

Tasmania's energy future

To 2030 and beyond



Powering a
Bright Future

Introduction

A safe, reliable and affordable supply of electricity underpins Tasmania's economy and is a cornerstone of our modern way of life.

Tasmania is 100% self-sufficient in renewable energy, generated on-island by the state's hydro-electric generators and world-class wind.

Over the next 20 years, as part of Australia's transition to a more sustainable future, the State is set to increase its renewable energy capabilities still further. Tasmania will expand its role as a supplier of zero emission energy to both Tasmanian customers and mainland Australia and produce green hydrogen for both domestic and international markets.

Under the State Government's Tasmanian Renewable Energy Target (TRET), the State's renewable energy output will double, so that by 2040 Tasmania will produce twice as much clean energy as it does now. Realising this ambition will require substantial adaptation of 'the current Tasmanian transmission network.



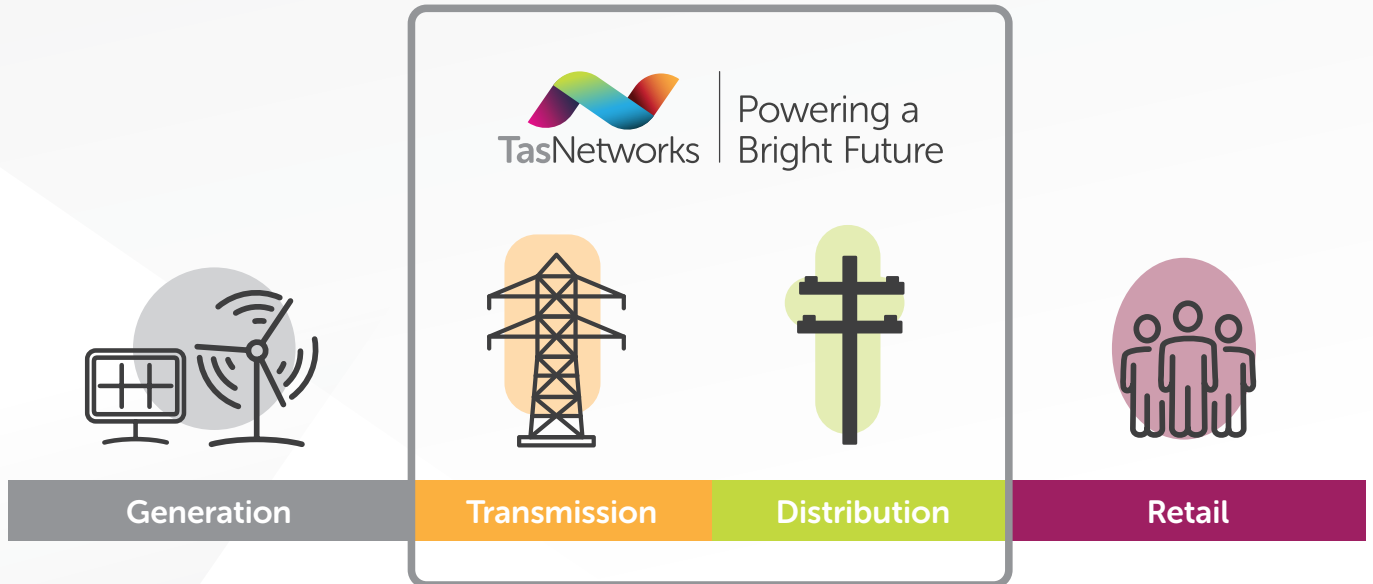
As Tasmania's transmission network service provider, TasNetworks will be managing this step change in the generation and transmission of electricity through the Tasmanian network planning process, the first phase of which is outlined here.

What is 'green hydrogen'?

Green hydrogen is the production of hydrogen gas using entirely renewable energy or low-carbon power.

About us

TasNetworks is a State-owned Corporation that owns, operates and maintains the electricity transmission and distribution networks in Tasmania. We deliver a safe, affordable and reliable electricity supply to more than 295,000 residential, commercial and industrial customers.




These energy networks form a key component of Tasmania's economic infrastructure and, as a State-owned Corporation, TasNetworks' performance contributes to the financial wealth of all Tasmanians.

TasNetworks is looking to build on a proud history of

over 100 years

of Tasmanian investment in renewable generation and network infrastructure, as we work towards powering a bright future for all Tasmanians.



The National Energy Market (NEM) is a wholesale energy market which interconnects the six eastern and southern states and territories and delivers around


80%

of all electricity consumption in Australia.

Tasmania's transmission network

TasNetworks' transmission network supplies electricity to Tasmanian customers, and to the rest of the National Energy Market (NEM) via the undersea Basslink interconnector.

The transmission network is responsible for receiving and transmitting high voltage electricity from generators and delivering it to our customers. This delivery happens either via our distribution network of poles and wires, to the mainland NEM via interconnection (currently via Basslink) as well as more directly to our ten large commercial and industrial customers around Tasmania.



TasNetworks' transmission network connects **30 hydro-electric power stations, five wind farms and one thermal (gas-fired) power station.**

We also provide the network capability that supports the Basslink high-voltage direct current (HVDC) interconnector.

Tasmanian energy landscape

2022

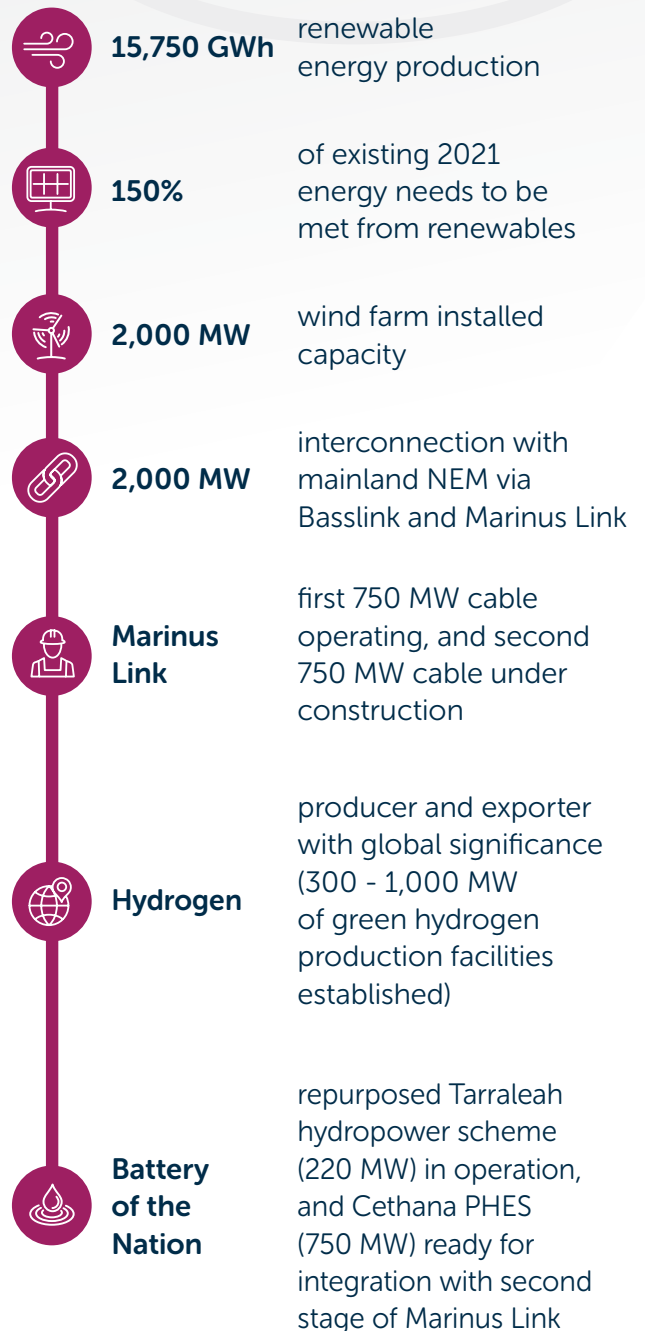


2030

Current state



Future state



Tasmania is leading this energy transformation and as the nation's leading renewable energy state, we are perfectly placed to deliver what the country needs – low cost, reliable and clean energy that delivers energy security, downward pressure on prices, and much needed economic stimulus and jobs for Tasmanians.



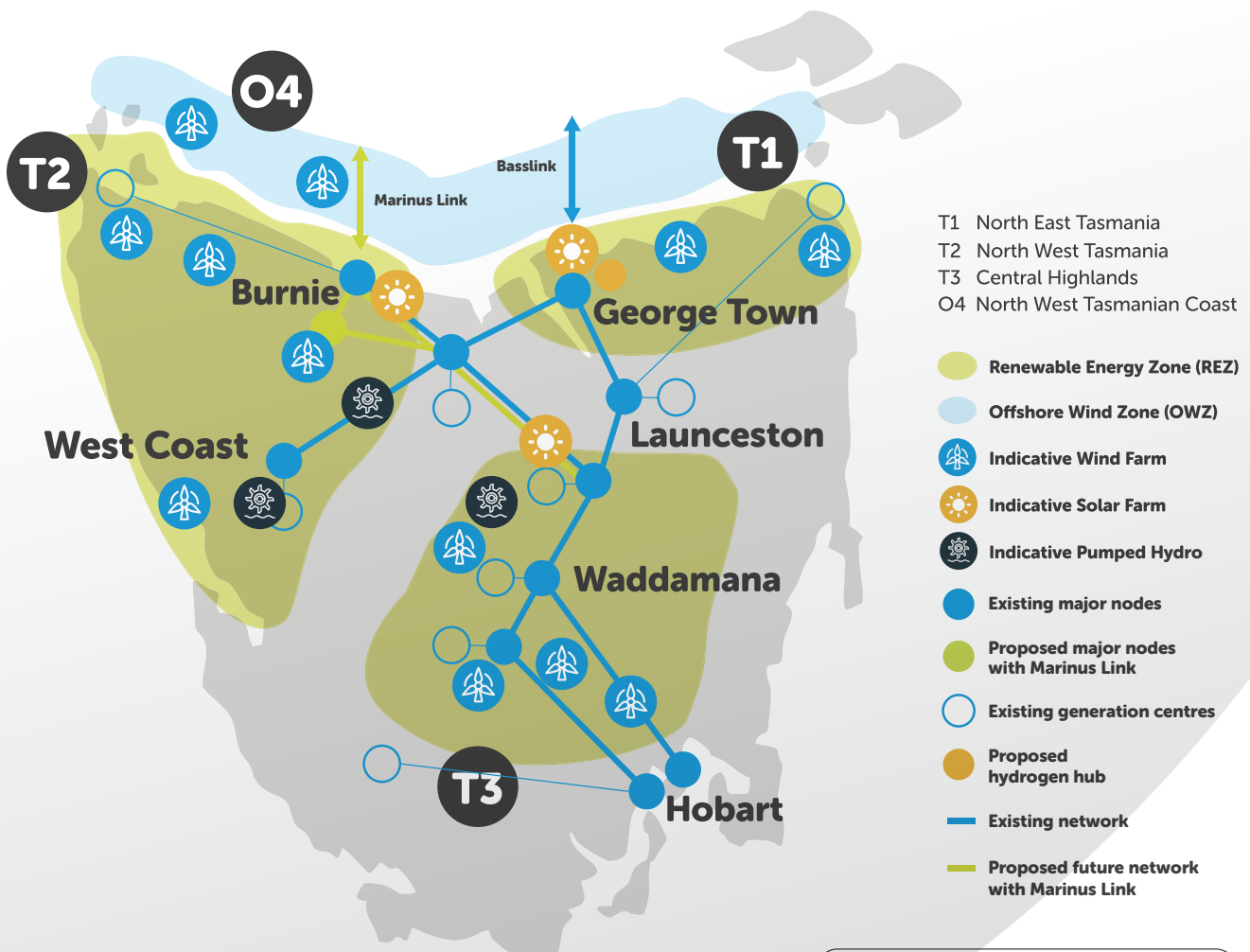
Peter Gutwein, Premier of Tasmania

Facilitating Tasmania's energy future

To integrate both the industrial-scale production of hydrogen and the new renewable generation required to supply that load, significant adaptation of Tasmania's transmission system will be required.

The key elements of our plans for the future are, as required:

- enhancement of the 220 kV Palmerston-Sheffield transmission corridor, which is required under the majority of future scenarios;
- supporting the development of Renewable Energy Zones (REZs) in the Central Highlands and north-east Tasmania;
- developing the transmission network in the State's north-west to support the proposed Marinus Link interconnector with Victoria, as well as new wind generation in the north-west Tasmania REZ; and
- managing system strength and stability as increasing amounts of inverter-based generation (such as wind farms) are connected to the Tasmanian power system.



Indicative wind, solar and pumped hydro locations are pictorial only, and do not represent any actual proposals or plans.

2030 timeline



Tasmania becomes 100% self-sufficient in renewables

- Tasmania's bulk electricity is generated using a combination of hydro-electric generation and the island's world-class wind resources.
- The wind resource quality in Tasmania is amongst the highest across the country.
- While wind farms on mainland Australia typically have average capacity factors of between 30 and 35 per cent, many areas of Tasmania offer average capacity factors of 45 per cent or more.

New wind farms begin to connect

- Battery of the Nation (BoTN) is a Hydro Tasmania initiative.
- The project includes improvement to the efficiency of some of Hydro Tasmania's existing hydro power schemes.
- BoTN aims to grow Tasmania's capacity to generate dispatchable renewable electricity in order to supply new industries in Tasmanian and also to export to mainland Australia.

Battery of the Nation

We are here

- Tasmania is in an enviable position to take advantage of the economic opportunities linked to hydrogen's potential as an energy store, energy carrier and a zero-emission replacement for fossil fuels.
- With its existing and future renewable energy generation assets, in conjunction with its abundant freshwater resources, Tasmania has the potential to become a global competitor in large-scale green hydrogen production.
- This will contribute to decarbonising the NEM and drive economic activity in Tasmania.

Hydrogen hub established

- Marinus Link is a proposed 1,500 MW undersea and underground interconnector linking the Tasmanian and Victorian power systems.
- Marinus Link will predominantly export power from Tasmania to the mainland, however it will also be able to facilitate imports of energy into Tasmania to help facilitate hydrogen production and new renewable energy such as wind and solar.

Marinus Link
First cable delivered

TRET Target:
150% of current renewable energy generation

Questions & Contact

TasNetworks welcomes feedback and enquiries on any of the matters raised in this document.

Your comments will help us better shape our plans to the needs of our customers.

Please send feedback and enquires to:
planning.enquiries@tasnetworks.com.au or visit our
Talk with TasNetworks page to find out more about
our broader planning project:

<https://talkwith.tasnetworks.com.au/tasnetworks-r24>