
EXPERT COMMENTARY

*Investment opportunities are abundant, if you know where to look, says **Spence Clunie**, founder and managing partner at Ancala*



Assessing the wide world of energy transition

The energy transition – the shift from a world that runs on energy generated from carbon intensive fossil fuels to one where energy is generated from renewable sources – requires investment across a range of subsectors and technologies, including renewable generation, networks storage, transportation and waste, and in turn touching almost every infrastructure subsector.

Until the storage of renewable energy is sufficient to meet our energy requirements, the energy transition will also encompass the use of legacy fuels, primarily gas, where these are sufficiently flexible to manage the intermittency of renewable energy generation.

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Governments across Europe have pledged to reduce emissions to net zero by 2050 with several introducing interim targets, such as the EU targeting a 55 percent reduction in net greenhouse gases by 2030 compared to 1990 levels. Nevertheless, the pathway to net zero in this timeframe remains uncertain.

It is easy for politicians to set out grand emissions targets, but where they would really add value is with the design and implementation of well thought-through long-term

frameworks, incentives and plans to deliver such targets. In September 2021 the Climate Action Tracker consortium concluded that, out of all the countries that have made commitments globally, only Gambia had government targets and actions that are consistent in keeping within the 1.5C limit for global warming that net-zero emissions pledges are seeking to deliver.

As infrastructure investors, we take a whole of life investment approach and hence policies, without clear pathways, make assessing risks – and therefore making investment decisions – difficult. However, the energy transition does provide investment opportunities.

Finding opportunities

We have been investing in the energy transition since we were established in 2010. Our maiden investment from our first commingled discretionary fund was Green Highland Renewables, which we acquired on a bilateral basis and transformed from a hydro plant developer into the UK's leading independent owner and operator of hydro power plants.

Our investment drove a step change in strategy and output, growing the business from approximately 4MW of generation to 26MW in just three years, all with 20-year renewable incentives from the government. We exited this investment in 2018 at a 2x multiple and a 39 percent IRR, demonstrating that energy transition investments can offer an attractive risk-return profile.

Since that first transaction, we have invested in most renewable technologies, from biogas to geothermal to wind. We also analyse our whole portfolio, running all assets through our bespoke due diligence and ESG screening tools, to see where we can bring our expertise in renewable energy investments to reduce energy consumption and the carbon emissions across our portfolio.

For example, at our Dragon LNG Terminal, we are adding a 10MWp solar farm that will reduce the terminal electricity costs by 9 percent and emissions by 2,300 tCO₂e per annum. We are also developing 3MWp of solar farms at Portsmouth Water and Liverpool Airport and introducing more environmentally friendly aircraft fuels for airlines by bringing the fuel management and delivery service in-house.

As one of the issues commonly raised with renewables is their intermittency and misalignment between peak demand and supply, we have focused on investing in overlooked assets that resolve these challenges. We have invested in several portfolios that provide base load renewable energy including biogas, biomass and geothermal, which solve two problems in one: first, they provide base load renewable energy with low volatility and no

How to support the energy transition

Governments can accelerate the energy transition through incentives and legislative measures.

Incentives can help energy transition technologies reach critical mass and drive down costs, which is important, especially considering the sharp cost inflation currently being experienced across Europe, which is likely to impact the bounce back post-covid.

Governments can facilitate take-up through legislation, for example through mandatory waste separation. The UK Environmental Act 2021 is significant here. It mandates the separation of all household food waste from 2023, which is a big step as currently in the UK less than 10 percent of food waste is recycled into renewable energy, with a large component still being disposed to landfill.

Governments can also facilitate take-up by increasing taxes on high-emitting fuels, or through incentives, ensuring the incentives are put in the correct areas, for example reducing track access charges for electric rail. They also need to take a holistic view to ensure that the necessary ancillary infrastructure is developed alongside incentives to reduce emissions, for example electric cars and EV charging networks.

The holistic view also includes education and training to ensure the skills are there to deliver a just and fair transition. There continues to be a disconnect between investors in underlying infrastructure who would like greater long-term certainty and governments whose long-term mindset is the number of years to the next election.



Biogen: The UK's leading anaerobic digestion operator turns food waste into green energy

seasonal impact; second, they also offer other benefits such as reduced waste going to landfill in the case of our biogas and biomass businesses.

We have more than doubled the size of the portfolio of our biogas business, Biogen, over the past five years. This has provided diversification and we have significantly improved the performance of the plants to increase generation and reduce costs. We have focused on the highly fragmented food waste to energy

sector, where we identified the potential to deliver growth and improved returns through consolidation, synergies and economies of scale, as well as the added benefit of reducing waste to landfill and not diverting fertile farmlands from food to energy crop production, together with the production of compost.

With our Icelandic geothermal business, HS Orka, we are maximising the value of their resources by investing in new power generation that utilises

waste heat from the existing operations. We are also growing the adjacent Resource Park, a concept built on waste reduction by offering the opportunity for corporates to locate in proximity to HS Orka's geothermal plants to benefit from green power as well as HS Orka's "waste" resource streams such as hot and cold water, steam, brine and sulphur, amongst others.

In biomass, we invested in Magnon Green Energy, Spain's largest owner and operator of biomass renewable generation assets. Its assets are a source of base load renewable energy and are complementary to Spain's large fleet of intermittent wind and solar assets.

Railing against carbon

The transport sector is a major contributor to global emissions. While some progress has been made in achieving reductions in this sector, it requires significant investment and government support to transition to lower emission options.

In 2018, 78 percent of emissions from the transport sector came from road transport, while shipping accounted for 11 percent and aviation for 8 percent. The share from rail traffic is only 0.4 percent and largely consists of emissions from diesel trains.

When the covid pandemic struck, transport assets across the globe were among the hardest hit in terms of performance and valuation, but we noticed niche investment opportunities. At the height of the pandemic, we invested in Hector Rail, which runs over eight million train kilometres and 20 million tons of cargo each year transporting freight across the Nordics and Germany, roughly the equivalent to 150 trips around the world.

Hector Rail runs electric locomotives using certified renewable energy. In addition, train transportation is more energy efficient and traffic-safe, whilst delivering a load capacity significantly more extensive than transport by truck; one train can hold as many passengers as six buses or almost 140 cars.

"It is easy for politicians to set out grand emissions targets, but where they would really add value is with the implementation of well thought-through long-term frameworks"

A freight train can handle as much load as 30 trucks.

Networks of the future

Meanwhile, a significant increase in the electric network capacity and materially higher penetration of heat networks will be vital to making net zero a reality. Large investments in electrical grid infrastructure are required to meet the growing and changing energy needs of homes and businesses, including the increased loads required for EV charging and electrical heating.

Further, heat networks in the UK must grow to represent around 18 percent of homes by 2050 (from 2 percent today) if the UK is to meet its carbon targets cost effectively. We are investing through Leep Utilities, our multi-utility platform, with a portfolio of over 100,000 electric, heating and water connections to deliver flagship networks in central London, Manchester and Liverpool and work with government funding partners, property developers and heating infrastructure manufacturers/operators to deliver affordable heating solutions to new and retrofit developments.

Where to look next

Energy transition opportunities by their nature tend to start small to mid-sized, providing an opportunity for mid-market investors, once the technology and concept is proven, to help those companies take the next steps in their journey, both in improving operationally and also in achieving scale.

We are seeing opportunities to develop smart home services for customers, using technology and software to make it easy for consumers to understand and adjust their energy usage. This allows them to easily control their home energy usage remotely, reducing emissions and also saving money. We are also looking at alternative heating solutions such as heat pumps where relevant and adding these as a product in our solutions to housing developers.

We see opportunities in industrial energy usage to bring our experience across renewable technologies, utilities and waste to industrial users to upgrade their energy and utility systems, reduce emissions and reduce costs. This can be directly at industrial sites or in fleet management with electric vehicles and charging networks.

Across both residential and consumer markets, we are looking at financially viable storage solutions, which importantly offer downside protection. We were one of the first investors to deploy batteries at scale on our solar sites and we continue to look at viable storage solutions for renewable energy.

The energy transition represents opportunities to reduce risk and improve returns in existing assets and new areas for investment. GPs must spend time with management teams to understand what their current position is and then work with them to reduce emissions and provide solutions to assist customers. Ultimately, this is how we can make improvements for all stake holders, from our investors through to the customers of our portfolio companies and ultimately society as a whole. ■



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