

KEYNOTE INTERVIEW

Moving to a more holistic future for energy



*The performance of the clean energy market remains strong, even as some economies and technologies encounter turbulence. Further evolution is likely to depend on the sector becoming more closely integrated, says Nuveen's **Joost Bergsma***

While the energy transition may be a global movement, progress is not uniform across every market. In the US, for example, recent political shifts are resulting in certain technologies, like offshore wind in particular, falling out of favour. In other regions, where the transition is faring better, the driving forces behind clean energy demand vary.

Joost Bergsma, global head of clean energy at Nuveen Infrastructure, discusses why investors are continuing to show interest in renewables, even while taking into account interest rate rises and power price risks. GPs may be needed more than ever to steer

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investors through market volatility, but the sector remains robust, he explains.

Q How is the market performing and which regions have the greatest appetite for continued investment in the transition?

Overall market growth for the power sector is still fairly robust. The International Energy Agency issued a report at the end of March that showed global energy demand growing by 2.2

percent, almost double the rate we saw over the last 10 years. At the same time, global electricity consumption grew by nearly 4 percent. Clean energy rose worldwide by a significant amount, too.

If you look at what is driving the growth of clean energy, there are different factors at play. In Europe, this is primarily caused by a desire for energy independence, while in Asia it is economic growth acting as the driving force.

The European market certainly contrasts with what we are seeing in the US. The US has a lot of access to domestic LNG and oil, which is not the case in Europe. After the outbreak

Q Where are governments currently with regard to grid investment? And what potential challenges do you see?

Grid investment has certainly increased over the last five years. In most European countries, significant capital has been directed towards improving the grid infrastructure, but it is never enough.

I would say the issues around the grid partly stem from the fact that owners are state-owned. This means the process for accessing the grid is not necessarily the most efficient. It can be overly bureaucratic. The production capacity of clean energy is primarily handled by private companies, while the grid itself is still owned by state companies. This leads to something of a mismatch.



of the Ukraine war, Europe has been shifting away from Russia as a source of LNG to other regions. Overall, the strategic goal for Europe is to achieve energy independence and that is why clean energy is likely to continue its growth on the continent.

We have also seen some change in terms of investor interest in the energy transition. The demand no longer seems to be shared by all investors, with some perhaps believing that they already have a good allocation of ESG assets within their portfolio. Roughly speaking, European investors still seem to be as interested in the theme, while the picture is more mixed with individuals from the US and Asia.

It is good to remind yourself that the most important thing for investors looking at clean energy infrastructure has always been returns. No one ever invested purely for environmental or ethical reasons. Clean energy now has a 15-year track record, so purely from a risk diversification perspective, it is likely to continue proving attractive to some.

Q What trends are you seeing in terms of asset pricing and returns? Is there enough capital to supply the project pipeline?

Clearly the return requirements for

“The strategic goal for Europe is to achieve energy independence and that is why clean energy is likely to continue its growth”

infrastructure, including clean energy, have gone up over the last two to three years. It is not necessarily the case that the risk perception of the sector has increased, but as interest rates have risen, we have seen a shift back to infrastructure credit.

Three to four years ago, infrastructure credit was not offering significant enough returns but now we are seeing some volume moving away from clean energy equity to credit. The flip side of this is that the return requirements for infrastructure equity have gone up. To some extent, this has made it possible to deliver slightly higher returns. Clean energy has benefited from higher power prices.

We have also seen some dislocation as the sector adjusts to changes in the market. Last year, there was not a lot of deal volume. Rather than being caused by a lack of capital, this was primarily due to a gap between buyer and seller expectations, but this is now narrowing. Slowly, we are starting to see rates decrease and the expectation is that as interest rates continue to come down, the gap between buyers and sellers will narrow further.

Q With governments stepping back, how is the private sector stepping up with regard to energy contracts?

It is not a uniform picture but overall the trend line indicates that clean energy will become more market-driven, with the market already strengthening in several areas. For instance, when it comes to the volume of electricity being produced, we have seen a significant rise in the number of PPAs.

A B2B market is definitely emerging, especially around commercial real estate, public facilities and small to medium-sized enterprises. They are all looking at ways of making their operations more energy efficient and, often, clean energy has a big role to play.

If you look at other pockets of the market, the government is still needed. In wind, for example, production costs

are still quite high due to elevated commodity and labour prices. Particularly in Europe, you have seen governments put in place support mechanisms for technologies like offshore wind. Battery storage and grid infrastructure have received similar public sector backing.

Most investors look to infrastructure for predictable cashflows from proven technologies. The heightened power-price risk has resulted in the private market increasingly stepping in.

As a GP, we have to be able to provide very clear answers regarding how we will deal with negative power price risk. The good news is that the market is becoming more liquid and we are entering into lots of hedges and sophisticated PPAs. Overall, the sector, especially when it comes to power prices and offtake, is more volatile. Investors want GPs to offer solutions to mitigate this volatility.

Q How far away are we from clean energy meeting baseload demands?

“Investors want GPs to offer solutions to mitigate this volatility”

It is difficult to put a timeframe on that but we still have a way to go. If you are looking at a single project involving clean energy, it is still quite difficult to meet baseload demand through renewables alone. A mix of technologies is needed, such as wind and solar, to take advantage of their complementary production profiles. Ultimately, these technologies also need to be affordable.

The cost at which this technology mix is available is driven, in part, by scale. In Europe, with its high population density, it is hard to find large areas to implement both wind and solar projects at the necessary scale. In short, we may not be able to meet baseload demands through clean energy yet, but we know how to get there.

The other factor that needs to be discussed regarding clean energy baseload is batteries. There are different ways to invest in this technology. At one end of the spectrum, you have fully regulated batteries, where all of the revenue is paid for by the government, which essentially takes control. At the other end is a pure arbitrage-type investment.

The countries that are especially attractive for battery technology are those where governments are providing the right incentives, such as capacity payments. This includes markets like some Nordic countries, the UK and Italy. We expect more battery production to shift from the US to Europe. This year could be a big year for batteries.

Q What do you foresee for the future of the energy transition?

I remain optimistic about the next five to 10 years. Of course, some sectors seem to be taking a hit in certain markets, like offshore wind in the US. However, even with regards to this technology, Europe continues to be very attractive. This is notwithstanding Europe's own challenges with offshore wind, such as an overly concentrated supply chain and higher prices. Still, governments have stepped in, so I

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remain positive on a five-year basis.

Elsewhere, I am quite confident that batteries will find their place in the market. Typical lithium-ion batteries are able to provide short-term storage. However, what is really needed to propel the sector forward is medium and long-term storage.

Over the next five to 10 years, I am confident we will see this technology becoming available. For instance, I would expect hydrogen fuel cells to become more user-friendly, cheaper and used more widely.

The other thing I expect when looking at the future of the transition is for the sector to become more holistic, more of a B2B sector. Today, and over the last 15 years, the sector has been heavily production focused, but over time I expect it to become more integrated. You will see supply and demand under one roof, which could result in energy efficiency offerings where you own both energy production and storage while providing services to the end user. ■