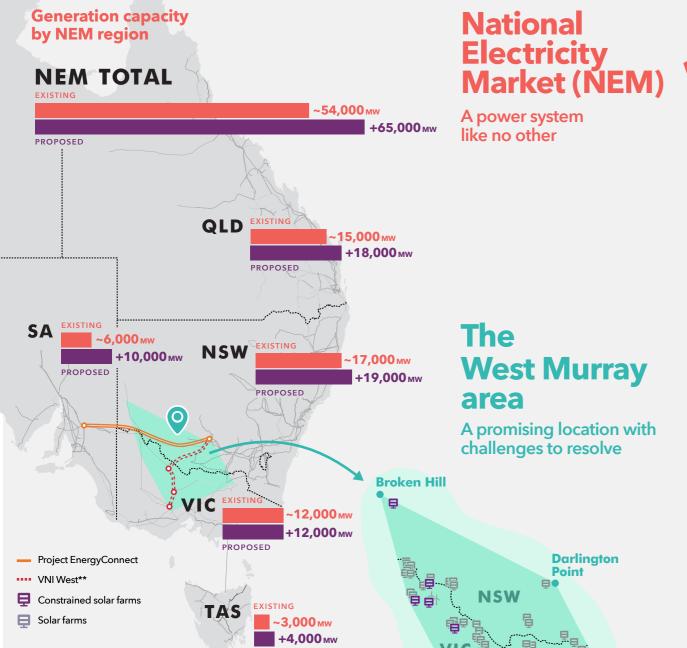
Transforming Australia's energy system

Australia's energy system is transforming faster than anywhere else in the world. New generation in geographically diverse locations are producing world-first challenges that need to be solved for a better energy future for Australia.



For more information, please visit aemo.com.au or contact us at 1300 236 600 or media@aemo.com.au

10 February 2020



* Proposed generation includes projects that are: Committed, Emerging, Maturing, Publicly Announced,

Upgrades, and Expansions. For more information,

please visit AEMO's Generation Information page.

** This is a proposed project and the route is not yet determined.

The NEM is the world's longest

About the NEM



bright future.



~54,000 MW

interconnected energy system.

New generation



Australia has gone from having six to 45 grid-scale solar farms in just 2 years. This is enough to power over 1 million homes for over a year.



Australia has gone from 36 to **52 wind farms** in just 2 years. This is enough to power over 1.3 million homes for over a year



+65,000 MW of new generation

New challenges for the network



Scale and pace of inverter-based generation connected in electrically remote areas of the NEM is presenting unprecedented technical issues.



World-first challenges need to be solved to ensure secure and reliable energy for all Australians.



In 2009 the NEM had 298 registered participants. Today there are 463 registered participants.

About the West Murray area



The location has attracted investment in inverterbased generation projects due to ideal climate



~1,200 MW





The electrically remote area means it is weakly connected to the backbone of the grid, and remote from demand centres.



Dederang

Ballarat

Significant investment infrastructure will be needed to allow projects to connect and generate at full capacity. This was noted in the draft 2020 Integrated System Plan and previous AEMO publications

Why network constraints have been applied



In September 2019, post-fault performance was found to cause unsatisfactory voltage fluctuations. system security.



As the power system operator, AEMO applied **network** constraints to maintain power system security.

What AEMO is doing to restore operational stability



AEMO continues to work closely with the solar generators, their equipment suppliers and Network Service Providers (Powercor and TransGrid) to **test and** develop solutions that would restore secure operation requirements.



Once this is restored, AEMO will work with Network Service Providers to connect as many generators as can be connected securely.



Two major interconnector projects will deliver critical benefits for the West Murray area and aid with system strength gap closure:

- Project EnergyConnect: interconnector between South Australia and between Victoria and New South
- VNI West: interconnector between Victoria and New South Wales.