

## What is transmission?

### AEMC Transmission Frameworks Review backgrounder

**Electricity transmission is the transportation of power from generators to electricity distribution networks.**

Transmission lines, when connected with each other, become a transmission network. Transmission networks include the towers which support high-voltage wires, underground cables, transformers, switching equipment, and monitoring and communications equipment. The transmission network connects generators to each other, to large demand customers and to the distribution system. It stops at substations where electricity is transferred to lower voltages for supply to consumers through the distribution network.

#### The importance of transmission

Transmission networks form the 'backbone' of the National Electricity Market (NEM). They play a key role in transporting power from generators to consumers. They facilitate competition between generators so that consumers can be provided with electricity at the lowest cost.

In Australia, there are transmission networks in each state and territory, with cross border interconnectors that link the networks of eastern and southern Australia together to create the NEM. Western Australia and the Northern Territory do not link to the NEM.

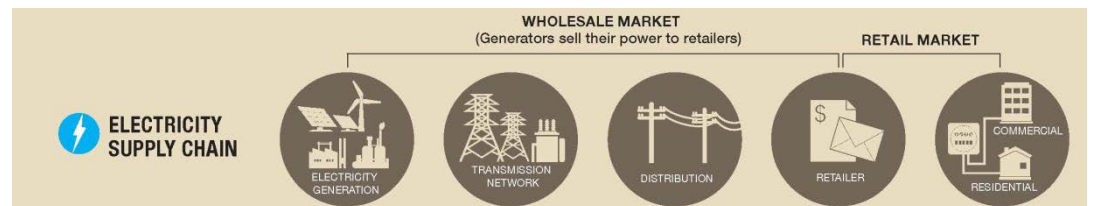
The NEM transmission network is unique in the developed world in terms of its long distances, low population density and long, thin structure. It reflects the often long distances between demand centres and fuel sources for generation. The 290 kilometre link between Victoria and Tasmania, for example, is one of the longest submarine power cables in the world. By contrast, transmission networks in the United States and many European countries tend to be meshed and of a higher density.

#### What are transmission frameworks?

Transmission frameworks are the regulatory and market arrangements that govern investment in, and the planning, funding, pricing and operation of, transmission networks.

Key elements of transmission arrangements include:

- services that are provided to generators and customers by transmission;
- management of network congestion, which occurs when the network is unable to accommodate the lowest priced generation;
- how use of the transmission network is charged for;
- the way in which the transmission network is planned; and
- how transmission users can connect to the transmission network.



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