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Financing the NSW energy transition

An open letter to the finance industry

from Paul Verschuer, Executive General Manager

For Australians, climate change presents economic and social challenges and opportunities.

Climate change and ways to decarbonise is front and centre for governments right around the world. The number of countries announcing pledges to achieve net zero over the coming decades continues to grow, with a large emphasis being placed on reducing energy-related emissions.

Like most challenges, tackling climate change through decarbonisation presents an incredible opportunity to detach energy prices from the volatility of global fossil fuel markets and deliver more affordable and cleaner energy for consumers.

In New South Wales, decarbonisation presents an opportunity for financiers to contribute to something that will make a real, meaningful and positive impact throughout society – from low-income families facing rising power prices, small business through to the largest energy users and broader industry.

The [International Monetary Fund](#) estimates that \$3 trillion to \$6 trillion per year until 2050 will be required globally to address the climate challenge. Closer to home, high-level assumptions utilising analysis conducted by the [Climate Policy Initiative](#) indicate that Australia's energy sector may require \$100 billion to \$200 billion per year to replace aging fossil-fuel electricity generation with cleaner, renewable energy solutions.

Undeniably, the energy transition presents one of the most significant investment opportunities in history. The financial sector has a pivotal role to play by backing projects with innovative products and supporting the supply chain and labour to deliver these projects.

The energy challenge in New South Wales

In New South Wales (NSW), four of the five coal-fired generators accounting for three-quarters of the state's electricity supply, will be decommissioned or retired due to age in the next 11 years. Our transmission network was built to deliver energy from these five power stations to major load centres.

Renewable energy will be decentralised across the state focused in at least five Renewable Energy Zones (REZ). The zones will group renewable generation, transmission, and storage infrastructure in strategic locations where there is high-quality renewable resource and the energy generated can be efficiently stored and transmitted across NSW when needed.

This new decentralised approach means our existing transmission system needs to evolve, and upgrades to the existing transmission network and new transmission infrastructure will be required to connect the new electricity generation and storage to the power system.

Strong energy policy provides peace of mind

Governments across Australia have made public commitments in support of the energy transition, ranging from agreements on net-zero emissions targets, to real dollar incentive mechanisms designed to bring forward the necessary investments.

In NSW, the government has set a target to reduce emissions by 70% by 2035 compared to 2005 levels and committed to net zero emissions by 2050. The Electricity Infrastructure Roadmap (Roadmap) is the biggest contributor to meeting this emissions reduction target. The Roadmap provides for coordinated investment in transmission, generation, storage and firming infrastructure to deliver ‘whole-of-system’ benefits – at an unprecedented scale.

Global research has shown that earlier forms of energy infrastructure incentive schemes had often achieved their energy goals, but sometimes at a significant cost to consumers. The Roadmap takes a different approach, requiring energy consumers and host communities to be at the centre of planning and decision-making.

What is our role?

[AEMO Services](#), as the NSW Consumer Trustee, is helping bring the Roadmap to life by carrying out coordinated planning of long-term investment, competitive tenders to facilitate this investment, and authorisation of Renewable Energy Zone transmission infrastructure.

At least \$32 billion in private capital for new infrastructure investment will be required to deliver a minimum of 12 GW of renewable energy and 2 GW of long-duration storage in NSW by 2030. AEMO Services determines the size and staging of electricity infrastructure investment under the Roadmap to meet this target, taking into consideration new technology, trends and consumer demand for energy. Details of this are outlined in our [Infrastructure Investment Objectives \(IIO\) Report](#).

At a national level, Australia’s federal government recently announced its [Rewiring the Nation plan](#), a [Commonwealth Capacity Investment Scheme](#) and a [funding package of \\$7.8 billion to back eight critical transmission and REZ projects](#) which will support our the activities being undertaken under the state program of work, and increase electricity reliability across the national electricity network.

Unleashing private investment in new energy

Project development lead times and costs are being impacted by global supply chain constraints, further increasing the need to act quickly and provide support to renewable energy proponents if we are to ensure we can continue to enjoy clean and reliable energy supply. The financial services sector has a crucial role to play in helping mobilise and shift capital to support and accelerate the development of renewable energy and open critical supply chains – capital is required for the builders, owners and operators of new electricity transmission, generation and storage infrastructure, and capital is required by the corporations who will need to scale up the supply of materials and labour to feed it.

AEMO Services has engaged with investors, project proponents and financial institutions to design new products and processes to incentivise and hasten new energy investment in NSW. Our approach to incentivising renewable investment has received widespread support from industry and other stakeholders.

Long-Term Service Agreements

Our Long-Term Energy Service Agreements (LTESAs) are a new and innovative options contract which offer generation, storage and firming projects the rights to access minimum cash flows for periods within a long contract term (up to 20 years for generation projects, and an annuity payment for up to 40 years for long-duration storage with a minimum duration of 8 hours).

They are designed to protect investors from the risk of unexpectedly low wholesale electricity prices, while maintaining exposure to upside where electricity prices are higher, maintaining the potential benefit from higher uncontracted electricity prices and the flexibility to enter into power purchase agreements. The LTESA achieves this by providing the Operator with a series of options to enter into fixed length derivative arrangements, incentivising investment and providing consumers long-term stability in supply and contracting.

We have consulted extensively with the market on the design of the LTESA and **we are confident they are bankable.** The contractual counterparty to LTESAs is the Scheme Financial Vehicle (SFV) that is rated Moody's Aa3. The SFV will serve as the independent counterparty to LTESAs and provide revenue (as determined by the Australian Energy Regulator) for Renewable Energy Zone network infrastructure projects and Priority Transmission Infrastructure Projects developed under the Roadmap.

Our products and processes minimise the impacts of intervention, recognising that competition provides the best protection to consumers, and private sector innovation and execution capability are in the best interest of consumers. They ensure that only projects that demonstrate significant benefit to consumers and the communities that host them get supported, and in return, the developers and investors of these projects receive products that **give them far greater flexibility than the traditional Contract for Difference (CFD).**

10-year rolling plan of competitive tenders

Through our 10-year tender plan, we are identifying the best projects in NSW that will bring quality energy to market soonest and providing them with the financial security and/or network access they need to realise that potential. Our tenders ensure competition thrives and the best, most efficient projects which deliver energy in a socially responsible way are supported to construction as early as possible.

In Q2 2023, we will conduct a tender for firming infrastructure as well as the second tender for generation and long-duration storage. We also expect a third tender round for generation and long-duration storage to take place toward the end of the year. Tenders are open to projects located in New South Wales that commit to deliver built infrastructure through a LTESA. Proponents are also able to seek an 'Access Right' to connect to new REZ transmission.

Closing thoughts

We must act quickly to ensure energy remains secure, reliable, sustainable and affordable as NSW coal generators reach their end of life.

The energy transition is necessitating the need for financiers to think outside the box and innovate to find new ways of creating, distributing, and financing electricity. It's changing the way government's think about energy policy and the need for long-term market certainty to stimulate investment. It's driving innovation and advancements in energy technologies, products, systems, and processes. It's changing the way we mitigate investor risk through new products and services to support new energy development and supply chains and bring new energy to market sooner.

The energy transition and overcoming existing constraints will be complex and challenging, but it will also create many exciting opportunities for our state and the energy sector more broadly. Private sector innovation and execution capability are critical to hastening the transition and serving the best interests of consumers. I'm confident that by working together we will overcome these challenges and bring our energy system into the future.

<Callout box>

I want to recognise and thank the financial institutions that have already engaged with our work and are supporting their clients in fully understanding the value in our designs for both debt and equity. Proponents that understand this will more than likely be those that are successful through our competitive tenders.

-ENDS-

About the author

Paul Verschuer, Executive General Manager

Paul is responsible for leading the management of AEMO Services.

Prior to joining AEMO Services in June 2021, Paul spent more than 35 years in senior governance and management roles across the financial, government and energy sectors. This includes working with the NSW Department of Planning, Industry and Environment, Westpac, the Commonwealth Treasury and NSW Treasury.

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