EnergyCo



Mr Stephen Barry Planning Director - NSW Independent Planning Commission Level 15, 135 King Street SYDNEY NSW 2000

Received by Commission 14/11/2023

Dear Mr Barry

Thank you for the opportunity to comment on the Oxley Solar Farm (SSD 10346).

The following information is provided on the basis of the Energy Corporation of NSW's (EnergyCo's) high-level review of the project and does not seek to provide advice as to the merits of the project, but instead provides context as to the project's potential contribution to meeting New South Wales (NSW) electricity system needs.

Summary of the Project

Oxley Solar Development Pty Ltd has lodged a State significant development application seeking approval to develop the Oxley Solar Farm (the Project), which comprises 215 megawatts (MW) of solar energy generation and 50 MW / 50 MW-hour (MWh) battery energy storage system (BESS).

The Project is located within the boundaries of New England Renewable Energy Zone (REZ), approximately 14 kilometres (km) south east of Armidale and is proposing to connect to two existing Transgrid operated 132 kV transmission lines that traverse the site.

NSW Electricity Infrastructure Roadmap

Within the next decade, three out of the remaining four coal fired generators in NSW are scheduled to retire. As a result, around 7,400 MW of dispatchable electricity generation capacity will be removed from the system. The NSW Government's Electricity Infrastructure Roadmap (Roadmap) sets out a plan to coordinate investment in new transmission, generation, storage and firming infrastructure as these coal-fired power plants come to the end of their scheduled life.

The Roadmap supports the private sector to drive the delivery of at least 12 gigawatts (GW) of new renewable electricity generation and 2 GW of long-duration storage, such as pumped hydro, in NSW by 2030.

Delivery of the Roadmap is enabled by the Electricity Infrastructure Investment Act 2020 (EII Act). Section 44(3) of the EII Act identifies minimum objectives that include:

- a) construction of generation infrastructure that generates at least the same amount of electricity in a year as—
 - (i) 8 gigawatts of generation capacity from the New England REZ, and
 - (ii) 3 gigawatts of generation capacity from the Central-West Orana REZ, and
 - (iii) 1 additional gigawatt of generation capacity.

Should the Project proceed, it would contribute up to 215 MW of additional renewable generation capacity to the NSW electricity system and the infrastructure investment objectives in the EII Act. This applies irrespective of whether the Project participates in the NSW Consumer Trustee's independent competitive tender rounds for access rights to new network infrastructure.

Potential impacts on the transmission network

EnergyCo notes that the Commission has sought advice on the potential impacts of the project on grid security, reliability, transmission costs and energy prices.

The Project is located within the declared boundaries for the New England REZ. This region was identified as a suitable location to develop a REZ due to the presence of some of the best natural energy resources (wind, solar and hydro storage) in NSW.

EnergyCo understands the Project plans to connect to the existing local transmission network, rather than the New England REZ transmission infrastructure that will be delivered as part of the development of the REZ.

EnergyCo's 2023 Network Infrastructure Strategy (NIS) indicates that the overall network capacity in the New England region is expected to be increased through the development of new planned REZ transmission infrastructure, which is expected to be completed in 2029 at the earliest. While the Project is not proposing to connect to this new transmission infrastructure, these infrastructure upgrades have the potential to alleviate some of the pressures on the existing network.

Given the scale of this project and the existing measures in place within the National Electricity Market to manage the entry of new generators, EnergyCo would not expect the Project in unto itself to materially affect transmission network costs, and as a renewable energy generation project it would contribute to putting downward pressure on energy prices.

Capacity and performance of the BESS

Section 44(3)(b) of the EII Act identifies a minimum objective for the construction of at least 2 gigawatts capacity of long-duration storage infrastructure by 2030. However, the effective operation of the NSW Electricity Transmission Network also relies upon the development of other forms of storage to support the efficient utilisation of available network capacity and protect against system shocks.

The 50 MW / 50 MWh lithium-ion BESS proposed as part of the Project would provide greater control over the dispatch of energy from the Project and would contribute towards the NSW Government's objectives to develop additional storage capacity within the New England REZ.

The Waratah Super Battery (WSB) is an important project which will help replace a significant portion of the NSW generation capacity lost when the Eraring power station retires, which is currently scheduled for mid-2025. A component of the WSB project involves engaging multiple generators across NSW that are capable of responding to signals from the System Integrity Protection Scheme (SIPS) control aspect of the battery, to respond to network shock events. Given the size and location of the proposed BESS, the Project may be eligible to provide a paired generation service for the WSB in future. Any such pairing would be subject to tender and procurement processes for these services.

Summary

In summary, the proposed Oxley Solar Farm could contribute towards meeting the NSW renewable energy objectives as set out in the Roadmap and EII Act. The Project would also support meeting NSW's net zero objectives.

EnergyCo notes that the Project will be subject to rigorous environmental assessment and community consultation requirements under the *Environmental Planning and Assessment Act* 1979. We also note that the ability of the project to connect to transmission infrastructure and dispatch its generation capacity to the grid is subject to separate applicable regulatory and connection processes.

If you have any further questions about this matter, please feel free to contact me directly at

Yours sincerely

Matthew Sprott

Director, Planning and Policy Energy Corporation of NSW (EnergyCo)