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Maintaining consumer value while enabling ambitious Net Zero commitments

*Delivered by Paul Verschuer, Executive General Manager
at Industrial Net Zero Conference*

Good morning. I'm Paul Verschuer, and I lead AEMO Services. Thank you for joining me this morning – I'm grateful to have this opportunity to speak to you today at Industrial Net Zero 2023.

I'd like to begin by acknowledging the Gadigal people of the Eora Nation as the First Peoples and Traditional Owners and custodians of the land and waterways on which we meet and pay my respects to their Elders past and present. I extend this respect to all First Nations people here with us today.

I would also like to recognise the Traditional Owners of country throughout Australia and acknowledge that, wherever we work, we do so on Aboriginal or Torres Strait Islander land. I pay my respects to those Indigenous cultures, who have deep and continuing connection to Country, and hope that our work can enrich their lands and waters to the benefit of future generations.

As I'm sure most of you are aware, the development of human society over the course of millennia has been a story of energy transitions. From fire itself through the introduction of farmed cereal grains to the coal furnaces that fuelled the industrial revolution. While each of those had effects at an individual level, they progressively increased our ability to produce at scale, and intensive energy use is a hallmark of our most productive industries.

Navigating the next energy transition without adversely affecting our collective ability to produce goods and services will be key to maintaining quality of life for Australians and people around the world. It has been encouraging to hold conversations with so many of you who are working on this challenge for your respective industries, and I'd like to speak to you today about the work we're conducting in NSW to ensure that as you do transition to less carbon intensive forms of energy supply, in particular as you electrify more and more of your operations, you can count on the state's electricity network to be there – with clean, reliable electricity at the lowest price possible.

The urgency lent by the scheduled obsolescence of most of the coal-fired generation fleet over the next ten years has helped focus attention and secure bipartisan support for necessary action in NSW. The state's energy transition is an extraordinary challenge, but it is by no means unique. Other jurisdictions are facing similar sets of decisions with the potential for scheduled closures of traditional power stations to be brought forward as the economics and social licence of coal declines and the case for delaying the energy transition continues to erode.

AEMO's 2023 Electricity Statement of Opportunities report highlights the urgent need for investment in generation, long-duration storage, and transmission right across the NEM in order to reliably meet demand from Australian homes and businesses over the next decade.

NSW is a precursor to other states following the same path, and the innovative, consumer-focused approach we've taken to incentivising private sector participation in NSW's energy transition offers learnings for every jurisdiction.

It's well understood that transforming the energy system to net-zero emissions requires a build out of critical infrastructure and many billions of dollars of capital. A fact that is often not publicised – but one to which I'm sure you're all attuned – is that these costs all flow through to energy consumers in one way or another.

You don't need to be told that energy prices, uncertainty around future supply and rising demand from decarbonisation are already hitting home for energy consumers in homes and businesses across the country.

Yet the success of the transition to net zero depends on the continued confidence and participation of these very same energy users. That's why consumer value is written into our mandate and pushed to the forefront of everything we do.

It even features in our job description – Consumer Trustee – under the NSW Electricity Infrastructure Roadmap.

Although AEMO Services is a stand-alone subsidiary of the Australian Energy Market Operator, established to provide independent expertise around the energy transition to jurisdictions across the National Electricity Market, most of our work to date has been in fulfilment of this foundational role as Consumer Trustee under the Roadmap.

We're trusted by the state government to protect the interests of NSW energy consumers through our work in energy system planning for the transition to renewables and the electrification of much of the state's industry.

Through this planning, we set development pathways for the acceleration and co-ordination of long-term private sector investment in generation, firming and long-duration storage, and we then conduct competitive tenders to bring forward the projects with the greatest potential to help the state meet its future energy needs.

We engage closely with the market, consumer representatives, government, and investors to ensure new energy infrastructure delivers the energy that is needed, when it is needed, and in a way that protects the long-term financial interests of electricity consumers, whilst benefiting host communities.

Where equivalent transition incentive schemes had been established both locally and overseas, the research shows that they are typically successful at delivering against their energy objectives, but that this success came at a significant, sometimes questionable, cost to energy consumers and taxpayers. It was clear we needed to turn this dynamic on its head with innovative solutions to incentivise private sector investment if we were to avoid similar outcomes in NSW.

We needed a product that would provide a larger incentive for those projects coming early and taking greater risk on transmission build delivery. We also needed for that product to be competed down to zero as a market signal when financial support was no longer required. Finally, we needed repeatable, consistent tender process that would deliver at least 12GW of new renewable electricity generation and 2GW of long-duration storage by 2030; and firming and network capacity to meet the state's Energy Security Target.

The traditional Contract for Difference (CFD) model used both in Australia and overseas did not meet these criteria. Given that it is essentially a zero-value risk transfer between investors and consumers on the future price to be paid for the energy produced, it will always be set close to the levelised cost of energy (LCOE). It was designed in that time when the economics of renewable energy were weak, and subsidies were required to stimulate innovation.

A number of the project proponents we engaged with supported this hypothesis and suggested that if the state's Renewable Energy Zones were delivered as designed, they would have no need of a financial support mechanism at all. If this proved true, the use of 20-year CFDs in our tenders would clearly be an unconscionable use of consumer money.

So after extensive consultation, our team developed innovative Long-Term Energy Service Agreements (or LTESAs); incentives that utilised swaptions as the key financial support mechanism for periods of price risk.

LTESAs can be competed down to zero, and we expect that as the REZs become fully established, they will be. This is not just because of the increased certainty that will accompany better developed transmission infrastructure, but also because quality connection opportunities in high-renewable resource zones will be plentiful, and projects across the state will compete for a finite amount of financial support in each tender.

The LTESA provides proponents insurance against times of very low wholesale energy prices. Having dealt with that price uncertainty, projects are free to capture the full range of market upside, and critically, we obtain value for consumers because projects compete to bid down the option strike price, ensuring that only the most cost-efficient are successful.

The LTESAs act across three main factors that drive customer electricity prices to deliver lower costs for users over the long term.

First, they reduce risk for investors of projects, bringing them to market sooner, thereby increasing supply and lowering spot prices for electricity over the long term.

Second, they provide projects with flexibility to utilise power purchase agreements and wholesale contract markets to opportunistically hedge their electricity price risk. The additional security of the LTESA insurance may also increase the range of counterparties with whom suppliers are willing to trade on the wholesale contracts market.

Third, we had hoped, and so far we have seen, that these benefits open the door to new entrants, increased competition, and product innovation in the retail market.

Under these contracts, the risk to consumers from incentivising a project now only occurs at the low end of the wholesale price market. The consumer bears the cost if market prices are below the fixed price, and the consumer receives the benefit if market prices are higher.

LTESAs are offered through our rolling schedule of biannual tenders, which have been designed to harness the capabilities of the market for new energy infrastructure, drawing on its drive and innovation to find new and better ways of delivering critical energy. We have specifically designed our processes to encourage participation and foster competition, allowing the market to play a central role in shaping the mix of projects that will support our legislated investment objectives, and ensuring long-term value is delivered to energy consumers and host communities.

Our unique tender process features three points of difference that contribute to better outcomes for electricity consumers than has been achieved elsewhere and at less cost than in previous schemes.

First, it allows repeated participation at minimal additional cost to proponents, increasing our ability to select the right projects at the right time. Predictable, recursive tender processes deliver better outcomes than ad hoc interventions by encouraging participation amongst proponents and investors, increasing competition and driving value for consumers.

Second, the tender process is flexible and long-term to capture the full potential of new innovation and respond to changes in the market. We fully expect our tenders and products to look different in five years compared to today, as markets change and new technologies emerge. This flexibility will allow us to adjust the infrastructure build out to deliver the right energy mix, at the right time, and at the right cost, while ensuring reliability of energy and a fast transition.

Third, the tenders' two-stage design assesses the social licence credentials and ability for a project to deliver first, before a shortlist is invited to compete on price. Consumer and community benefit is central to the renewable energy transition. The tender process ensures that communities who host the new renewable energy generation infrastructure benefit directly from its development. By assessing binding social licence commitments first, we help to ensure local supply of goods, labour and services along with opportunities for local apprentices and trainees, as well as First Nations' people.

It's clear why this is so important: the sheer scale of the necessary investment is unprecedented; energy technology is quickly evolving; and both energy consumers and host communities rightly expect that the transition will lead to improved outcomes for them.

Our products and tender processes rely on competition to deliver value, and we've been very conscious in our design to maximise the attraction for proponents and investors to ensure a high level of participation in our tenders.

Our early results show that we've been successful. This new way of tendering and financial support mechanism has been met with enthusiasm from the market.

Right from the outset, it was clear that some proponents had thought deeply about our new mechanism and the ways in which they could maximise its benefits. These projects stood out amongst the crowd in our first competitive tender for generation and storage infrastructure, which was five times oversubscribed.

Three renewable generation projects with a capacity of 1,395MW, alongside one 8-hour battery, were successful in this tender, having comprehensively demonstrated their financial value to NSW electricity consumers and benefits to their host communities through our two-stage process.

The Generation LTESA strike prices for these projects were around 40% lower than the Levelised Cost of Energy and an equivalent Contract for Difference – so we are well and truly delivering on our mandate for electricity consumers.

Across our broader bidding group, we received innovative and considered initiatives from a number of proponents, including ambitious projects to secure employment outcomes for First Nations people, careful and creative site selection, and a range of other community benefits. We designed our processes to minimise friction and allow unsuccessful bids at one tender to easily participate in the next, ensuring we capture the full value of these initiatives at the right point in the transition.

We are currently assessing bids for our second tender for firming infrastructure and our second competitive tender for generation and long-duration storage. This will be followed by the commencement of another generation tender before the year is out.

Our firming tender attracted enough interest to warrant welcome additional support from the Commonwealth, who are now funding up to an additional 550MW of firming capacity on top of our indicative target of 380MW.

There's plenty more to come, particularly in storage where the technology is less advanced, but we're confident that our process and product design has identified the right settings to achieve our objectives with maximum value for NSW consumers.

We're taking a different approach to many of the other schemes around the world that seek to incentivise the energy transition – and moving the dial on how and when government and consumers should incentivise new infrastructure. Times move, and innovation drives change – and consumers rightly expect that this is reflected in financial outcomes for them.

We've recognised the benefits of minimal intervention, and the potential for competition to deliver lasting financial value to consumers through the transition and the power of private sector innovation and execution capability.

We've challenged the traditional tender methodology, with a unique a two-stage assessment process that achieves this financial value alongside demonstrated benefits for host communities.

Our LTESA – an Australian first – delivers better value to proponents and consumers alike.

A highly co-ordinated energy transition that brings new capacity and stability to the system quickly and cost-efficiently is possible. This is what we've planned, and this is what's unfolding in New South Wales as we speak.

-ENDS-

About the speaker

Paul Verschuer, Executive General Manager

Paul is responsible for leading AEMO's independent subsidiary, 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 NSW Government (Energy and Treasury), Commonwealth Government (Treasury) Westpac, Bankers Trust and Macquarie Bank.

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