



# Project EnergyConnect Connections

May 2024



## Introduction

Project EnergyConnect (PEC), the new electricity interconnector between South Australia and New South Wales, also including a connection to North-West Victoria, is a highly anticipated infrastructure addition to the National Energy Market (NEM).

PEC is being delivered by Transmission Network Service Providers (TNSPs) ElectraNet in South Australia and Transgrid in New South Wales, and by AusNet Services in Victoria<sup>1</sup>.

The project has secured final regulatory approval and financial commitments from all TNSPs. Updates are shared regularly by ElectraNet and Transgrid on the Project EnergyConnect website<sup>2</sup>. Physical on-the-ground construction commenced in South Australia in February 2022 (completed end 2023) and New South Wales in May 2022.

The connection to North-West Victoria obtained the required development and environmental approvals in June 2023, and physical on-the-ground construction commenced in August 2023.

We are aware of the significant interest in PEC among potential renewable energy and storage proponents keen to take advantage of the increased transmission capacity that will be enabled by the interconnection.

## So, what do you need to know?

If you are a proponent interested in connecting to PEC, in many cases the connection process will be similar to current processes for connection to the transmission network. However, proponents interested in connecting to certain sections of PEC in NSW will need to take into account access arrangements relating to the South-West Renewable Energy Zone. You can read more about these access arrangements below.

There are several key milestones in relation to PEC that must be met before your connection can be progressed through the various phases of the connections process.

The following milestones under the PEC Connections Framework have now been met:

1. Connection enquiry pre-requisites (March 2023)
2. Connection application pre-requisites (March 2024)

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<sup>1</sup> AusNet Services are delivering the connection to Red Cliffs Terminal Station, Transgrid is delivering the transmission line from Buronga Substation to Red Cliffs Terminal Station

<sup>2</sup> <https://www.projectenergyconnect.com.au/>

This means that both connection enquiries and connection applications can now be formally lodged and progressed.

To submit a connection enquiry or connection application within South Australia, proponents will follow ElectraNet's defined [connection process](#).

To submit a connection enquiry or connection application within New South Wales, proponents will follow Transgrid's defined [connection process](#).

Further information on the phased approach to progressing connections to PEC, including application approval, registration and commissioning is available on the [Project EnergyConnect website](#). This includes a status tracker of current progress and expected timeframes for future milestones, which will be updated accordingly.

## What if I want to connect to the existing ElectraNet or Transgrid networks before PEC is constructed and fully operational?

Both ElectraNet and Transgrid will continue to accept connection enquiries and connection applications for generation and load connection projects to their respective existing transmission networks.

Now that PEC has achieved Considered Project status, all Connection Applicants will need to explicitly take PEC into consideration in their Connection Applications. PEC models have reached sufficient maturity to be used for planning purposes. PEC models are now available to proponents via the AEMO Data Request<sup>3</sup> process.

### Considered Project – what is it?

This is the term under the National Electricity Rules (NER) which greenlights an infrastructure project as an approved addition to the National Electricity Market (NEM).

To be classed as a Considered Project, the following conditions must be met:

1. necessary land and easements have to be acquired;
2. all necessary planning and development approvals have to be obtained;
3. the project has passed the Regulatory Investment Test for Transmission (RIT-T); and
4. construction has either commenced or a firm date is set for it to commence.

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<sup>3</sup> <https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/data-nem/network-data/policy-on-provision-of-network-data>

## When can a new cut-in connection along PEC happen?

The primary purpose of PEC is to increase transfer capability between NEM regions. While connection enquiries and connection applications for proposed connections directly to PEC (cut-ins) can be lodged and processed utilising available information, connections can only be physically facilitated once 500 MW of transfer capacity has been released across PEC. Indicatively, this is expected to occur in 2026/2027, following successful completion of hold point testing under the inter-network test plan.

A South Australian Interconnector Trip Remedial Action Scheme (SAIT RAS) is being developed to cater for a non-credible trip of either the PEC interconnector or the Heywood interconnector under high power transfer conditions to prevent separation of South Australia from the NEM. Any cut-in along PEC will likely require a significant amount of analysis and consequential redesign of the SAIT RAS.

## NSW South-West Renewable Energy Zone Access Arrangements

Connection proponents proposing to connect to PEC network infrastructure in NSW, will need to consider the access arrangements for the South-West Renewable Energy Zone (SW REZ), which may affect a proponent's ability to submit a connection enquiry, apply to connect, or receive an offer to connect, to PEC network infrastructure both within and outside the SW REZ. Connection proponents should familiarise themselves with the regulatory and access arrangements for the SW REZ.

Further information can be found on the EnergyCo Renewable Energy Zones website<sup>4</sup>.

### Proposed connections to Buronga substation, Dinawan substation or PEC transmission lines between these two substations and PEC transmission lines east of Dinawan substation

Connection proponents should note that these proposed connection points are impacted by REZ regulatory changes.

The NSW Minister for Energy has declared an access scheme for the SW REZ. In accordance with the SW REZ access scheme:

1. The 'open access' principles under the National Electricity Rules no longer apply to these elements of Transgrid network infrastructure, referred to in the declaration as 'access rights network'.

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<sup>4</sup> <https://www.energyco.nsw.gov.au/sw-rez>

2. EnergyCo, as the Infrastructure Planner for SW REZ, now has the power to control connections to the elements of PEC that are 'access rights network'.
3. Connection proponents seeking connection to Buronga substation, Dinawan Substation or PEC transmission lines between those two substations:
  - a. Are no longer able to submit a connection enquiry to Transgrid,
  - b. Are not able to make a connection application or receive an offer to connect unless the connection proponent holds an access right.

### Proposed connections to PEC west or south of Buronga substation

The SW REZ access scheme does not change the principles which currently apply for sections of PEC within NSW from, but not including, Buronga substation west to the border with South Australia or south to the border with Victoria. As a result, the 'open access' principles under the National Electricity Rules and Transgrid's defined connection process continue to apply to those sections of PEC in NSW.

## What can happen now?

New connection enquiries or connection applications (including direct cut-ins to PEC) can be formally lodged and progressed with ElectraNet.

Connection enquiries or connection applications (including direct cut-ins to PEC) can be formally lodged and progressed with Transgrid for connections to PEC located to the west or south of Buronga substation.

Connections to elements of PEC that are 'access rights network' as detailed above will be subject to the process for allocating SW REZ access rights to be determined by EnergyCo.

PEC models have reached sufficient maturity to be used for planning purposes. PEC models are now available to proponents via the AEMO Data Request<sup>5</sup> process.

Register your interest with either ElectraNet or Transgrid for more information and updates and engage with the relevant connection teams.

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<sup>5</sup> <https://aemo.com.au/en/energy-systems/electricity/national-electricity-market-nem/data-nem/network-data/policy-on-provision-of-network-data>

### Project EnergyConnect – key facts

1. 330 kV double-circuit line from proposed Bunday Substation, north of Adelaide, to new substation (Dinawan), located between Coleambally and Jerilderie in New South Wales, via the existing Buronga Substation. The 330 kV double-circuit line will continue from Dinawan substation through to existing Wagga Wagga Substation, in New South Wales (Note this line will be built with a line rating of 500 kV but initially operated at 330 kV, until full 500 kV capability is built at substation receiving ends – separate to PEC).
2. New 220 kV double circuit connection from existing Buronga Substation in New South Wales to existing Red Cliffs Substation, in north-west Victoria (replacing existing connection).
3. Existing substations will be expanded and/or augmented for the new PEC transmission lines.
4. Transmission lines spanning approximately 210 km in South Australia, 690 km in New South Wales and 1.4 km in Victoria
5. Eventual transfer capacity of 800 MW under favourable operating conditions.
6. PEC will provide the first direct connection between SA and NSW, enabling sharing of renewable generation between the two states and increasing system security.
7. When combined with the Heywood Interconnector, a fully tested PEC will enable a total import of 1300 MW into South Australia and export of 1450 MW to New South Wales and Victoria.
8. It will also reduce system strength limitations around Buronga and Red Cliffs

