Delivering low cost, reliable & clean energy

Consumer Advisory Panel | Roundtable

Marinus Link overview and business case

13 May 2022

Benjamin White

Executive Manager
Stakeholder Relations, Land
& Environment
Marinus Link Pty Ltd

Acknowledgement of country

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AGENDA

2:00pm	**Meeting Start – Heath Dillon** - Acknowledgement of Country - Introduction - Housekeeping
2:05pm	**Today's purpose – Heath Dillon**
2:10pm	**Marinus Link overview and business case - Benjamin White**
2:50pm	**Q&A- Mandi Davidson**
3:00pm	**Meeting close – Mandi Davidson**

Next roundtable session
'Who pays' with Heath Dillon and Prateek Beri
Tue 24 May | 2:00pm – 3:00pm

Today's purpose

Heath Dillon, Executive Manager Customer and Revenue

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Marinus Link overview and business case

Benjamin White, Executive Manager,
Stakeholder Relations, Land & Environment

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Project overview

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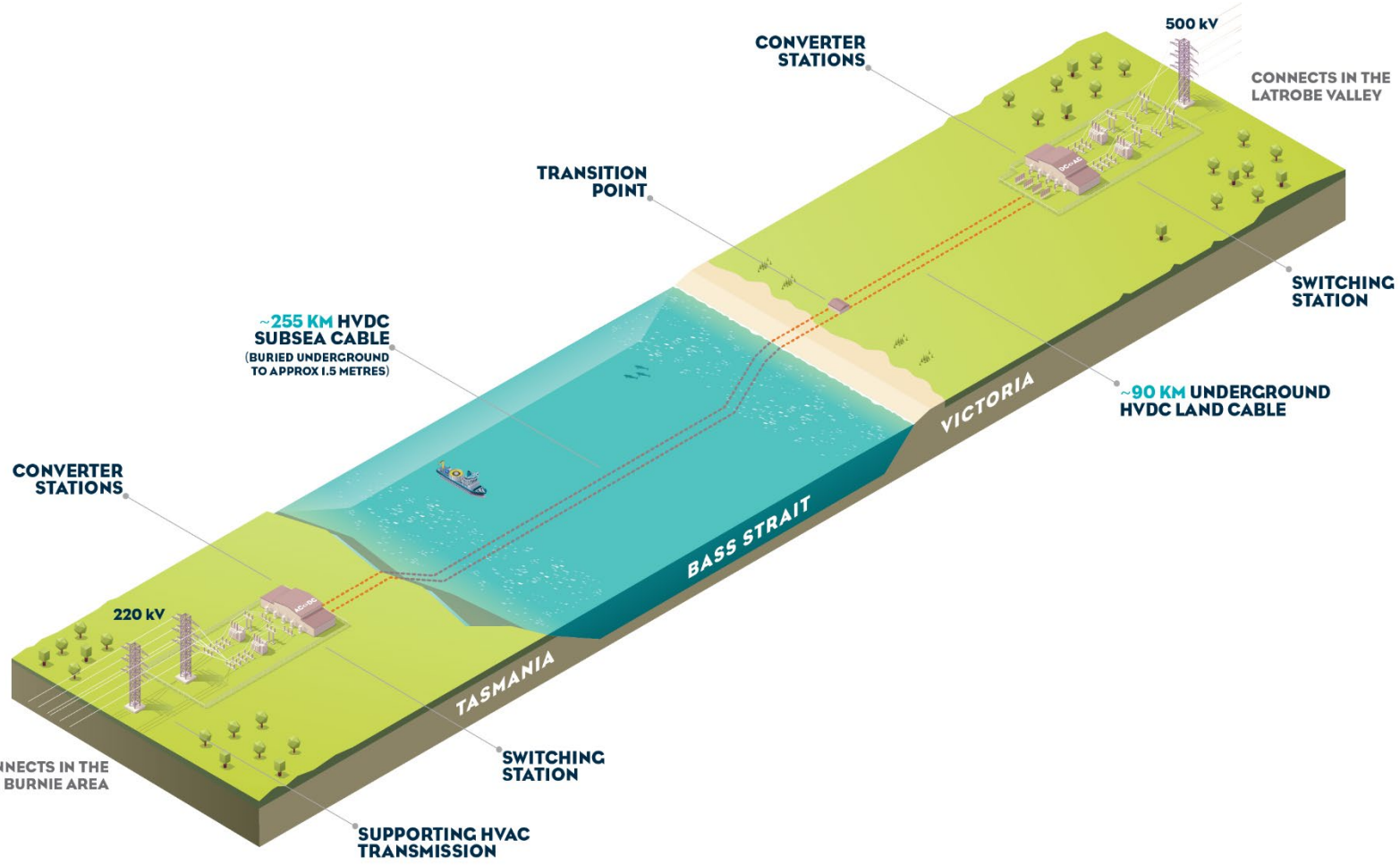
Who is Marinus Link?

- **Marinus Link Pty Ltd** is a subsidiary of **TasNetworks.**
- TasNetworks plans, owns, operates and maintains the **electricity transmission and distribution networks** in Tasmania.
- Both TasNetworks and Marinus Link are wholly owned by the State of Tasmania.
- Marinus Link has received substantial funding support from the Commonwealth and Tasmanian governments since 2018.
- More recently $75m from each government ($150m total) to see Marinus Link through to a Final Investment Decision.

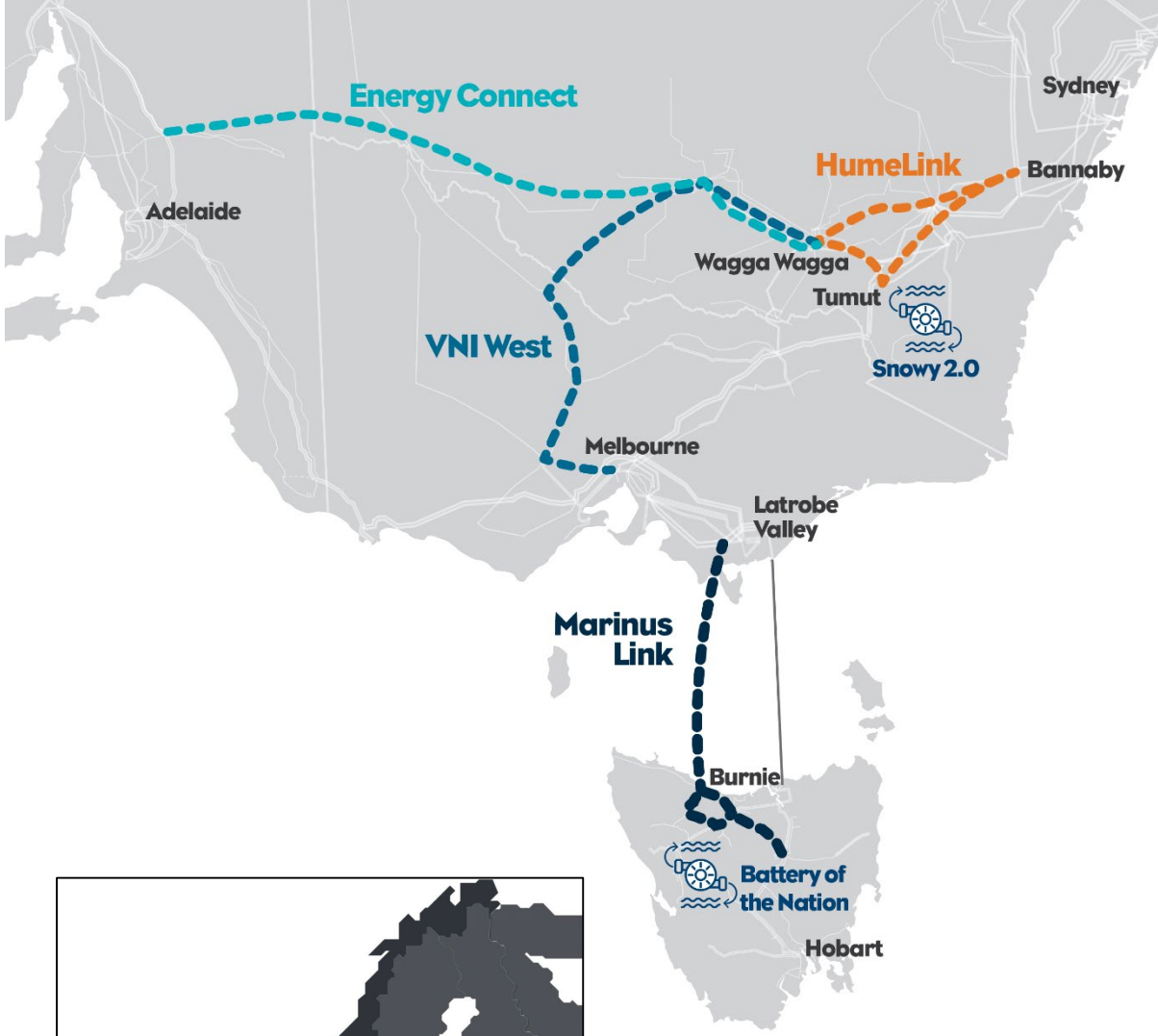
What is Marinus Link?

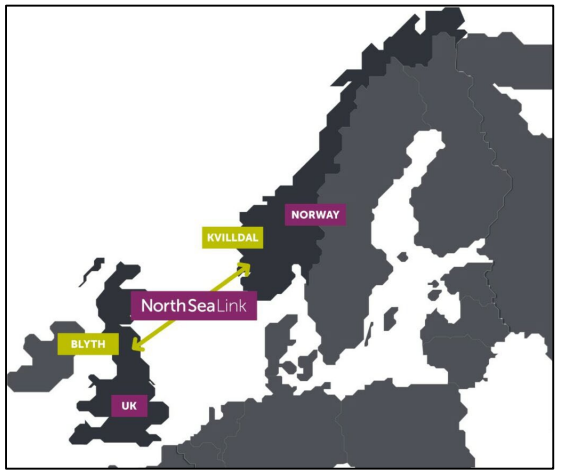
- **1500 MW HVDC electricity interconnector** between Tasmania and Victoria (part of the National Electricity Market).
- **255km** undersea, **90km** land HVDC cables.
- Increased **optical fibre telecommunications** capacity across Bass Strait.
- Victorian **connection near Hazelwood**, in the Latrobe Valley.
- Currently in **Design and Approvals phase.**
- **Final Investment Decision late 2024.**
- 2 x 750MW stages
  - **Stage 1 in service ~ 2028-29.**
  - **Stage 2 in service ~ 2030-31.**



National priority project

- **Actionable Project** 'in service as early as possible' in Australian Energy Market Operator's draft 2022 Integrated System Plan.
- **High Priority** status in **Infrastructure Australia** listing of nationally significant initiatives (Feb 2022).
- Key part of **Infrastructure Victoria's 30 year Strategy** (2022) for energy infrastructure.
- **International in scale**, comparable to key transmission investments that facilitate energy transition in northern Europe.





- (e.g. recently completed **North Sea Link** interconnector from UK to Norway)

An energy sector in rapid transition

UP TO

24,000 MW

OF **THERMAL GENERATORS** ARE EXPECTED TO **RETIRE BY 2035**

=

UP TO

67,000 MW

OF NEW **GRID-SCALE** AND DISTRIBUTED **RENEWABLES** TO **REPLACE** THERMAL GENERATORS

+

UP TO

21,000 MW

OF NEW **GRID DISPATCHED RESOURCES** TO FIRM RENEWABLES

+

UP TO

11,000 MW

OF NEW BEHIND-THE-METER **BATTERY INSTALLATION** TO SUPPORT CUSTOMER'S OWN LOAD

Figures based on the most likely scenario in the AEMO Draft 2022 ISP

Supporting Australia's Renewable Energy Future

Marinus Link will play a key role as ageing, centralised coal-fired power continues to be replaced by variable renewables (supported by storage)

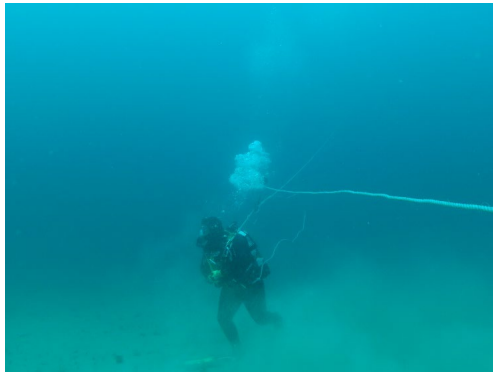
- Provides **cost-effective access to Tasmanian hydro capacity**, delivering:
  - clean, dispatchable energy and firming services; and
  - long-duration 'deep hydro storage'

- Provides **customer benefits from geographic diversity**
  - variable solar and wind generation patterns across states
  - differing seasonal customer load profiles across states

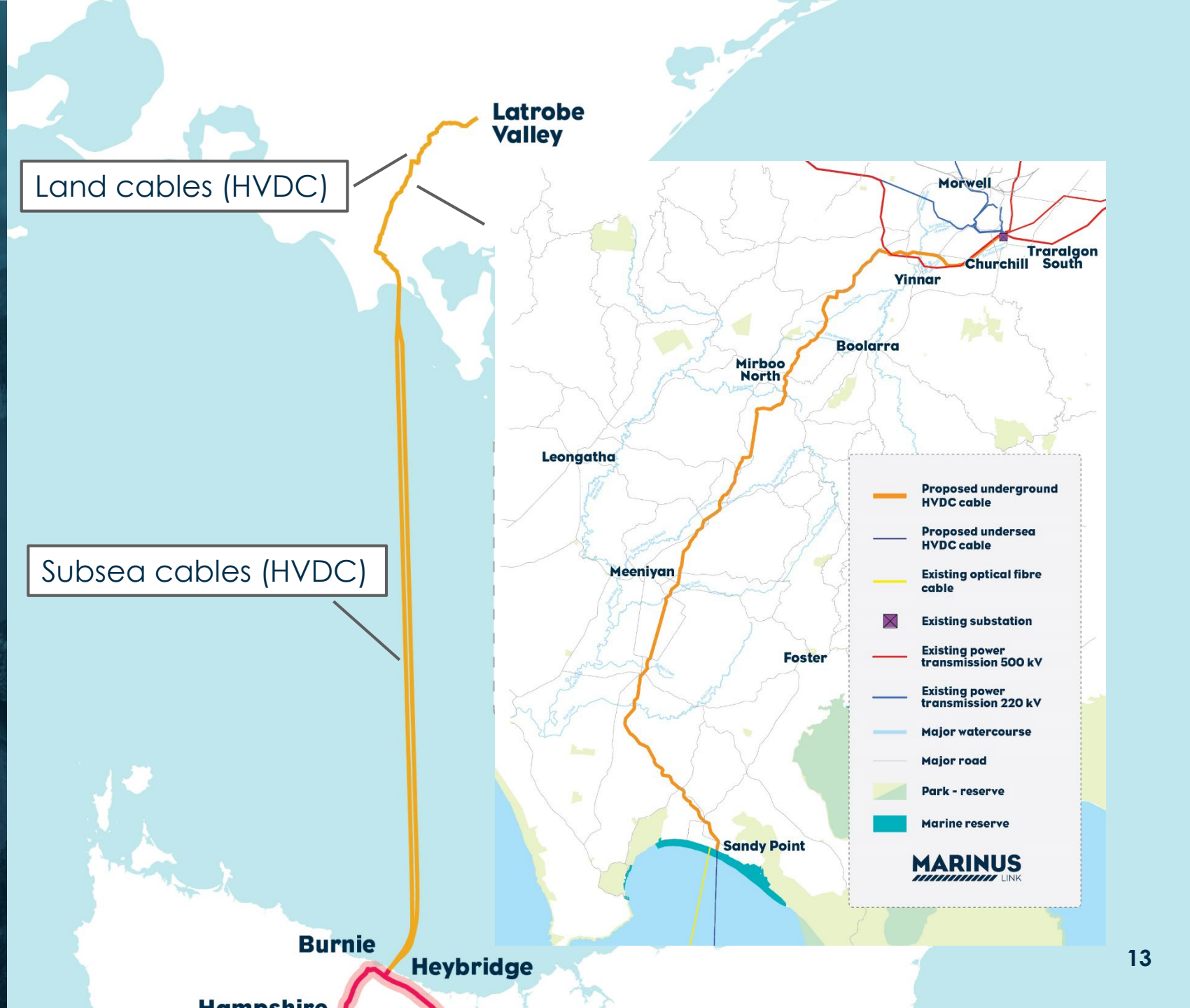
- Puts **downward pressure on customer energy prices**
  - lower cost solution than alternatives
  - fair cost allocation models being progressed

Work underway: Design and Approvals phase

- Project's **largest marine engineering survey** across Bass Strait completed, in advance of **international tender process**.
- Working closely with local landowners and Aboriginal parties to conduct important **geotechnical, cultural heritage and environmental surveys** in Victoria and Tasmania.
- **Strategic land acquisitions** made in Victoria and Tasmania to secure **convertor station sites** and support **route alignment**.
- Refining **technical and power system design and specifications**.
- Engaging with regulators on **market rule changes** to ensure fair cost allocation and revenue setting.
- Progressing **environment and planning impact assessments** in 2 x state and Commonwealth jurisdictions.
- **Wide ranging stakeholder engagements** with governments, industry, business, customers and community.



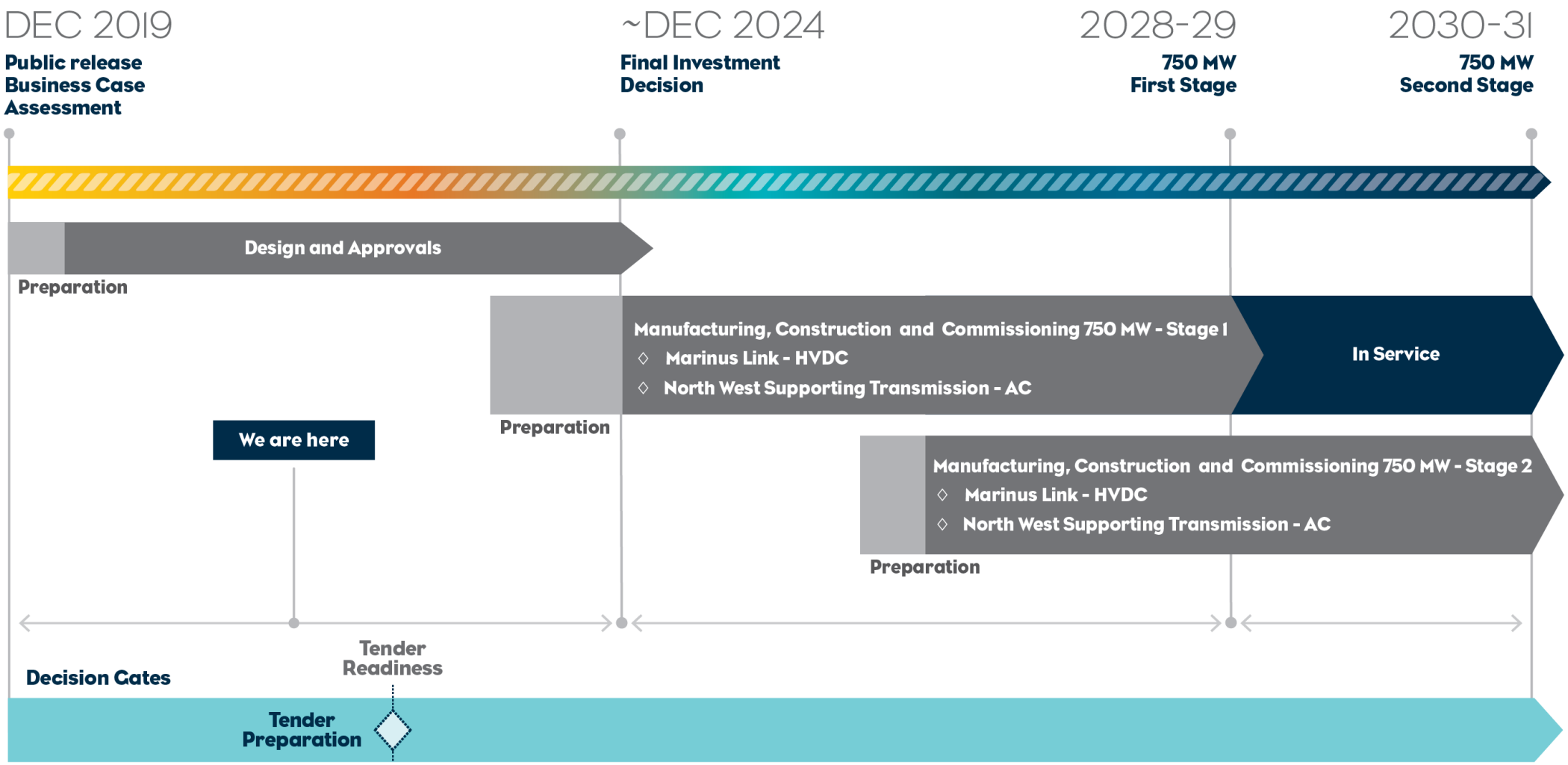
Proposed route overview



Work underway: Gippsland engagement

- Dedicated land agents engaging regularly with approximately **100 directly impacted landowners.**
- **Gippsland Stakeholder Liaison Group** established, independently Chaired, with representatives from local government, tertiary education, Traditional Owners, and other local networks and authorities.
- **Consumer reference group** established to guide revenue setting process.
- Substantial program of **events, information sessions and community activities** underway and planned for 2022.
- Establishment of a Marinus **regional office** in Gippsland.

WORKING TIMELINE

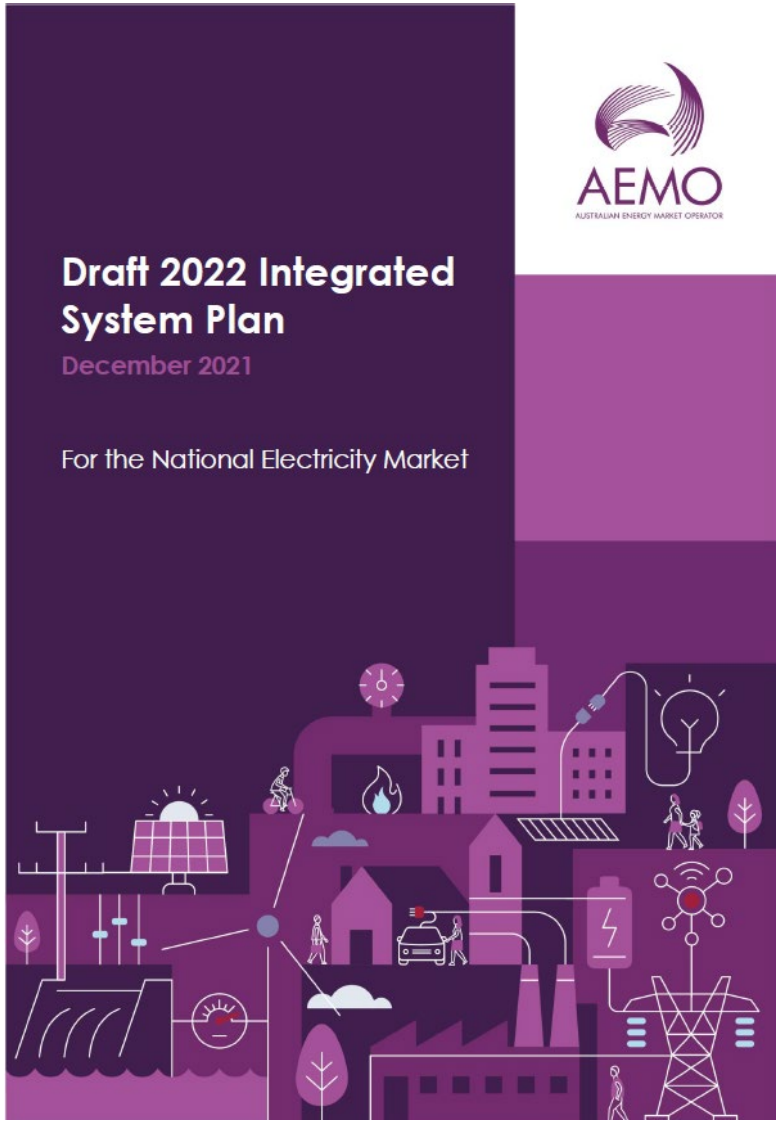


Marinus Link unlocks savings of at least
140 million tonnes of CO_2 by 2050 = removing more than a million petrol/diesel cars off the road

How does Marinus Link stack up?

AEMO Draft ISP 2022 – Net benefits across the NEM under all scenarios

- Under the **most likely 'step change' scenario**, **Marinus Link** contributes approximately **$4.6 billion in net market benefits**.
- These **capital cost savings** will be delivered, both in **reducing investment** in **lower quality VRE** and **firming capacity**, but also through further REZ augmentation.
- **Prompt delivery** of both the first and second cables will deliver **net market benefits** under **all scenarios.**
- **Wind farms located in Tasmania** (particularly Tasmania's Central Highlands and North-West REZs) **produce more energy** than almost all REZs on the mainland, and also **provide greater resource diversity** to mainland wind farms.
- **Without improved access** to these resources, **more mainland capacity would be required** for the equivalent volume of energy, **which would increase system costs** all else being equal.



Regulatory Investment Test for Transmission (RIT-T)

The Regulatory Investment Test for Transmission (RIT-T) is a mechanism defined in the National Electricity Rules that:

- Applies **a cost-benefit analysis** on new electricity infrastructure proposed for the National Electricity Market (NEM).
- Identifies transmission investments that **maximise net economic benefits** and meet **reliability standards.**
- Assesses the **economic and technical impact of**, and **preferred timing** for all major network investments in the NEM.
- Ensures regulated transmission investment decisions are **in the long term interests of customers**.

Marinus Link satisfied the RIT-T in June 2021 with the publication of the Project Assessment Conclusions Report

Key findings - Project Assessment conclusions report (PACR)

- Project Marinus delivers **substantial net economic benefits** to the NEM. These benefits are robust across all ISP scenarios and sensitivities.

- The **benefits are maximised** under a **1500MW (2 x 750MW stages)** option.

- There are **significant economies of scale in building the second 750MW Link**

- All indications are that **Project Marinus will be needed as early as possible**, and **market developments** are likely to **reinforce the earliest possible timing**

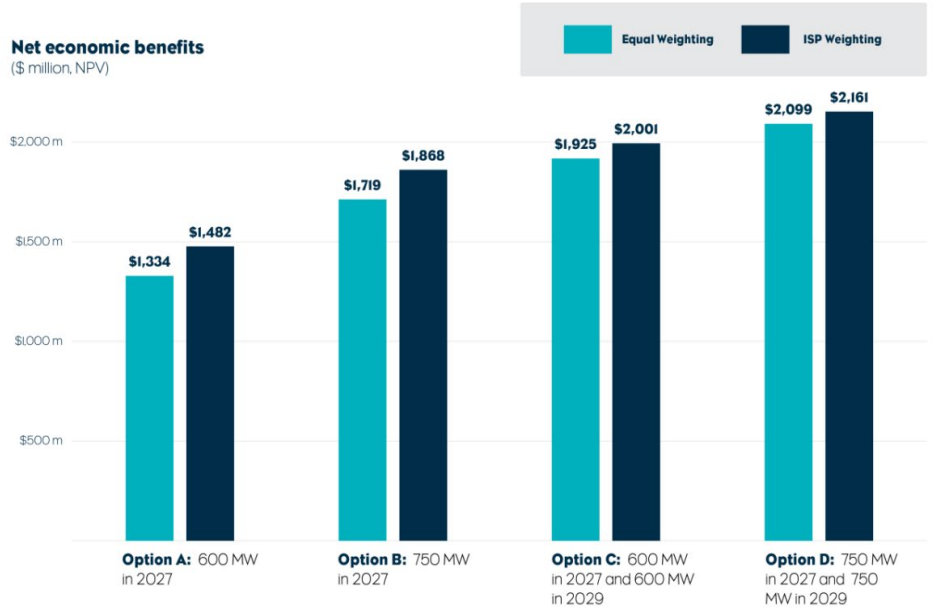


Figure 1: Net economic benefit for all credible options – ISP weighting and averaged across scenarios

Purpose & scope of the Wholesale Pricing Report

The Wholesale pricing report addresses stakeholder feedback on how customers would benefit if Project Marinus proceeds.

- TasNetworks engaged **independent** global advisory **firm FTI Consulting (FTI)** to undertake **wholesale pricing analysis**
- FTI has provided **similar pricing insights for several interconnector projects** in Europe previously, and;
- In the NEM, **FTI has advised AEMO, ESB and pricing for Project Energy Connect**.

- FTI analysis **differs from Project Marinus RIT-T approach**:
  - **FTI focuses exclusively on customers' perspectives** by focusing on Project Marinus impact on future electricity prices, cf. considering net economic benefit across the NEM; and
  - **FTI takes account of generators' likely bidding behaviours**, cf. assuming generators' bids will always reflect their marginal costs.

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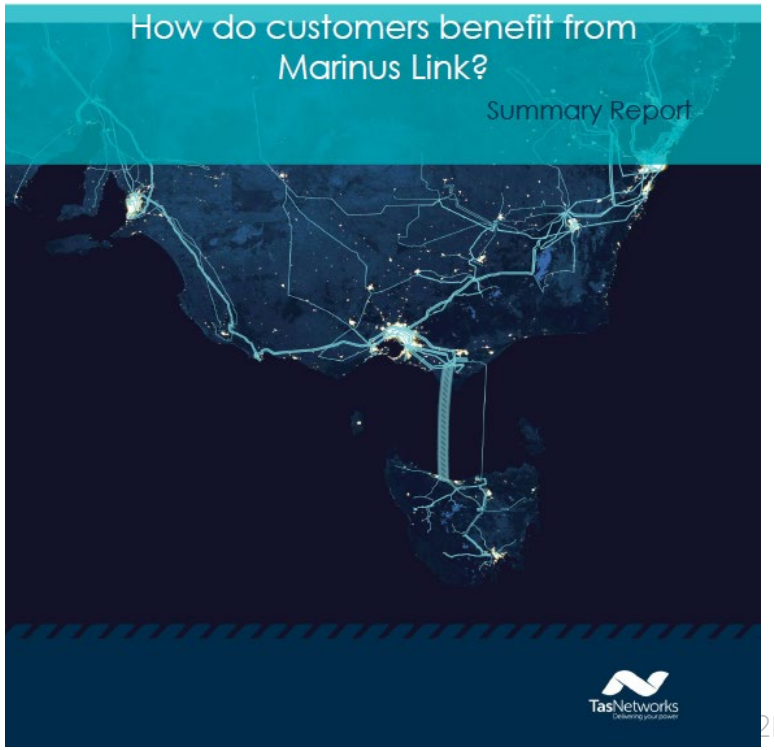
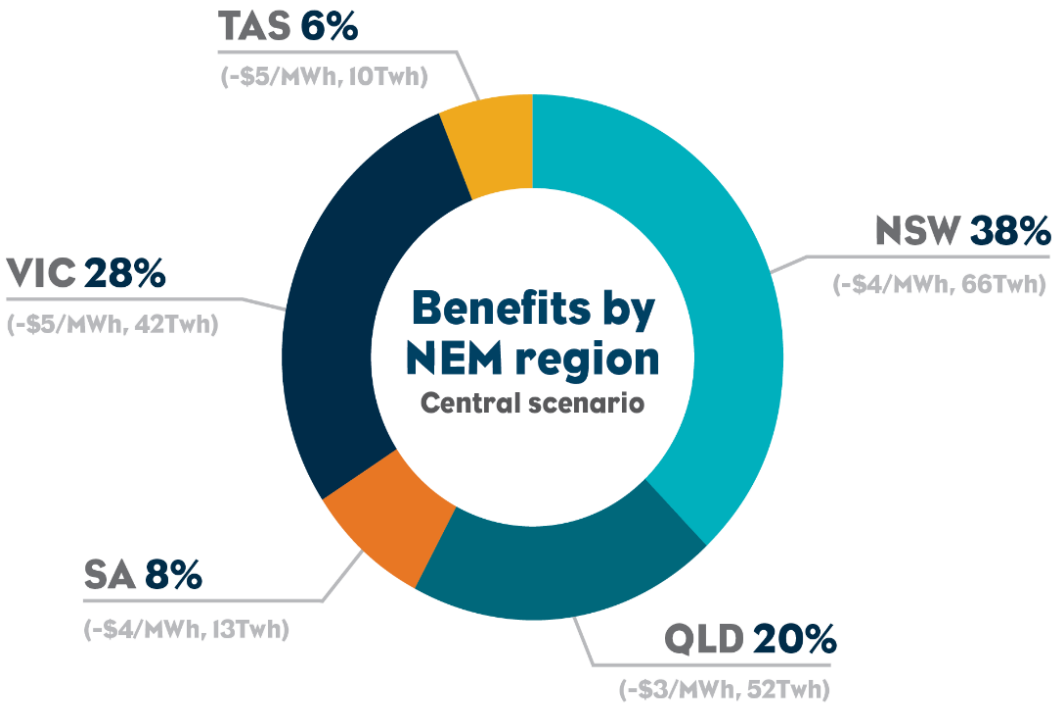


Key Insights From The Wholesale Pricing Report

- **Project Marinus is projected to lower costs for all consumers** by unlocking cost-effective Tasmanian dispatchable generation as NEM continues to transition away from the ageing thermal generatio fleet.
- **Project Marinus can exert downward pressure on wholesale electricity prices by introducing additio dispatchable capacity** that replaces the marginal gas-powered generators.
- **Under current pricing framework** - while **Victoria ar Tasmania** would pay for the cost of the interconnector, they **only receive 34% of the bene**

Benefits by NEM region for Central Scenario

projected reduction in wholesale electricity price and annual energy consumption



Q&A

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