

# Delivering a national electricity network for the future

## What is the National Transmission Network Development Plan (NTNDP)?

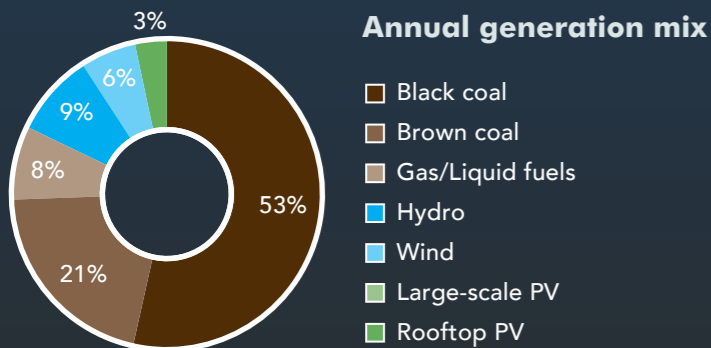
The NTNDP is AEMO's strategic view of efficient transmission development across the National Electricity Market (NEM). It provides a 20 year outlook to 2036 and tackles uncertainties through a scenario-based assessment.

## A coordinated, national plan is vital

A coordinated, national approach to planning for Australia's energy transformation is imperative to deliver the best long-term outcome for consumers. This is particularly important given the range of potential developments across the NEM, and the interdependencies between them.

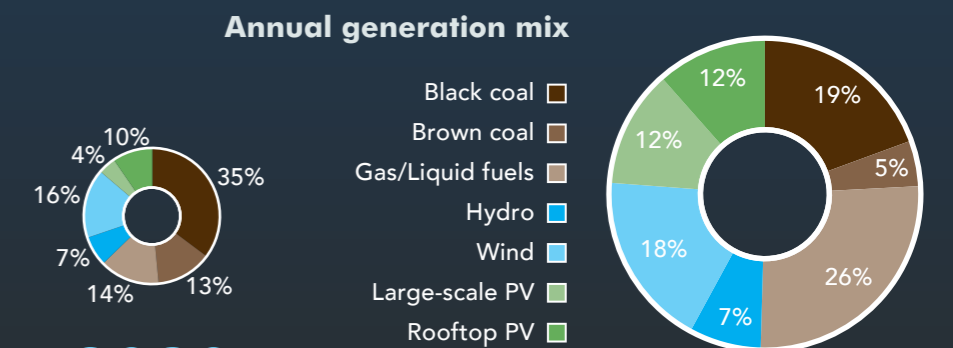
## A new era for transmission planning

- State and federal emissions reduction targets, as well as consumer sentiment, are projected to drive a transformation of the energy generation mix.
- Transmission networks, designed for transporting energy from coal generation centres, will need to transform to support large-scale generation development in new areas.
- Transmission networks will increasingly be needed for system support services, such as frequency and voltage support, to maintain a reliable supply.



# 2017

Historically, network investment has been driven by the need to meet increasing consumer demand.



# 2030

# 2036

2030 is included to show the possible generation mix if the COP21 emission reduction target is met.

Looking to 2036, power system resilience and the ability to connect renewable generation are likely to be key transmission development drivers.



## A more interconnected NEM could lower overall costs and improve system resilience

High level analysis shows positive net benefits when looking at a combination of the following potential transmission developments:

1. New interconnector for South Australia linking with either NSW or VIC from 2021.
2. Augmenting existing interconnection linking NSW with both QLD and VIC later in the 2020s.
3. A second Bass Strait interconnector between Victoria and Tasmania from 2025.

A detailed assessment of each development project is required (through a regulatory investment test) to assess whether other solutions (including non-network options) could deliver greater net benefits.



## Local solutions will also be required

Further interconnection would not solve all the expected challenges of transforming the generation mix towards a low-carbon future.

- Local development will be required to ensure sufficient system resilience in each region.
- Our modelling reveals augmenting transmission in Western Victoria is needed to facilitate the Victorian renewable energy target (VRET).