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IN-DEPTH: THE REBRANDING OF RENEWABLE ENERGY INVESTMENT

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Close to 50 new funds created during 2018 and 2019 are targeting USD 27bn for assets linked to the energy transition. But with wind and solar power investment now crowded and commoditised, where will all this capital go? Katherine Steiner-Dicks and Colin Leopold report

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EMEA

Sector: Renewables
Power

Country: EU
USA

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A funneling of new capital has been prepared for deployment in the burgeoning energy transition fund market over the past year. Falls in bond yields, low interest rates, cheap debt, decreasing fixed income streams, carbon-neutral remits and an attractive cost base for most renewable energy sources is creating the perfect concoction for GPs and LPs to sip and savour.

Once a bolt-on component for infrastructure funds, renewable energy is now mainstream and, in many cases, dominates fund strategy.

Last month, *Inframation* reported that two well-known London-based infra funds, Arjun and Infracapital, were among those adding to their investment teams with key energy-related hires. The same is being done by investment teams across New York and Asia.

With stable returns in the mid-to-high single digits and an environmental and social box clearly ticked, increased attention is also being seen from large insurance and pension fund managers, says Mortimer Menzel, partner at London-based Augusta & Co.

On September 23, an alliance of the world's largest pension funds and insurers – responsible for directing more than USD 2.4trn in investments – committed to carbon-neutral investment portfolios by 2050. The group included Allianz, Caisse des Dépôts, La Caisse de dépôt et placement du Québec (CDPQ), PensionDanmark, Swiss Re, CalPERS and Zurich.

"Disappearing bond yields are creating a pull into renewables for many and they may yet provide a bright spot for investment in the coming years," says Menzel. "Cheap debt is conversely also fuelling build-out of renewables, providing more deal flow."

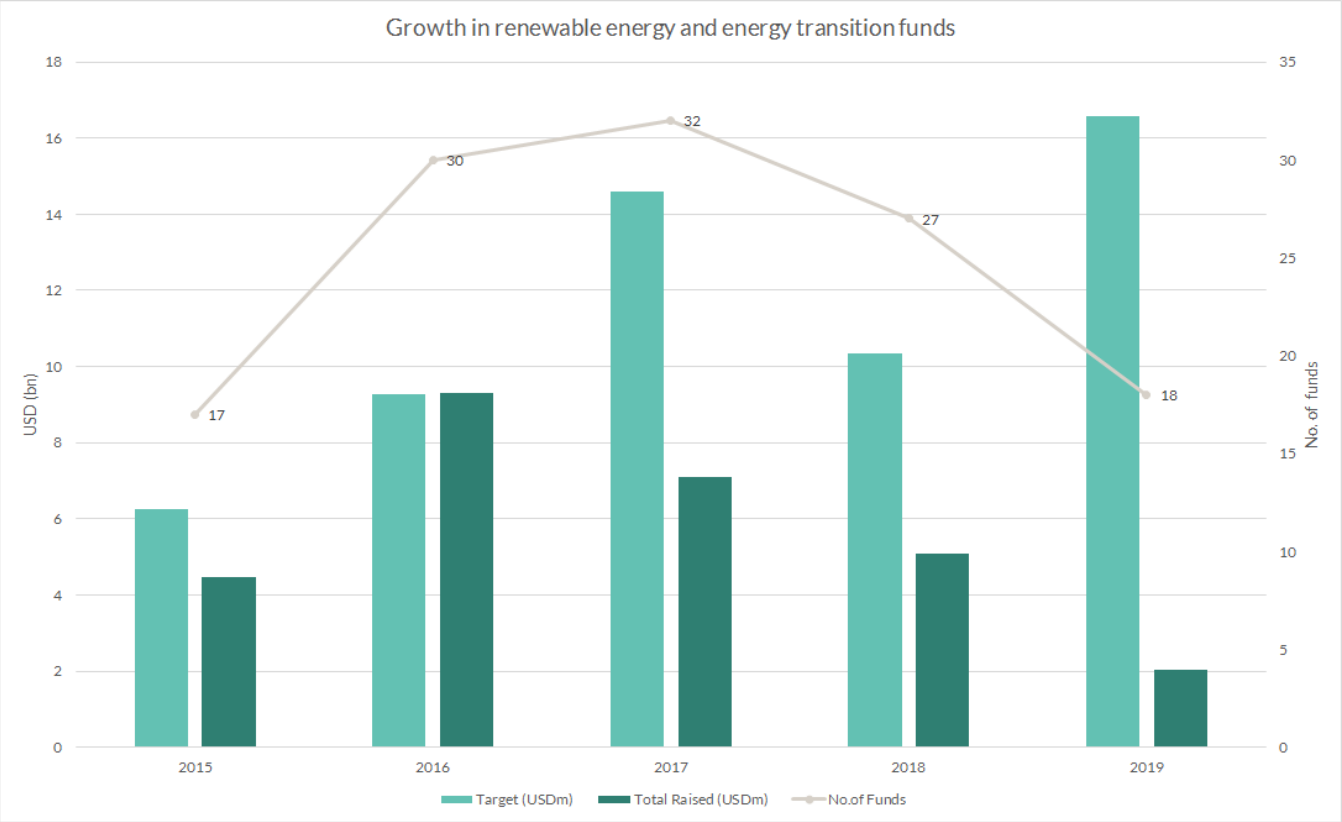
LPs with ESG requirements to fulfil are also increasingly looking to invest in operational renewable assets in the current lower interest rate environment, says Spence Clunie, Managing Partner at UK-based infrastructure investment firm Ancala.

Many other agree. "We are seeing LPs increasingly ask for more renewables. That is in response to growing opportunities," says Evan Corley, partner and senior investment professional in Pantheon Venture's Global Infrastructure and Real Assets team.

GPs have not been slow to take advantage, with ever-increasing allocations to renewables and the wide-spread creation of distinct renewable energy-only or energy transition funds.

According to *Inframation* research in October, the number of newly launched funds with an exclusive focus renewable energy or energy transition assets for the 2018/19 vintage is 45. These funds are targeting just under USD 27bn equivalent. Yet, based on the same research, they have raised only USD 7.1bn so far, leaving around USD 20bn to rise in the coming months.

While 2017 was a peak for the number of new funds targeting renewable energy and energy transition investments (32), far less funds (18) in 2019 year-to-date are targeting an even higher overall amount in the sector (see chart below).



Source: *Inframation*

Global energy investment was stable at USD 1.8trn in 2018, according to IEA's World Energy Investment 2019, but financing gaps are emerging in key areas.

Have infrastructure funds over-estimated the amount of money they can raise in the renewable energy sub-asset class, and – if not – will they be able to deploy that USD 27bn in what is now one of the most competitive hunts for assets on the planet?

Deployment risk

According to consultant DNV GL's latest Energy Transition Outlook report, the global energy transition will require more than 10 times more solar power and five times more wind power, in combination with other technology measures to limit global warming to well below 2°C and meet the targets of the Paris Agreement.

But the challenge for infrastructure investors in this space is *not* about having enough capital to deploy, or having investable technology to target, according to Marco van Daele, Chief Investment Officer at SUSI Partners.

The challenge, he says, is in sourcing deal opportunities that not only match LP risk profiles, but can also deploy institutional capital at scale, at an attractive rate of return, and somehow collectively address the energy transition holistically.

Among the 45 funds captured in *Inframation*'s research, answers to this question may be emerging.

SUSI is taking a multi-fund approach that enables the manager to raise capital when sub-sectors of the energy transition market are investable. The strategy was conceived to include in-front and behind the meter investments to suit the risk profiles of LPs either already invested in the asset class or making their first commitments.

The Swiss fund manager is targeting classic renewable energy generation assets, but also energy storage and efficiency investments, such as LED lighting, combined heat and power (CHP) plants and smart metering, across several funds and geographies. As well as a 15-year fund SUSI Energy Efficiency Fund II (which has a EUR 300m target), SUSI is also fundraising for an open-ended EUR 1bn OECD Energy Transition Fund and USD 250m SUSI Asia Energy Transition Fund, which will mainly target Indonesia, Thailand, the Philippines, Vietnam and adjacent SEA countries.

Other, larger funds such as Stonepeak, BlackRock and MIRA will also consider Asia with their new global renewable energy fundraising vehicles, but SUSI is one of the first to attempt an integrated strategy in the segment. It will invest in 15 to 20 renewable energy generation assets in the region as well as into energy storage and energy efficiency projects, targeting a net IRR in the region of 12-14%, according to *Inframation* data.

The transition's mid-market

According to the people spoken to for this article, there is a consensus that funds writing cheques in the EU50m to EUR100m zone will have plenty of investment opportunities in the energy transition, but they will be predestined to tackle deals under the radar of the multi-billion dollar infrastructure funds now entering the space with dedicated investment vehicles.

But those investing in less familiar territory, such as mid-market opportunities in energy efficiency (LED city lighting, energy service companies and storage, for example) will have to prove they understand the associated technologies, risks and returns. When they do, it will make the education exercise for LPs less of a challenge.

The mega funds just do not have the relationships in this investment bracket, nor would they find this segment economic, says van Daele.

"The bottleneck in all of this is the middle space," he says. "Somebody needs to spend a lot of time and brainwork in this area... We do not jump into a market because there are a lot of assets to be sold. That's not our business. We deploy most of our capital into new assets. This protects against the commoditisation. We are structuring entities that enable owners and developers of assets to use our capital to generate profits for themselves and for our funds."

Power generation, especially solar in Europe, is "only starting", he says, but with volume comes commoditisation and "pretty low" returns, as had been seen in solar PV and offshore wind. "It is not an area we are really targeting," he says, instead pointing to integrated energy solutions, efficiency investments, and the electrification of transport and heating.

With a doctorate in thermodynamics, and having held previous roles at Goldman Sachs, Och-Ziff Capital, Macquarie Group and Zouk Capital, Erich Becker is Founder and Manager of Winton's Exergy Capital Management, a London-headquartered manager raising its first energy transition fund. He believes that a new approach is needed to renewable energy investment entirely.

"We see a lot of dry powder sitting with infrastructure-type investors, such as pension funds, insurance companies," says Becker, "yet many of these funds do not have the investment mandate to invest where it is really required to meet this energy transition. Who is going to provide this funding?"

The manager is currently working with Dubai private equity investor Dalma Capital for its first energy transition fund for an undisclosed amount. Exergy and Dalma have established the first Sharia and ESG Compliant Energy Transition Private Equity structure globally.

“We are looking at areas that are below the radar screen of most funds, areas that are not as easily understood when it comes to the technology involved and require a bigger capital requirement. We are looking to bridge the funding gap in these areas,” says Becker.

Impact of the herd

Fund managers generally are increasingly allocating more of their LP capital through energy transition and renewable energy investment vehicles and feeling compelled to re-brand funds to meet LP mandates and risk profiles.

Impact investment and climate resilience-based funding are becoming more common, in and outside the infrastructure and energy space.

The impact investment sector, which includes areas of the economy beyond infrastructure and energy, is now worth more USD 500bn, according to Allianz Global Investors (which launched the Allianz Impact Investment Fund last month). AllianzGI already manages around EUR 6bn of impact investments and says it has an expanding impact offering which already includes renewable energy portfolios such as the Allianz Renewable Energy Fund.

“As more investors look to allocate capital with the intention of achieving a defined and measurable result rather than just a financial one, the impact sector looks set to experience continued growth,” said Martin Ewald, Lead Portfolio Manager Impact Investments, last month.

But impact investment is not a new phenomenon, and often requires experience of more than just renewable energy.

“The impact element – it’s something we have done all the time,” says a long-standing global fund manager working in renewables and emerging markets. “Ten years ago, many LPs wondered why we were spending our time on that and thinking that we were almost suffering return-wise to do good, which has never been the case. People realised there is no conflict at all.”

Rushing to create new vehicles under the banner of buzz words such as impact investment or climate resilience carries risks.

“The big danger is that the less-experienced fund managers in this space will gravitate to the low-risk opportunities,” says van Daele. He explains that GPs and LPs will likely invest in solar and wind because they understand it, which creates herd behaviour, and then cannibalises the market and compresses returns.

According to the SUSI Partners CIO, the early adopters that go against the tide, by going into markets early or quicker will get the better returns across the energy transition spectrum. Some of those early adopters, and that can include larger players, will continue investing on the generation side, or will look to faster-growing, higher-risk economies.

“We are seeing LPs interested in taking greenfield risk around renewables [outside of the US] because the return profile is more attractive then say the opposite end of the spectrum, which includes supercore renewable assets that are long-term contracts priced to a cost of capital [and] lower risk,” says Corley at Pantheon.

Corley admits that while the concentration of investment into wind (offshore and onshore) and solar will continue, the renewables investment opportunity is very different to what it was ten years ago.

“Yes, this concentration still continues, but now there is just so much more that can be done, be it in renewables, energy efficiency and transition – the latter of which I believe will be the broader theme that many of these GPs will pursue.”

Demand curveballs

Continued efficiency improvements in lighting, refrigerators, motors and other sections of the wider economy are estimated to result in electricity demand staying relatively flat in advanced economies, according to the IEA.

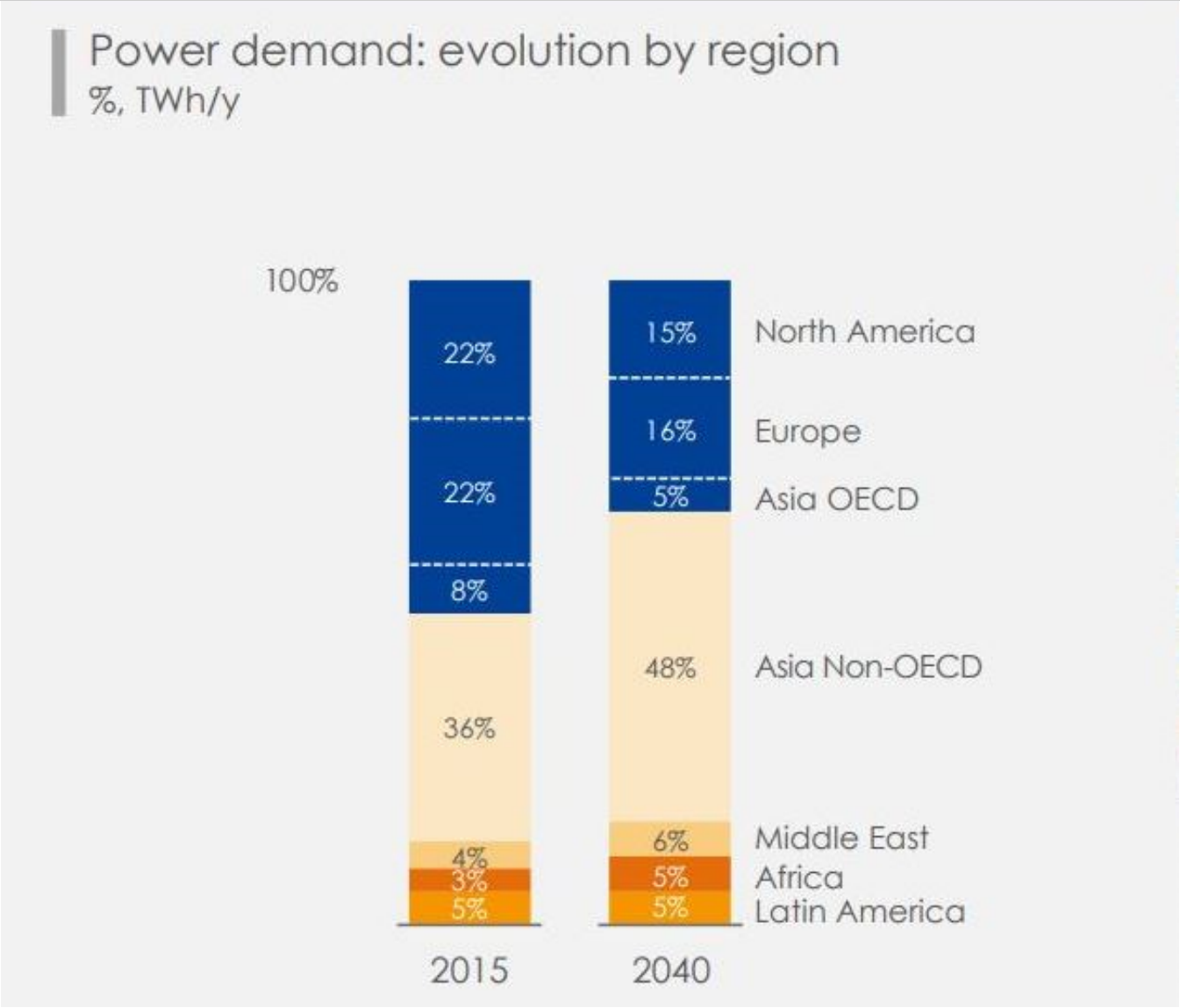
This flattening of demand is partly why some of the larger infrastructure funds (EUR 500m or more target, for example) are placing their bets on renewables growth in Asia and Latin America, and potentially Europe's more emerging renewables markets of Portugal and Poland.

Steen Lønberg Jørgensen, Partner at Copenhagen Investment Partners (CIP), tells *Inframation* that its New Markets Fund I (NMF) will primarily invest in South East Asia and Latin America, as well as Central and Eastern Europe.

The fund has a USD 1bn target and in August *Inframation* reported it achieved a first close at USD 700m. The NMF will continue its broad-balanced approach and invest in the same technologies as the flagship funds – onshore wind, solar, offshore wind, biomass, waste-to-energy, transmission and storage.

"Energy is the largest segment within infrastructure and its focus fits well to LPs having an existing infrastructure portfolio," says Jørgensen.

"Focus is on the fast-growing major economies, which have significant need for new capacity. The need and market for new capacity is growing very fast. In the developed world, this is driven by replacement of old capacity including coal and nuclear. In the fast-growing economies, it is primarily driven by increasing power consumption."



Source: International Energy Agency

But predictable returns even in some of these faster growing markets is far from assured, despite the promise of offshore wind taking off across Asia.

Vietnam added over 4GW of new solar connections in the 12 months leading up to June 2019, overtaking Australia for commissioned utility-scale capacity. But despite a crowded market, which includes international developers and a new feed-in tariff scheme up to 2021, bankability concerns over grid flexibility remain.

In Latin America, some government-led auctions have proved unreliable and produced lower-than-expected tariff levels or been suspended, delayed or cancelled.

Investors looking at Portugal, which concluded its first renewable energy auction this year, are questioning how projects will be economical at such low tariff levels.

Speaking at the Green Investment Group's New Frontiers event in London on October 3, the Head of Energy EMEA at the European Bank for Reconstruction and Development (EBRD) Harry Boyd-Carpenter said the problem facing energy transition investors in emerging markets is not "finding 100MW to finance" but how to find gigawatts to finance, when the offtaker in the country is not solvent and the grid cannot absorb that level of power generation.

Small-scale transactions

According to the IEA's Sustainable Development Scenario, investments in energy efficiency must work in parallel with the suggested doubling in renewable power.

At the same time, it admits that the sector is "highly fragmented" and as a result now tends to veer towards smaller transaction sizes, which can "make it difficult to attract finance".

Van Daele agrees that this segment is not investable until a solution to address small transaction sizes and asset ownership can be created. SUSI claims it has created a solution for both challenges with its latest energy efficiency fund by offering a structured finance solution, which also fits LPs looking for a credit exposure profile.

"We are proud that we have made this market investable and at scale for institutional investors," he says. "No one has done this before. We are in the process of raising our second energy efficiency fund, which we expect to grow in excess of EUR 300m. We are constantly building out this portfolio and strategy and could easily see it grow to EUR 1bn over the next five years."

Van Daele sees enormous promise in the LED municipal lighting segment, where the firm has already made headway in Spain. With still nine of out ten European municipalities to switch on to LED, he says, there are ample low-risk opportunities to explore.

By 2022, expenditure on UK street lighting alone is forecast to reach GBP 336m, up by 17% compared with present levels, according to AMA Research.

According to UK independent body the Committee on Climate Change, the most expensive part of the transition to zero carbon will be the modification of 28 million home heating systems. Of the GBP 1trn required to reach net zero, half (GBP 500bn) will go towards refitting domestic heating.

Yet this energy efficiency and demand-side component of the energy transition has not been as well supported by regulatory policy in many countries, when compared to historic support mechanisms for renewable energy generation, says Becker.

Some countries, including Chile, the UK and some in the EU are taking a proactive approach to grid flexibility and interconnectors and how they are valued. Javier Bustos, Chile's head of division for Energy Policy and Outlook at the Ministry in an exclusive interview with *Inframation*, said earlier in the year: "We understand the necessity to foster investment in resources that have the ability to control the grid, while right now no incentives are in place."

Such investment opportunities will require fund managers with a different set of technical and operational skills.

"You are talking about the immediate digitalisation of the energy value chain; using microprocessors, machine learning, similar technologies that already exist in the internet and telecommunications spaces, but have not been transferred and rolled out across the value chain. Firstly, the skill set needs to be transferred from these areas to the energy sector," says Becker.

Fund of funds

But there may be another avenue for the USD 27bn of fundraising targeted for renewable energy and the energy transition globally.

Funds-of-funds are expected to play an even a greater role for LPs given their value lies in carefully selecting top-performing fund managers and sharing risk across those with knowledge of newer and emerging technologies and markets.

Arcano is set to hold a third close of its inaugural EUR 300m sustainable infrastructure fund-of-funds, Arcano Earth Fund. Launched in October 2018, at the time of writing the fund had raised EUR 165m, mainly from Spanish

investors. It seeks to continue fundraising until the end of 2019 with the aim of broadening its potential investor base internationally.

Carlos Ruiz de Gauna, Investment Director Asset Management at Arcano, says the firm's latest fund is targeting the broader area of "sustainable infrastructure", rather than purely renewables.

"As a fund-of-funds, diversification to reduce risk while assuring interesting returns is paramount," says Ruiz de Gauna, "and it provides its LPs efficient diversification across multiple technologies, geographies, markets, and fund managers, while allowing its LPs to participate in the growing demand for sustainable infrastructure."

Pantheon's Corley believes the fund-of-fund vehicle will grow in popularity in the broader energy transition space for many of the same reasons but notably for diversification of risk.

"We see LPs of funds that had been previously launched during the earlier years willing to transfer their small ticket positions and LPs eager to crystallise their gains," says Ruiz de Gauna. "We expect the same level of increase in secondary activity in the sustainable infrastructure industry as in the private equity space. However, we foresee a bigger secondary market in the US."

Woody aspirations

Ten years ago the only viable area of the energy transition to invest within the confines of an infrastructure risk profile was renewable power generation, says SUSI's van Daele.

Now, new technologies such as carbon capture and storage (CCS) are coming into the sub-asset class thick and fast, and gas-to-power has been re-branded as a vital part of the current energy transition.

"Large-scale uptake of carbon capture and storage technology will unlock significant opportunities for hydrocarbon and renewable energy technologies to work together to decarbonize the energy mix," says Liv A. Hovem, CEO, DNV GL – Oil & Gas. "The energy industry must shift its mindset from 'gas vs renewables' to 'gas and renewables' for success."

CCS – the only currently-available technology to deeply decarbonize hydrocarbon use – will not be employed at scale until the 2040s unless governments develop and enact more definitive policies on its use, according to the DNV GL Outlook report. This could happen: the UK's history and geography means it is well-placed to lead in CCS, by storing carbon securely underground in depleted oil and gas fields – such as in the North Sea.

Previous energy transitions of the last century – from wood to coal to oil to gas – had an average 50 years to complete their cycle. Today's transition is already 15 years in by many estimates and there is just over 10 years remaining to meet the Paris Agreement's 2030 climate goals. And there is still the taboo subject of the nuclear phase-out to contend to, despite it being the world's second largest low carbon energy source.

This transition will require funds to be funnelled across the entire risk profile spectrum, to not only provide LPs with greater risk and fund diversification with specialised vehicles, but to mitgate inherent and growing risks associated with grid flexibility and congestion, marginal loss factors and subsidy-free asset financing – all issues the asset class needs to contend with to keep its future bright.