closed at the end of November 2020. With its $10.5 billion price tag, this is the world's largest wind farm and it is owned by SSE Renewables and Equinor. Debt was provided by three export credit agencies and 28 commercial lenders.

Green Bonds by Region 2015-2020 YTD



Source: *IJGlobal*

Earlier this year, another massive project achieved financial close – the 1.14GW Seagreen Alpha and Bravo Offshore wind farms. SSE completed the financing in June 2020, while simultaneously selling down a 51% equity stake to Total.

Other large-scale projects in the 5-year period are:

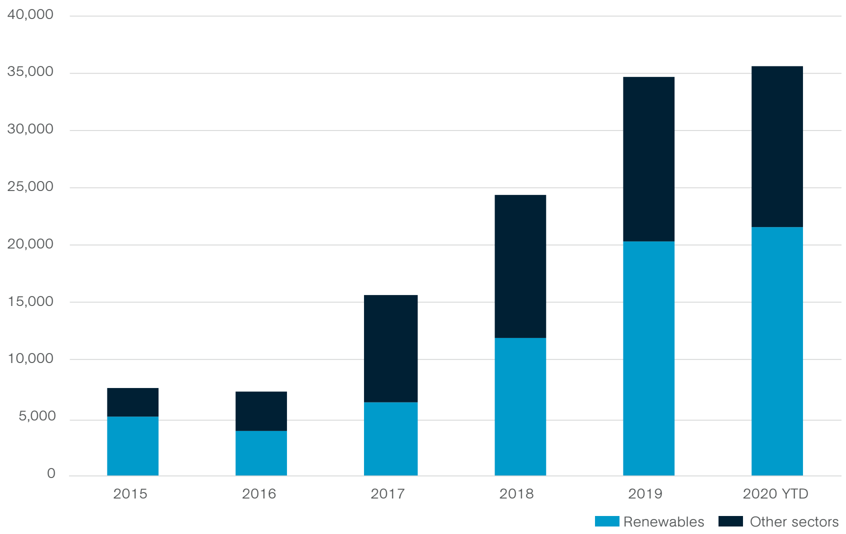
Offshore wind

- GIP's acquisition of 50% in Hornsea I Offshore Wind Complex (1200MW) – funded through a multi-tranche, limited-recourse debt package of senior bank loans, a mezzanine facility, and bonds
- Beatrice Offshore Wind Farm (588MW) – developed by SSE Renewables (40%), SDIC Power of China (25%), Copenhagen Infrastructure I and II (35%) and financed by a group of international lenders
- East Anglia One Offshore Wind Farm (714MW) – a $3.5 billion project sponsored by ScottishPower

Other renewables

- Tees CHP Biomass Plant (299MW) – developed by a JV between Macquarie and MGT Power and financed with term loans, revolvers, fixed-rate notes and CPI-linked notes
- Efeler Geothermal Project (170MW) – located in Turkey, owned by Gurmat Electrik and funded by the EBRD, Isbank, TSKB and Black Sea Trade and Development Bank

Global Green Bonds Renewables vs Other sectors



Source: *IJGlobal*

- Cobra Spanish Solar PV Portfolio (864MW) – which includes 18 projects; sponsor is Cobra Instalaciones y Servicios (subsidiary of ACS) and lenders are European commercial banks
- Ostwind 1 and 2 Offshore Grid Links – Eurogrid's Baltic Sea project, financed with a €750 million 12-year green bond

The €750 million green bond financing for Ostwind 1 and 2 is not an isolated case when it comes to sustainable investments in the region. Europe has dominated infrastructure with Green Bonds for the past 3 years*, with a value of $16.2 billion in 2019 and reaching $19.5 billion in 2020 so far.

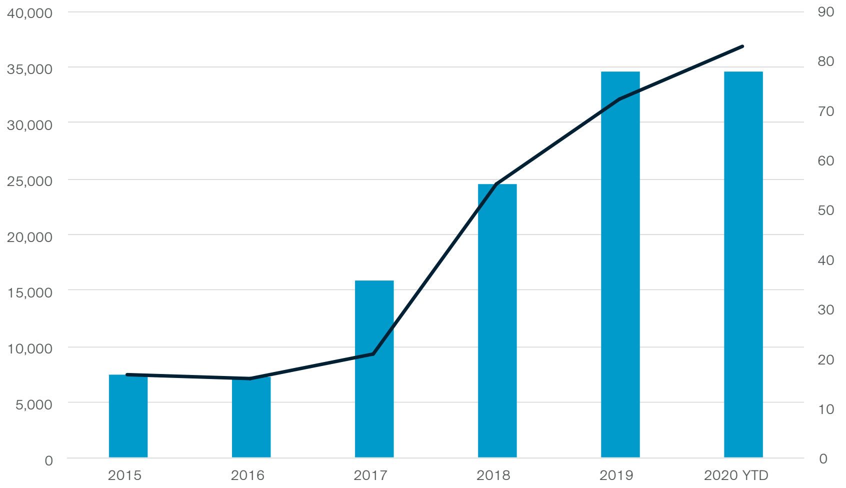
*IJGlobal data enables a more focused view of the green bonds market by showing financings related to infrastructure projects within the IJGlobal scope.

Green bonds are viewed as the perfect financing tool for large-scale sustainability projects worldwide – mainly wind farms and solar parks – as such developments require investment ahead of revenues and the revenues are modest over a longer investment horizon.

2020 data shows 60% of all green bonds are being deployed on renewable energy, a trend that is also valid for previous periods. It seems clear from the green bonds trend line drawn using *IJGlobal* data that sustainable investments have been thrown into the spotlight.

IJGlobal data suggests that throughout 2020 European power majors have embraced the green bond. In January, Germany-based E.ON issued a triple tranche bond offering amounting to €2.25 billion for eligible green projects. Meanwhile in July and September French energy giant EDF issued €2.4 billion, and Dutch Tennet placed €1 billion in green bonds geared at connecting large-scale offshore wind projects to the onshore electricity grid, as well as towards financing transmission capacity upgrades.

Global Green Bonds 2015-2020 YTD



Source: *IJGlobal*

Lenders, much like project sponsors, have been eager to offer financing compliant to modern sustainability standards. In September (2020) Allied Irish Bank (AIB) – an active lender on the local and international wind energy scene – raised €1 billion in a green bond issuance to finance or refinance renewable energy projects. The bond is priced at 330bp over the mid-swap, a minimal new issue premium. The issuance was over-subscribed, with the book peaking over €2.5 billion.

AIB followed in the steps of German banking group Commerzbank which issued €500 million in green bonds to refinance loans for onshore and offshore wind and solar projects primarily in Germany, but also in other European countries and North America. The non-preferred senior bond saw a volume of more than €4 billion seeking to subscribe, making the final issuance eight times oversubscribed.

The 2015-20 steady growth of investment, raising funds for a cleaner environment, might not seem that surprising, however the rise of green bonds sets a new path and is becoming one of the hottest trends in fixed income investment. ■

The 1.14GW Seagreen Alpha and Bravo Offshore achieved financial close this year