Tasmania's Battery of the Nation opportunity

Presentation to the Marinus Link Consumer Advisory Panel

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About Hydro Tasmania

More than a century of hydropower.

Australia's largest water manager, dam owner and renewable energy generator

- 30 power stations and 54 large dams
- Joint owner in 307 MW of wind farms

Consulting business Entura delivers clever solutions in water and energy to clients locally, nationally and internationally.

Electricity retail business Momentum Energy operates in mainland Australia and the Bass Strait islands.

What is *Battery of the Nation?*

Hydro Tasmania

1st 750MW cable

MARINUS LINK

2nd 750MW cable

Unlock system flexibility to provide firming

Station capacity upgrades (up to ~70MW)

New flexible Tarraleah hydropower scheme (+up to 220MW)

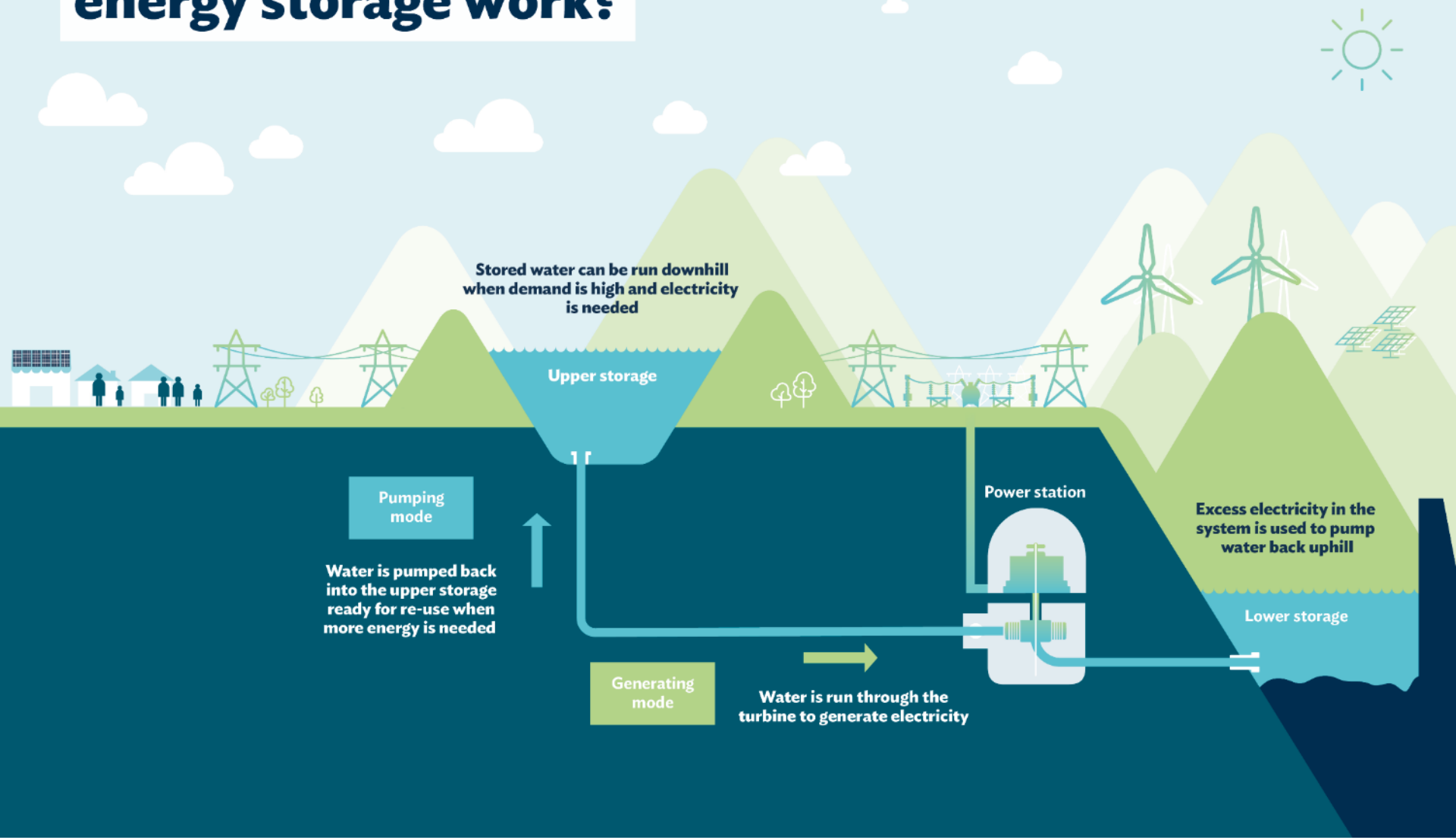
By 2028

New long duration pumped hydro at Lake Cethana (+750MW and 20 hours)

By 2031

How does pumped hydro energy storage work?

Hydro Tasmania



Deep storage and pumped hydro

- As supply becomes more variable, storage is expected to play an increasingly important role and there is a role for all storage types
- Deep storage will be critical in finding the long term ‘least cost’ solution for customers
- Longer duration storages:
  - Will help maintain reliability
  - Can better handle forecast uncertainty
  - Will be better placed to manage wind droughts, days of low solar and extended asset outages (transmission or supply).

Deep storage pumped hydro in Tasmania

Hydro Tasmania

Feasibility of 3 sites – one site selected to align with development of Marinus Link (2nd 750MW cable)

Lake Cethana
North West Tasmania

Lake Rowallan
North West Tasmania

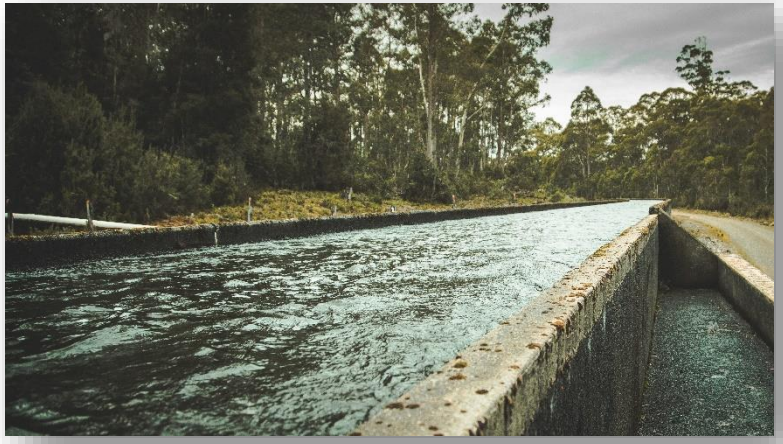
Lake Plimsoll (Tribute)
West Coast, Tasmania

Why redevelop existing assets?

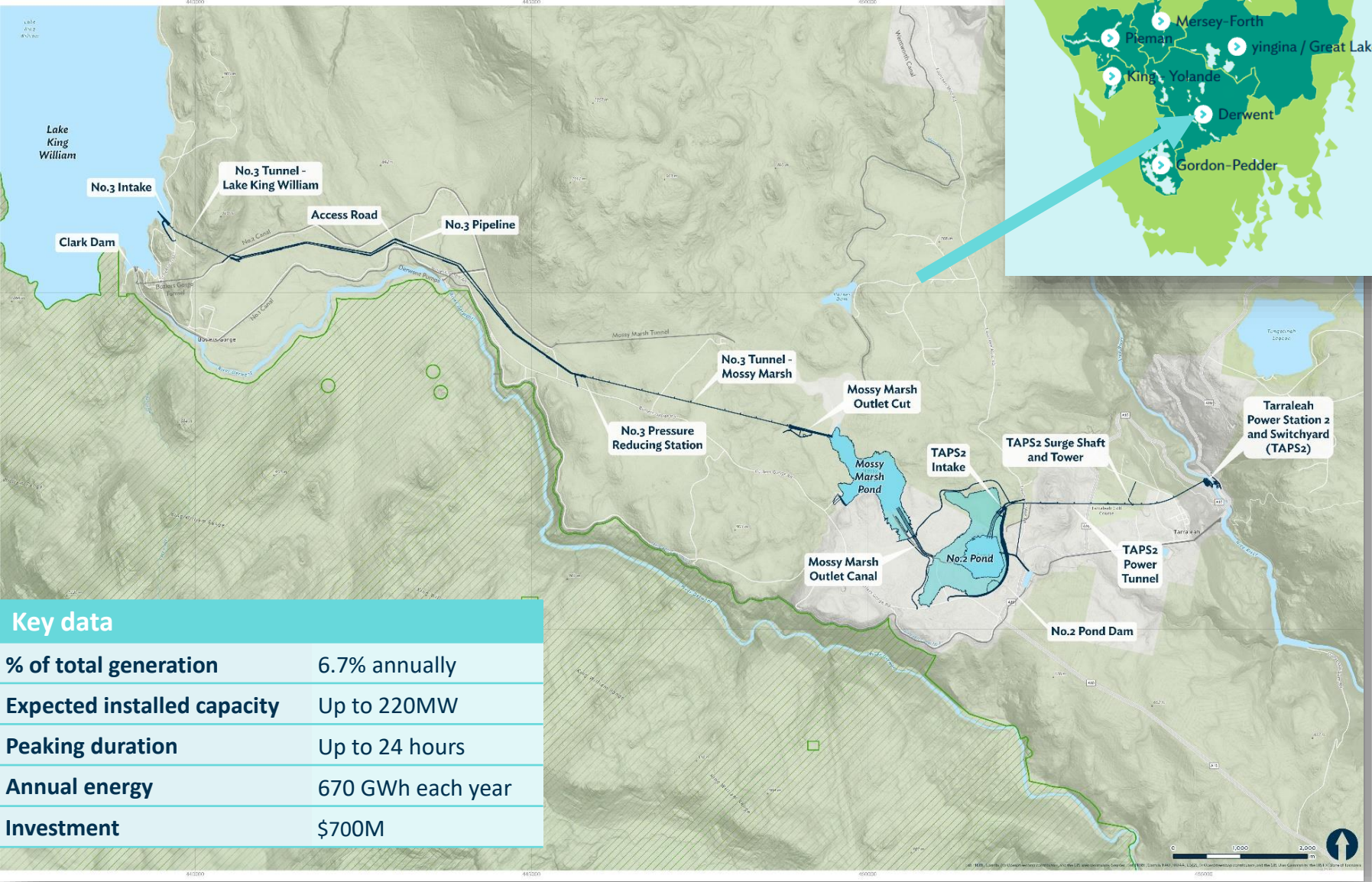
- Ensure assets can respond to future market needs
- Increase capacity, flexibility and responsiveness in the system

For Tarraleah

- A new power station, new water conveyances and bigger storage capacity.
- Deliver up to 220MW of flexible hydropower capacity.
- 24 hours continuous operation at full capacity when the market needs it.



Possible new future for Tarraleah

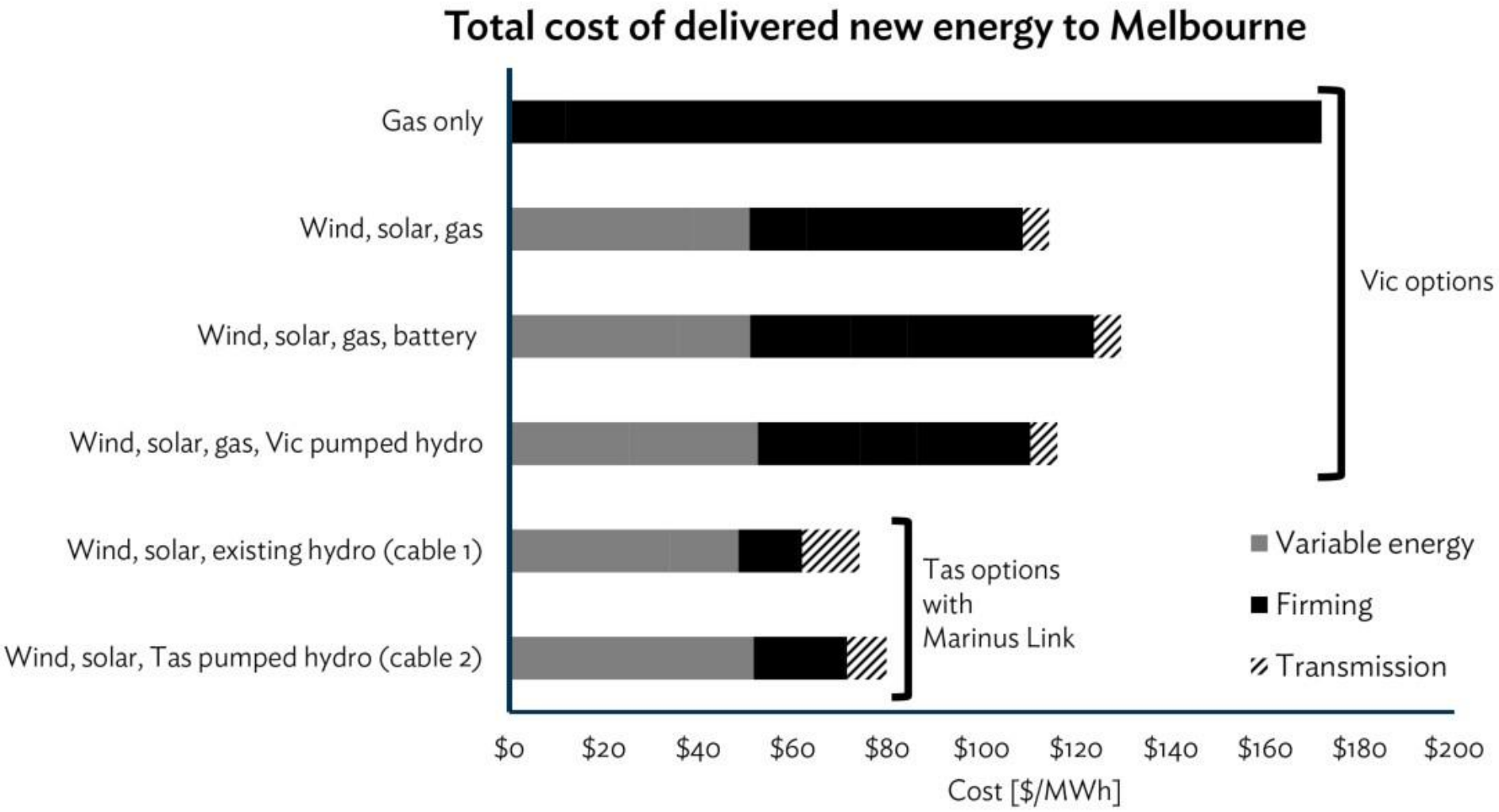


Key data	
% of total generation	6.7% annually
Expected installed capacity	Up to 220MW
Peaking duration	Up to 24 hours
Annual energy	670 GWh each year
Investment	$700M

West Coast scheme upgrades

- *Optimise existing assets to maximise capacity and renewable energy.*
- As part of our normal capital investment plan, these upgrades require a ~$350M investment from Hydro Tasmania.
- Long-term capital investment – 5 power stations over a 6 year construction period (1st 2024 – 5th 2030).
- Ensure further 30+ years' operation and increase efficiency and capacity.
- Preparation has started for the first stage.

Cost-effective Tasmanian supply



Derived from Hydro Tasmania's storage investment white paper - www.hydro.com.au

Benefits and opportunities

- Long term reliability and cost efficiency - Tasmanian consumers
- Optimise the Tasmanian hydropower system for maximum value
- Reduce pressure on Tasmanian water resources for energy generation
- Revenue to Tasmania from the NEM
- Regional development and opportunities – North West
- Leading position in renewable energy to attract green business

For the wider market

- **Innovation is key:** Products that take the risk out of trading in this type of market and provide revenue certainty for generators.
- **Least cost solution:** Deep storage will be critical in finding the least cost solution and deep storage is hard to find.
- **Enabling more VRE development:** Access to cost competitive deep storage in Tasmania enables more renewable energy development and increases competition.
- **Reliability and affordability**: Cumulative effect is improved power system reliability and downward pressure on prices.

Thank you

www.hydro.com.au/clean-energy/battery-of-the-nation

Bathymetric surveys at Lake Murchison, West Coast of Tasmania