

Talking Heads with Ed Lees, co-head Environmental Strategies Group

Daniel Morris: Hello and welcome to the BNP Paribas Asset Management Talking Heads podcast. Every week, Talking Heads will bring you in-depth insights and analysis through the lens of sustainability on the topics that really matter to investors. In this episode, we'll be discussing investing in environmental strategies. I'm Daniel Morris, chief market Strategist and I'm joined today by Ed Lees, Co-CIO of the Environmental Strategies Group. Welcome, Ed, and thanks for joining me.

Ed Lees: Hi, Daniel. Great to be back.

DM: It's been a pretty surprising 18 months, two years – and the impact of those surprises on the space you invest in: a less positive surprise as far as ESG (environmental, social & governance) [investing] is concerned, with the election of Donald Trump in America and a change in the attitude of the US administration. On the other hand, a couple of supportive surprises – the arrival of AI (artificial intelligence) in data centres, the demand for energy and the realisation that they need everything that they can get, regardless of the source.

Then also, perversely, the war in Iran, where a new appreciation of dependency on oil markets isn't the most desirable position to be in and [thus] looking for alternatives.

These are some of the factors you're having to deal with when you think about investing in this space. What are the main themes for you today for environmental solution strategies?

EL: I'll start just with more of a bird's eye view of the different themes in which we operate and broadly why they matter. The first is power. But power is broad – it's equipment and critical materials, not just solar, wind and fuel cells, but also the relevant metals. It's also clean energy production and power infrastructure, but also transmission and distribution and energy efficiency technologies.

That includes the all-important AI and power efficiency, but also E mobility, battery technology. We look at water, water utilities, and the waste infrastructure and circular economy. And I'd mention food and agriculture, but also animal health and nutrition, food ingredients and enzymes.

If we look at power, we see a 60% increase in global developed market power demand over the next 25 years. We see electricity demand growing at slightly above [the] compound annual growth rate through 2030 after 30 years of stagnant growth, driven in part by AI and data centres in Europe, also by broad electrification – cars, heat pumps, industry. This impacts the entire value chain from generation to transmission and distribution equipment and storage.

On water, water infrastructure in the developed market desperately needs modernising. By 2030, global freshwater demand is projected to outpace supply by 40%. Driving this is global warming, which is increasing the water cycle volatility. Warmer climate equals more evaporation, less water for food and industry and drier land, which equals more forest fires.

We know water is critical for society, and we need solutions for this new normal but also to look for ways to adapt. On food, arable land per person globally continues to decline. Towards the end of the century, it could decline as much as 70% from levels in the 1960s.

Climate change is decreasing [the] supply of foodstuffs through heat, drought and extreme weather, causing food inflation. Worryingly, geopolitical fragmentation has the potential to weaponize food supply chains.

There are micro markets and there'll be different dynamics in different areas, but on balance, the trends are concerning – that's the main takeaway. I was just trying to highlight in those three verticals some of the key long-term trends – they're all durable and they're not going to be fixed quickly and that does open the door for ongoing investment opportunities.

DM: So we talked about the three key areas, the key trends that you're looking at. What are the key factors that are affecting those decisions today?

EL: From a macro perspective, there's the rising 30 year [interest rate] This is a headwind for longer duration assets and also for high-yield companies or dividend paying companies. Linked to this is rising oil prices and inflation. [Fed Chair Kevin] Warsh's comments at [the] Jackson Hole [central bankers' conference, 27-29 August] are relevant for this.

And separately, it's interesting to see that, in oil, China's (and the world's) largest refiner said China hit peak oil last year. [It's] interesting, global peak oil could come a little bit sooner than we think, but this space is dynamic and needs to be monitored. I'd say the whole market is grappling with rising money supply, driven in part by China stimulus, [and] also the weakening [US] dollar, which could be an outcome of recent Treasury purchases that have been announced. This should, on the other side, help risk assets.

Looking at the three segments, in power, I'd say energy security is back on the table due to Iran, particularly for Asia that imports a lot of fossil fuels; this heavily will incentivise domestic renewables. We see solar and wind capacity expected to triple by about 2035.

The other point in power is [the] increased need for data centres to bring their own power to mitigate public backlash – fuel cells, batteries small modular nuclear reactors. You know, we've seen some more deals, for example, in the solid oxide fuel space. And we continue to look at pinch points in the power system.

Where we invest on water, current considerations include PFAs, a type of forever chemical used in industrial processes, that, unfortunately [are] negative for human health. Regulation has been growing in the US and Europe to drive advanced treatment to help mitigate the problem. And China's also tightening its own regulations, so that is a relevant topical area.

Coming back to drought, we need more water and wastewater treatment to augment the supply. And there's also industry implications from drought. By 2030, about 36% of global power generation and 42% of data centre capacity is expected to be in high water stress regions. Water is critical for these.

Weather volatility could impact food production – it worsens drought, flood, heat and storm conditions. The last 12 months, we've seen increases in various agricultural commodity futures. EU crop yields this year look set to fall about 14% below their five-year average. And specialty crops can be even worse – Spain's wine federation is projecting a 20% fall in production. Then there's Iran and the Strait of Hormuz, this impacts fertiliser supply, increasing prices.

DM: It's a big world to be thinking about and tracking. Ed, if you could focus in some of the main opportunities that you see going forward?

EL: Sure, I'll again split it out: power, water and food.

On the opportunity side, utility scale solar. We're seeing huge power demand growth. This is the main limiting factor for AI and it's in the midst of one of the strongest buildout cycles on record. USA – a 30% increase from the second quarter in 2025. India, a 49% year-over-year increase. Why? It's the cheapest and quickest but also has the lowest water requirement, and it's the least impacted by global warming. On a variety of categories, solar comes out as the winner and backlogs at key utility scale solar equipment suppliers are at or near record levels.

Battery and energy storage – also growing in importance. Too much power curtailment is a dynamic that we see around the world. Where renewable capacity has been overbuilt, this can intermittently crash power prices. It's linked to grid instability. And battery prices are falling. So we see lots of battery growth for energy storage – global battery storage capacity is projected to increase about six times between 2025 and 2030.

Generally, maintaining grid reliability is becoming more complex due to distributed and variable power. And decades of underinvestment have created an urgent need to expand and modernise grids around the world.

Turning to water, desalinisation is a key area. It currently supplies less than 1% of global drinking water, but it's critical for water-stressed regions. Global installed capacity has grown by about 40% since 2020, but expectations [are] for this to double by 2030, so growing strongly. Water recycling is also a very interesting area. It requires 30% to 70% less energy than seawater desalinisation but only about 11% of treated wastewater is reused globally, so potentially a good growth area.

Smart meters aids in leak detection, but [there is] also water solutions for data centres. They can consume millions of gallons of water daily for direct server cooling. As an example, one company of ours [that we invest in] reported a 300% growth rate in their data centre order business for applied water solutions.

Turning to food, we need more drought resistant seeds. This could be about a \$9 billion annual market in the coming years. Agriculture, broadly, is the biggest water user. It uses about 70% or so of global freshwater, so it has to learn to use water more effectively.

This opens the door potentially for more controlled, more precision agriculture. We think smart irrigation could double by about 2030. For food, there's potential for AI applications to help drive improvement – genomics for seeds, but also big data for robotic and precision agricultural work through image analysis.

But there's also AI applications in the water space and in the power space. So those are some of the areas that we're looking at today for opportunities.

DM: You sound like a very busy guy! If I can summarise some of the key points that you shared with us, Ed, I think after perhaps despair with the new US administration, things have become brighter, at least partly because of the clear need for greater energy supply for AI and data centres, whatever the source. But renewal is a key consequence of the Iran war and a desire to have other sources of energy.

You highlighted you're looking not just a[t] power; also at water and food. Some of the biggest opportunities you see there, separate from increasing energy supply for data centres, looking at desalinisation plants to increase water supply and also technologies to increase food production.

Ed, thank you very much for joining me.

EL: Thank you very much for having me, Daniel.

DM: That's it for this week's episode of Talking Heads. If you would like more information about our capabilities in environmental strategies, please reach out to your asset management contact or check out Viewpoint, our website for investment insights at [Viewpoint.bnpparibas-am.com](https://viewpoint.bnpparibas-am.com).

Just before we go, I'd like to mention that the Talking Heads podcast is available on Spotify and on YouTube. For YouTube, visit [the] [YouTube.com bnppam](https://www.youtube.com/bnppam) playlist and tap or click on Talking Heads.

You've been listening to the BNP Paribas Asset Management Talking Heads podcast with me, Daniel Morris and Ed Lees, Co-CIO of the Environmental Strategies Group.

Please do join me next week. Until then, take care.