

**8 May 2023**

## **A new way to deliver the energy transition – by Paul Verschuer**

Less than two years ago, the NSW Government appointed AEMO Services to manage a decade-long competitive tender process to transform the state's energy sector. The anticipated retirement of NSW's coal-fired generation fleet and the need to decarbonise has created an urgent need to develop new sources of energy generation, storage and firming to ensure NSW homes and businesses have reliable access to clean and affordable energy into the future.

Our mandate under the state's Electricity Infrastructure Roadmap was to bring forward energy infrastructure projects at a scale and speed that would deliver one of the fastest energy transitions in the world, protecting the financial interests of energy consumers while ensuring positive outcomes for local communities and the environment.

It is a significant challenge, particularly for a new organisation, and one thing was clear from the beginning: prior models for tendering and contracting with energy infrastructure projects would not deliver against these objectives in the timeframe available to us. AEMO Services would need to draw from expertise within our organisation and across the sector to innovate new products and processes, and given the urgency of the task, this design work would need to take place simultaneously with the early stages of implementation.

Our first Infrastructure Investment Objectives Report, released in 2021, set out the blueprint for our work: a twenty-year development pathway supported by a 10-year schedule of rolling tenders to identify the best projects that would be incentivised to bring quality energy to the network sooner. Reflecting developments in our planning and the market, this document was updated in 2022 and we expect to release a new draft version in May 2023.

Our research showed that earlier forms of energy infrastructure incentive schemes had often achieved their energy goals, but sometimes at a significant cost to consumers, and our aim was to turn that dynamic on its head.

Building on extensive consultation with industry, and deep expertise within our organisation, we developed innovative new financial instruments to address this problem. Our Long-Term Energy Service Agreements, offered through our tender process (along with Access Rights to network infrastructure being developed in Renewable Energy Zones) offer projects options to access minimum cash flows for storage or generation over a long period of time.

These differ substantially to Contract for Difference contracts that are typically offered in such circumstances, in that projects have no obligation to exercise their price option, and can take advantage of upside opportunities as they arise in the market. This flexibility means that while projects can rely on LTESAs for baseline certainty around their investment decision, they are able to develop their own models of revenue generation specific to their situation. Better positioned to capture value from the market, they are able to offer lower contracted prices through the tender process and thus provide greater financial value to NSW energy consumers.

Judging from the successful bids emerging from our first tender round, announced this month, the market sees these products as highly desirable. The strike price of the generation LTESA across the three selected projects was approximately 40% below the Levelised Cost of Energy, representing a significant saving for NSW consumers compared to the traditional contract for difference product used in other schemes. Working with the flexibility of LTESAs, the projects have developed a broad range of revenue strategies including short-term PPAs, long-term PPAs and merchant revenue. These strategies are underpinned by the minimum price provided in the option, without which projects may not be viable at such low cost to consumers.

Many bidders also took up the offer of a contracted percentage, where the LTESA only applies to a proportion of the total capacity of project output, meaning that consumer support is precisely tailored to what is needed to make projects viable.

These approaches, using options and contracted percentages, means projects are still available to contract with large commercial and industrial customers. We are actively supporting more supply and competition in the PPA market. This contrasts with other schemes, which can reduce supply for large customers and make direct contracting approaches like PPAs more difficult.

The strength of our commercial product was soundly underlined by the fact that all successful bidders accepted the LTESAs and Project Development Agreements, and contracts were signed as bid, without further negotiation on price or other terms.

Thanks to the innovation and rigour of our team of energy sector experts, the first tender round of the Roadmap has been a resounding success. With three generation projects contracted at a total capacity of 1,395MW, and one long-duration storage battery project, we're progressing well toward our objectives, and we expect interest to increase as the development of new REZ infrastructure opens up additional project opportunities.

I'd also like to thank the project proponents that came forward and participated in the first tender but were ultimately unsuccessful. We've designed a tender process that enables these projects to submit new, more competitive bids at minimum cost in future tender rounds and I'd encourage them to do so.

We've always been clear that our plan is flexible based on the consumer value presented by projects. For long-duration storage, we have further flexibility with the availability of additional, contingent tenders, which reflects longer lead times and higher uncertainty generally associated with this type of infrastructure development. It's important to note that the NSW Government's commitment to supporting medium to long-duration storage is likely to assist these technologies to become more competitive.

We're fortunate to benefit from strong bipartisan support for Roadmap, and we're ready to work with the new State Government on the challenges of the energy transition. The Government's proposal to establish an Energy Security Corporation to accelerate investment in renewable energy assets will complement our tender program and support critical investment in long-duration storage infrastructure. The 2GW objective set out for long-duration storage by 2030 under the Roadmap is a significant task and will benefit from constructive partnerships between government and industry.

## Table of projects

Project name	Company	Capacity MW	REZ	Type
Stubbo Solar Farm	ACEN Australia	400MW	Central West Orana	Generation
Coppabella Wind Farm	Goldwind Australia Pty Ltd	275MW	Non REZ	Generation
New England Solar Farm	ACEN Australia	720MW	New England	Generation
Limondale BESS	RWE Renewables Australia	50MW/400MWh+	South West REZ	Long Duration Storage