

Connection Process Fact Sheet

October 2024

Lumea
Transgrid Group

This fact sheet offers an overview of the steps involved in connecting to the transmission network in New South Wales (NSW) with Lumea.

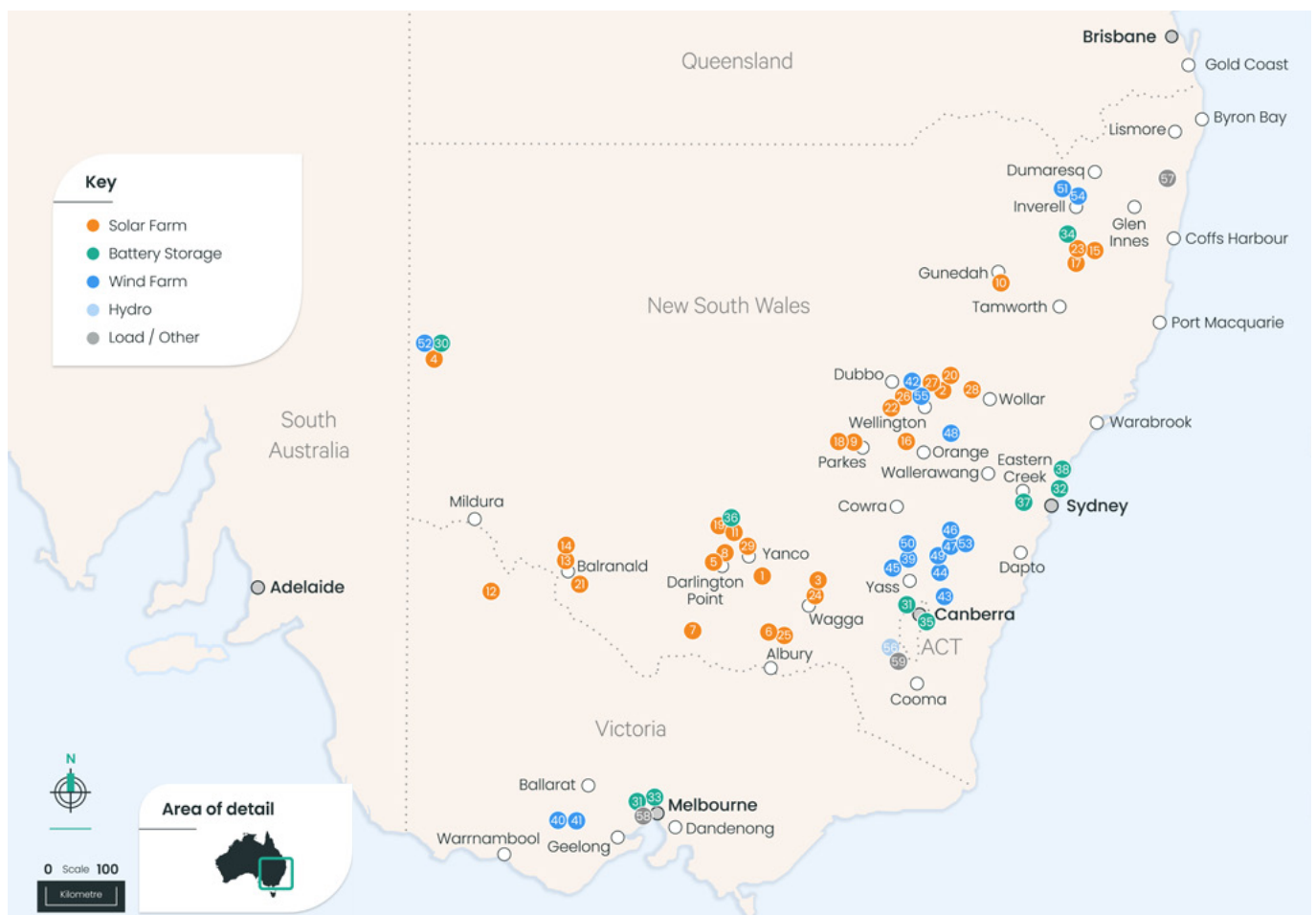
The connection process is regulated by the National Electricity Rules, which are frequently updated. Therefore, this guide may not always reflect the latest changes. Always refer to the current [National Electricity Rules](#) for the most accurate requirements.

About Lumea

Lumea is the most experienced connections provider, with a portfolio of over 55 projects, totalling 12GW, connected to the National Electricity Market (NEM). As part of the Transgrid Group, we are uniquely positioned with the backing, capability and expertise of Australia's largest Transmission Network Service Provider (TNSP).

Lumea is supporting Australia's energy transition by connecting renewable energy generators and large load connections to the transmission grid. Lumea takes ownership of the whole lifecycle of the connections assets: building, owning, operating and maintaining the connection assets including storage and telecommunications, to keep customers reliably generating and connected. By providing commercially agile and innovative design solutions our customers have the support they need to drive their projects forward.

Figure 1: Lumea connection infrastructure map



Who can connect to the transmission network?

The transmission network is ideal for generators or loads requiring connection to the grid above 50MVA.

While the transmission network has traditionally facilitated generator connections (e.g. solar and wind farms), load connections such as data centres, hydrogen electrolyzers and industrial loads are increasingly meeting the criteria to directly connect to the transmission network which offers higher reliability, redundancy and system strength.

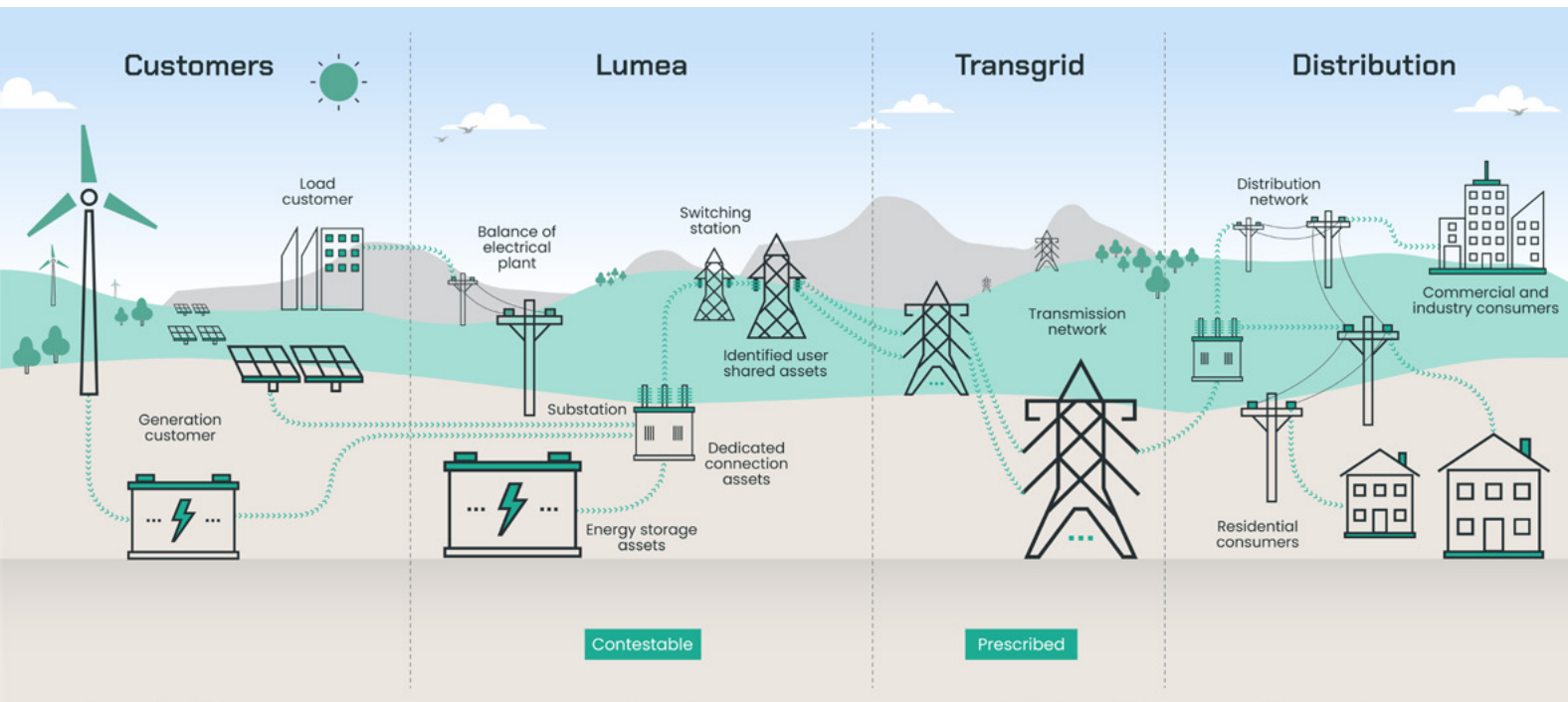
Figure 2: Connection process overview

	Exploration	Connection Enquiry	Contracting and application to connect		Delivery		Operations and maintenance	
Indicative timing*	3-6 months (6 months if feasibility studies are required)	30-40 business days	Project specific timeline**	Project specific timeline**	12-24 months (dependent on project scope)		Ongoing	
Customer actions	Feasibility study with TNSP (if required)	Submit connection enquiry to TNSP	Enter into preliminary agreements with Lumea	<ul style="list-style-type: none"> Submit application to connect to TNSP Enter into relevant connection and service agreements with Lumea 	Coordinate with Lumea and Transgrid	Submit R1 package and commissioning test plans		
Lumea actions	Advise customer on project scoping and connection enquiry application		Develop and execute preliminary agreements e.g. Connection Process Agreement - CPA in NSW	Commercial offer <ul style="list-style-type: none"> Contract development and execution Facilitate, provide guidance and expertise on the application to connect, regulatory requirements, process and timelines between AEMO, TNSP and customer 	Construction <ul style="list-style-type: none"> Manage design, procurement and construction of project scope 	Facilitate, provide guidance and expertise on the R1 package and commissioning regulatory requirements, process and timelines between AEMO, TNSP and customer	Manage operations, maintenance and modifications of connection assets	
Transmission network service provider (TNSP) connection activities	Consent letter	Connection Enquiry <ul style="list-style-type: none"> Consent letter (if not completed in previous stage) Issues the response to the connection enquiry NER 5.3.2		Application to connect <ul style="list-style-type: none"> Assess, review, negotiates and accepts performance standards submissions Issue offer to connect letter NER 5.3.4		Registration <ul style="list-style-type: none"> GPS compliance assessment Registration approval 	Commissioning <ul style="list-style-type: none"> Hold Point (HP) testing and commissioning 	

*Indicative time frame (allows for multiple rounds of submissions and feedback) and steps only. Processes are subject to change. Always refer to the National Electricity Rules (NER) for current requirements. **Please reach out to info@lumea.com.au to discuss your project requirements.

How we operate in the market

Figure 3: How Lumea operates in the market



Resources

- [National Electricity Rules](#)
- Australian Energy Market Operator (AEMO) resources
 - [Generator Connection Application Checklist](#)
 - [Registration Information](#)
- Transgrid resources
 - [Network Connections](#)
 - [Transmission Annual Planning Report \(TAPR\)](#)
 - [TAPR Portal](#)
 - [System Strength Requirements in NSW](#)
 - [System Strength for Network Connections](#)



Contact us for more information on our services.

Email info@lumea.com.au

Level 9, 180 Thomas Street, Sydney, NSW, 2000

lumea.com.au