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Beyond data centers: The broader opportunity in the energy transition

For Macquarie Asset Management (MAM), the scale and complexity of the energy transition demands a dedicated focus. Since first investing in renewables in 2005, MAM has become home to one of the world's leading specialist green investment teams, which invests in companies, assets and technologies that aim to capture opportunities to power our economy.

IREI recently sat down with Elise Vaudour, head of wealth – green investments at MAM to discuss the supply-and-demand drivers in today's power generation sector, and where she sees investment opportunities. The following is an excerpt from that conversation.

CONTRIBUTOR



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Based in Paris, Elise is focused on delivering investment opportunities offered by the global energy transition and serves on the investment committee overseeing MAM Green Investments strategies.

What are the primary drivers of long-term power demand?

Behind our energy transition infrastructure thesis are both demand and supply drivers. Data centers and artificial intelligence (AI) get most of the attention, with data center power demand projected to triple by about 2035. But even at that pace, data centers are expected to account for only around 17 percent of incremental global power demand over the next decade, according to BNEF. So most of the growth comes from industry, transportation and buildings.

> *"We don't build our thesis around any single source of demand, including AI. Instead, we see a multi-decade transformation of energy systems that requires sustained investment across several subsectors."*

What are you seeing on the supply side?

Supply-side drivers are coalescing around energy security and affordability. Renewables have become the most economical and fastest technology to deploy, so if you want to deliver power quickly and on competitive terms, renewables are the best option. That means the opportunity set is not driven by short-term cycles or AI hype. It reflects a multi-decade transformation of energy systems that requires sustained investment across several subsectors. As infrastructure investors, we invest for the long term, so that multi-decade opportunity is what we look for.

We've seen estimates of a widening supply-and-demand gap between the roughly $3.3 trillion invested in energy annually and the approximately $5.0 trillion some scenarios suggest is needed. Where is that gap most acute?

These figures come from policy-linked scenarios meant to indicate need, not a real-world base case. Once you're talking trillions of dollars, the numbers become almost unfathomable, but they still show the scale of the need.

The investments required to replace and build infrastructure are large enough that all pools of capital will need to be mobilized, and even then, there's unlikely to be enough capital to reach $5 trillion a year. The shortfall isn't only about capital availability; it's also about delivery. Providing capital is important, but delivery is a separate layer of opportunity. Grid congestion and permitting delays create bottlenecks that slow how quickly supply can meet demand, widening the gap and creating the opportunity behind our investment thesis.

MAM brings deep infrastructure expertise as well as capital. I work closely with colleagues who are energy-market experts, engineers and procurement specialists. We don't just acquire existing companies and create value in them; we also develop and build new infrastructure assets that help ease the bottleneck. Combining capital with delivery capability is powerful, and we expect that gap, and the opportunity it creates, to persist for years, even as the broader forces shaping energy markets continue to evolve.

Investors are focusing more on higher infrastructure returns than in the past. How do you continue to protect the downside while still providing the risk-adjusted returns investors are seeking?

The definition of infrastructure has broadened considerably since I started investing in infrastructure 20 years ago. Some energy and digital assets weren't considered infrastructure back then. To judge whether an investment is truly infrastructure, we go back to fundamentals; you could call us purists on that front. We use the acronym HALOID: hard assets, low obsolescence and inelastic demand. We also look for inflation-correlated, long-term contracted revenue. Those elements define what we consider a true infrastructure investment, with the downside protection that implies.

Returns come from our infrastructure expertise, not from aggressive leverage or risks that conflict with that core definition. We don't take technology risk; we wait until a technology is proven and commercially viable before investing. Much of our strategy sits in the core-plus category, where our team can optimize operations, negotiate terms, and improve contracts, revenue and costs to generate returns.

Building new assets is another value-creation lever, if you have the expertise to manage the risk. We're disciplined about deploying capital only once certain milestones are met, which derisks the asset. Once a new asset comes online and starts delivering power under a long-term, inflation-linked contract, there is the potential to create instant value. Building new assets, optimizing existing businesses and understanding local energy markets to capture opportunities as they arise are how we create value.

We also seek influential or controlling positions. Without enough control in a business, it's difficult to use the levers we rely on, from optimizing contracts to timing an exit.

Can you give me an example of how you capture opportunities as they arise?

There was concern about recent policy changes, such as the One Big Beautiful Bill Act, and what it might mean for energy transition infrastructure investment. That moment actually generated opportunity because market dislocations like that create a flight to quality. Well-capitalized players with the expertise to assess asset quality can capture opportunity rather than suffer from the change.

We saw that with DESRI, one of our portfolio companies. While many market participants were focused on policy uncertainty, DESRI continued to execute, announcing 850 megawatts of new power purchase agreements with Meta in 2026, bringing the partnership to approximately 2.6 gigawatts across nine U.S. states. The ability to keep investing and executing through periods of uncertainty is often where the most attractive opportunities emerge.

> *"At the end of the day, it's fairly simple: buy well, know your markets, know the opportunities and ignore the noise. We focus on the long-term signal rather than short-term noise, whatever the strategy or structure our investors choose."*

Does your strategy differ across markets and regions?

Yes and no. Policy is a risk in our investment universe, so we're deliberate about portfolio construction and diversification across energy markets, policies, revenue models, offtake and counterparties. We operate in close to 30 energy markets, and our approach varies by market and technology. We see strong offshore wind opportunities in places such as Europe, but not everywhere. Some markets favor solar paired with battery storage while others don't. There's no one-size-fits-all strategy; we don't always build new assets in one market and always buy existing operating assets in another. Determining the right approach in each market requires a large team; we have more than 90 people worldwide, giving us global scale with local market knowledge.

What are some of the investment theses you're seeing around the world?

In North America, digitalization is driving strong opportunities in solar-plus-storage, powering data centers and easing grid bottlenecks. Europe is a more mature market for energy transition, which creates opportunities, including battery storage, and investments focused on industry and transport – for example, bio-fuels. In Asia, demographics, digitalization and energy security are converging as strong drivers. And in Australia, where Macquarie is headquartered, coal retirement is driving significant investment in the energy system. The opportunity set varies by market, but each offers a distinct path to creating value for investors.

MAM has invested through multiple energy and market cycles. What lessons from past investments are most relevant to the opportunities you see today?

Our track record reflects a simple first principle: discipline in staying true to our infrastructure mandate. We've learned that downside protection depends on holding to those characteristics. When we focus on the value-creation levers we've discussed, we can find opportunities in nearly any cycle, whether that's patiently building new assets that grow the balance sheet, reducing costs, or securing favorable new contracts and consolidating our position.

At the end of the day, it's fairly simple: Buy well, know your markets, know the opportunities and ignore the noise. We focus on the long-term signal rather than short-term noise, whatever the strategy or structure our investors choose. Believing in real market value also means knowing when to exit or rotate assets, which again comes down to expertise and local market knowledge. Put together, that's what makes infrastructure investing resilient across cycles.

What are the risks for the next five to 10 years on the electrification theme?

Given the scale of transformation needed to meet growing power demand and future-proof the energy system, the key risks are a capital gap in delivering it, and failure by specific operators to execute in a complex environment. The scale of investment required is significant, and public budgets can't finance all the necessary assets, projects and grid upgrades. That means private capital will need to fill much of the gap. Combined with delivery bottlenecks, that will be a real constraint over the next five to 10 years.

Political and policy changes will also have an impact. The most obvious effect is to slow investment in some markets while accelerating it in others. Less obviously, policy shifts can create a flight to quality, opening opportunities for players like MAM with the capital and expertise to source deals on favorable terms.

In this way, the risks of a complex environment become a source of opportunity for investors with the discipline and delivery capability to navigate it.

CORPORATE OVERVIEW

Macquarie Asset Management (MAM) is a leading global asset manager, trusted by institutions, individuals and communities to responsibly manage $517.9 billion in assets. MAM provides clients with a diverse range of investment solutions that seek to deliver superior risk-adjusted returns.

Macquarie Asset Management is part of Macquarie Group, a diversified global financial services group operating in asset management, retail and business banking, wealth management, as well as advisory, and risk and capital solutions across debt, equity, financial markets and commodities. Founded in 1969, Macquarie Group employs more than 19,100 people in 30 markets and is listed on the Australian Securities Exchange.

All figures as of June 30, 2026.

For additional information, visit macquarie.com/mam/wealth

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