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Wednesday, 2 November 2022

Mr James Hay  
Chief Executive Officer  
Energy Corporation of NSW  
GPO Box 5469  
SYDNEY NSW 2001  
Via email: [contact@energyco.nsw.gov.au](mailto:contact@energyco.nsw.gov.au)

Dear James,

### **Draft Network Infrastructure Strategy for New South Wales**

Transgrid welcomes the opportunity to respond to the Draft Network Infrastructure Strategy published by the Energy Corporation of NSW (EnergyCo) on 30 September 2022. We understand that EnergyCo is preparing this document as part of the NSW Electricity Infrastructure Roadmap framework and that a final Network Infrastructure Strategy (NIS) will be published in 2023.

Transgrid operates and manages the high voltage electricity transmission network in NSW and the ACT, connecting generators, distributors and major end users. We have an important role in managing one of the key parts of the Australian energy system as it transitions to higher renewables penetration, including the connection of Renewable Energy Zones (REZs).

Transgrid supports the development of the NIS to provide stakeholders, including Transgrid, with an understanding of EnergyCo's plan for the coordination of generation, storage and new load in the long-term financial interests of NSW electricity consumers and its role in developing transmission options.

The delivery of the NIS should also form part of a coordinated planning process for NSW which includes the Transmission Annual Planning Report (TAPR) by Transgrid and the Integrated System Plan (ISP) by the Australian Energy Market Operator (AEMO). In particular, it will be important to ensure that coordination and consistency occurs between the assumptions and scenarios of these documents and consideration is given to the timing of publication of the NIS, the TAPR and ISP to ensure a coordinated process.

Transgrid offers feedback on three key areas to assist EnergyCo in finalising this Strategy.

### **Definition and coordination of roles under the NSW framework**

The NIS presents a summary on future roles and responsibilities between Transgrid, AEMO and EnergyCo together with the definition of functions as described under the NSW Electricity Infrastructure Investment Act 2020.

Transgrid would welcome further engagement with EnergyCo on understanding these roles and responsibilities, as the development of an integrated transmission network requires close coordination between planning entities. Transgrid is also well placed to support the integration of REZs to the transmission network as it has the following advantages:

- Established state wide jurisdictional planning and operational experience facilitating the connection of renewable energy to the transmission grid
- Established relationship with local communities, landowners and other stakeholders to assist with early engagement relating to substation site selection, easement acquisition and preparation of option agreements with landowners
- Experience in project development and design activities particularly primary planning and environmental approvals, licences and permits

Transgrid supports further engagement around these roles and responsibilities which will facilitate the transition to a low carbon energy future with increased renewables connected to our network.

### **Integration of the NIS into existing transmission planning processes**

The integration of the NIS into existing transmission planning processes is critical to ensure overall coordinated System Planning. Coordinating the timing, capacity and connection arrangements of REZ and Transmission Infrastructure developments between EnergyCo, AEMO and Transgrid will be essential for cost-effective delivery of network infrastructure for NSW electricity consumers.

Transgrid supports the development of the NIS to present a coordinated approach to connecting REZs to the NSW transmission network. Transgrid has obligations and responsibilities as the Jurisdictional Planning Body for NSW. These include the operation, management and planning of NSW's existing high-voltage transmission network under the National Framework. The integrated nature of the REZs within the existing transmission network and their impact on system operability, means that careful coordination is required between Energy Co, Transgrid, AEMO and any future Network Operators. To facilitate industry-wide planning and development of the transmission network, under the National Electricity Rules, AEMO is required to develop the ISP and Transgrid publishes the TAPR as part of its planning process. Through this process, future REZs will replace the existing coal generators and will need to fully and securely integrate into the transmission network. The NIS will provide information that will help facilitate the development of these documents. We expect that AEMO and Transgrid will require the following information around the proposed REZs and Priority Transmission Infrastructure Projects (PTIP):

- Capacity and timing of REZ and PTIP processes,
- Scope and connection arrangement of these developments to the Transgrid network.

Transgrid supports the integration of the NIS into the existing planning process and is supportive of increased joint planning and options development with EnergyCo. This will help ensure the integration and development of REZs and PTIPs into the overall transmission system plans for NSW.

### General feedback on REZs and transmission projects

We have reviewed the development of REZs and PTIP outlined in the Draft NIS. We would support continued engagement with EnergyCo on the Sydney 500kV Ring project as well as other REZ and PTIPs. Early engagement around planning and development will help ensure a timely and cost effective delivery of proposed infrastructure projects.

Transgrid supports the development of the Hunter Transmission Project between Bayswater and Eraring to facilitate the connection of the Central West Orana and New England REZs.

Transgrid considers the development of the Southern Sydney 500kV ring will provide the following benefits:

- diversity of transmission corridor,
- better access to southern and interstate renewables including Snowy Hydro,
- supports the connection of new load development around the Western Sydney Airport, and
- provides alignment with the current AEMO 2022 ISP.

We will continue to work collaboratively with EnergyCo as it develops this Strategy and other key elements of the NSW Roadmap framework. If you require any further information or clarification on this submission, please feel free to contact me or Kasia Kulbacka at [Kasia.Kulbacka@transgrid.com.au](mailto:Kasia.Kulbacka@transgrid.com.au).

Yours faithfully



Marie Jordan  
Executive General Manager, Network