



Transition of the grid to a clean energy future

Tony Meehan, Executive General Manager, Business Growth & Revenue

All-Energy Australia, 4 October 2016

About us

Operator and manager of the NSW transmission network, we supply:



3 million homes and 30,000 businesses



12,900 km transmission lines



99 substations



2,300 km optical fibre

Keeping you and your way of life
connected - 24/7

Legend

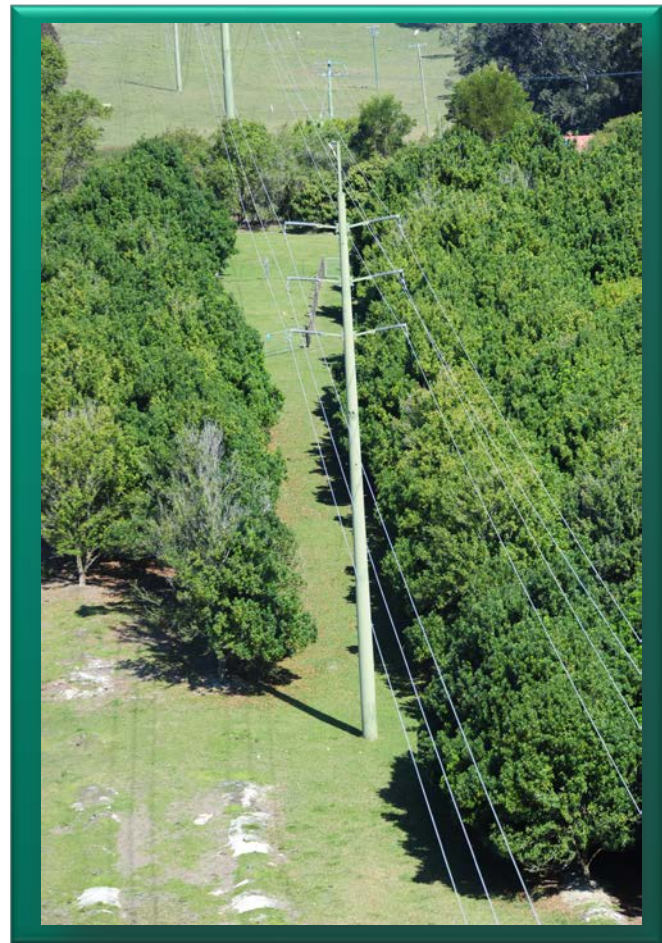
- 500 kV Transmission Lines
- 330 kV Transmission Lines
- 220 kV Transmission Lines
- 132 kV Transmission Lines
- 330 kV Underground Cable
- Customer Exchange Point
- Interstate Exchange Point
- 500 kV Substations
- 330 kV Substations
- 220 kV Substations
- 132 kV Substations
- TransGrid Office



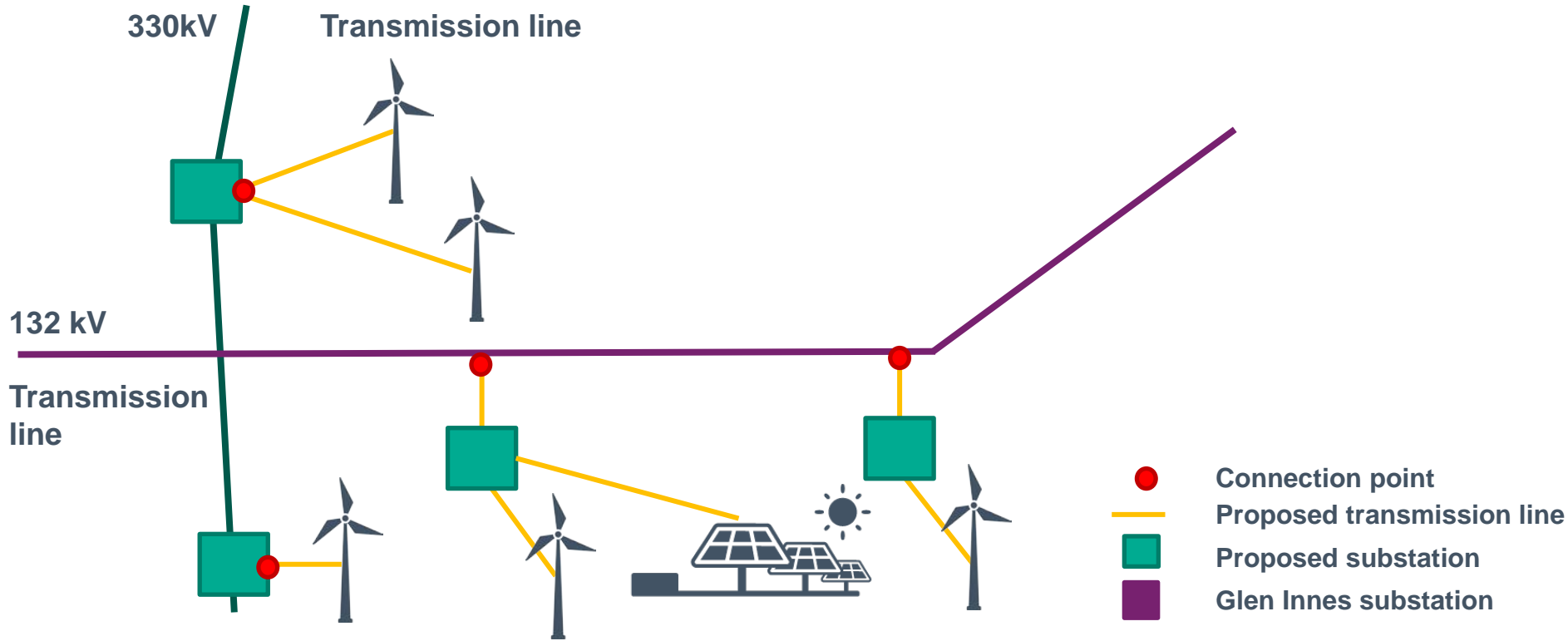
Future of the grid

- > Shift towards renewable sources of generation, both large scale and distributed
- > Smarter ways of managing peak demand, including integration of batteries
- > Widespread adoption of energy efficiency initiatives
- > Increased access to local generation
- > Interconnection

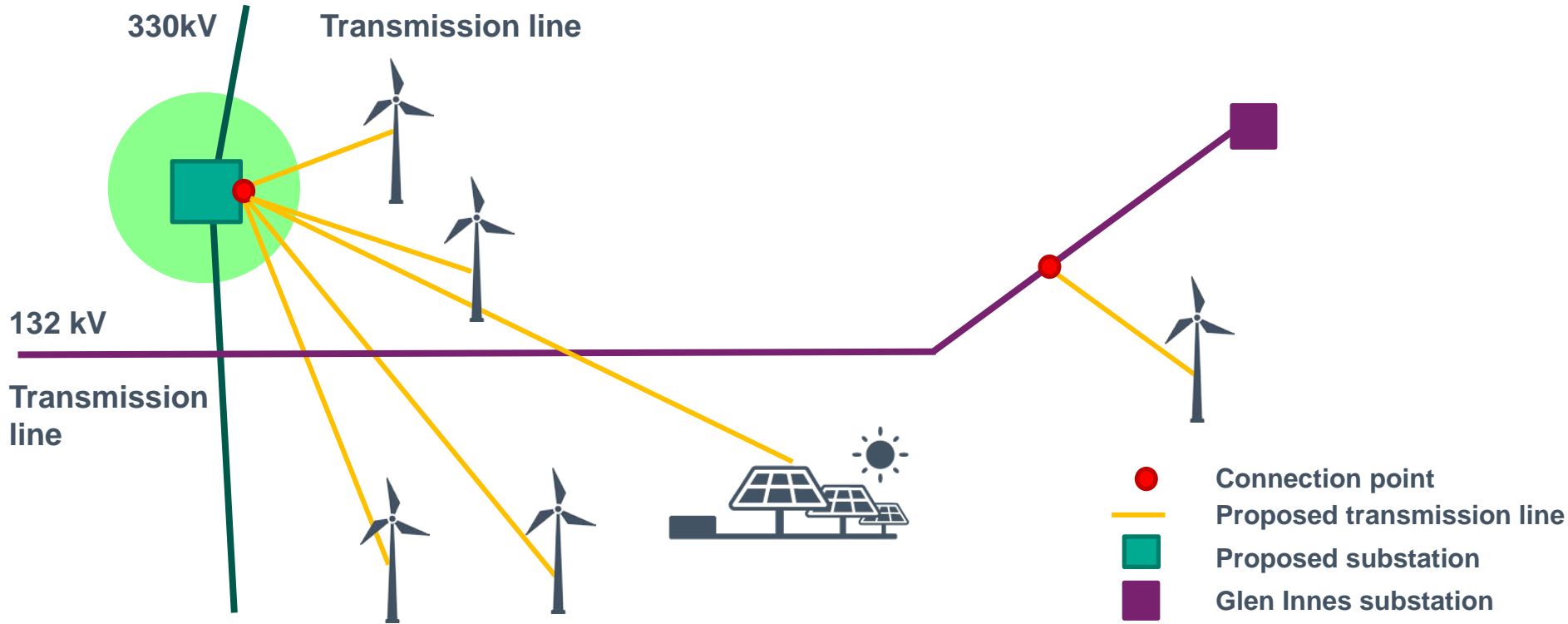
The grid of the future will look very different to the grid of today



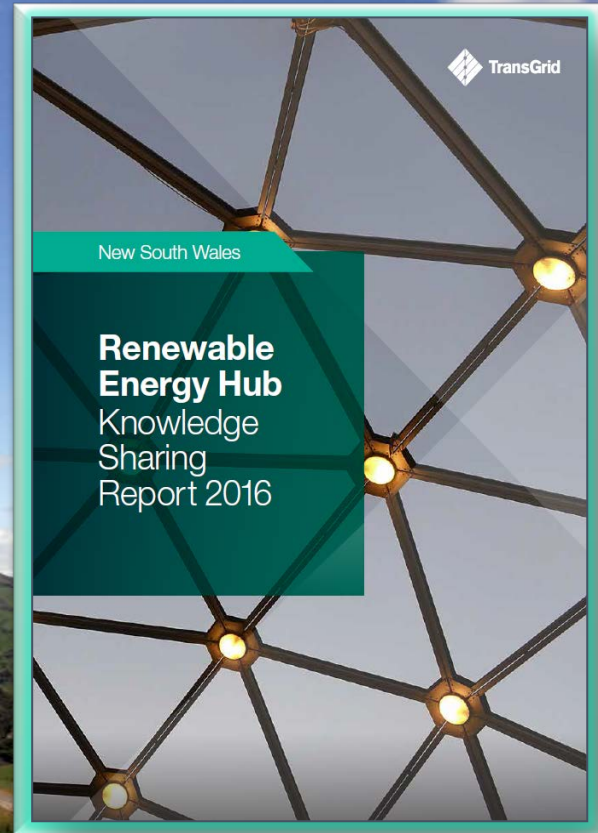
Network configuration – without a hub



Network configuration – with a hub



Renewable Energy Hub report



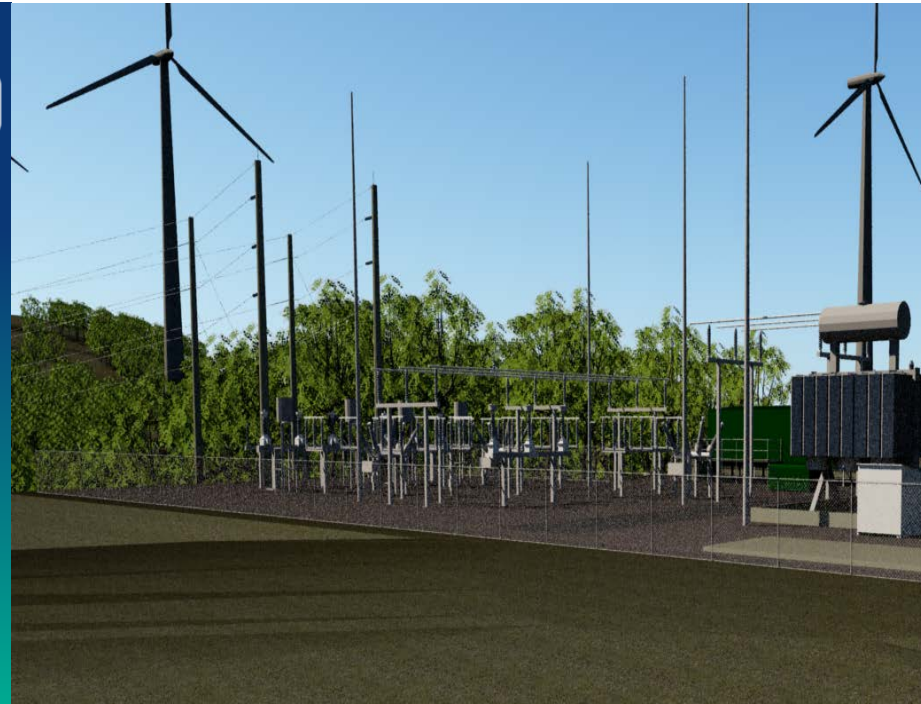
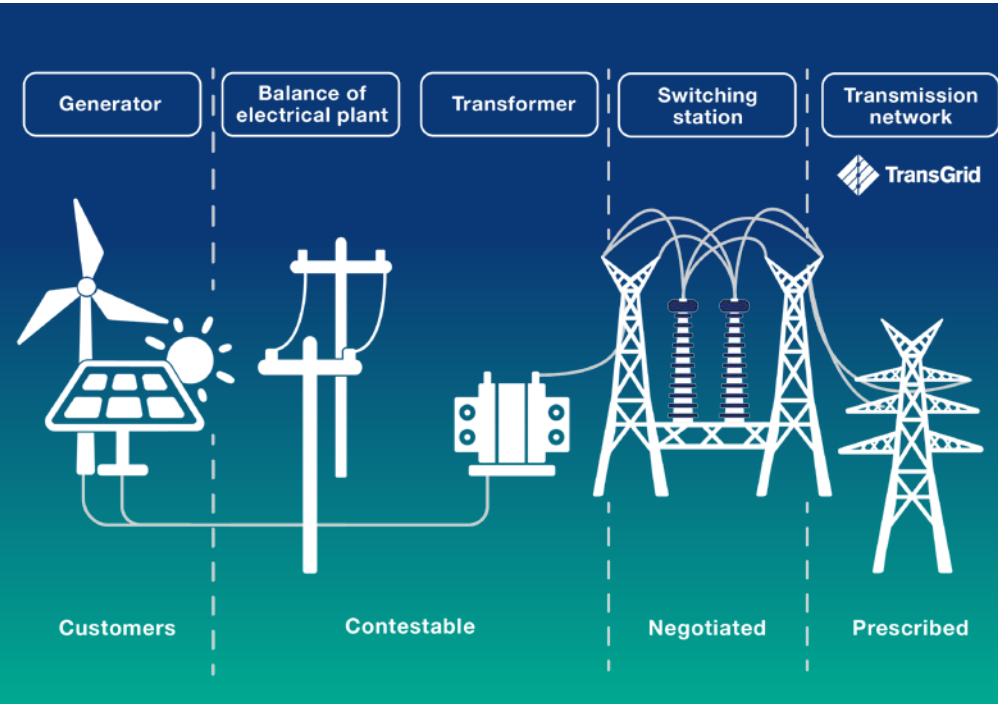
Identifying opportunities



Creating opportunities



Extended scope of services



Grid scale storage

- Energy storage trials to:
 - > Reduce intermittency of on-site generation
 - > Network peak shaving/ expenditure deferral
- Large scale storage part of the grid under a renewable future

We're trialling emerging technologies to explore ways to do what we do faster, smarter, and more sustainably



**AES Energy Storage
Laurel Mountain**



EOS Energy Storage

The role of interconnectors



- TransGrid is facilitating the transition to renewables
- Lowering the cost of connections to the Grid