



The CarbonNet Project

The 33rd Clean Coal Day International Symposium

2 September 2024

Jane Burton, Project Director



Australian Government
Department of Climate Change, Energy,
the Environment and Water



Jobs, Skills,
Industry
and Regions



Acknowledgement of Country

We acknowledge the Traditional Custodians of the lands on which we meet on today and their ongoing connection to lands, waters and communities.

We pay our respect to their culture and to Elders past and present.



Victoria's emissions reduction target

'To achieve net zero emissions by 2045'

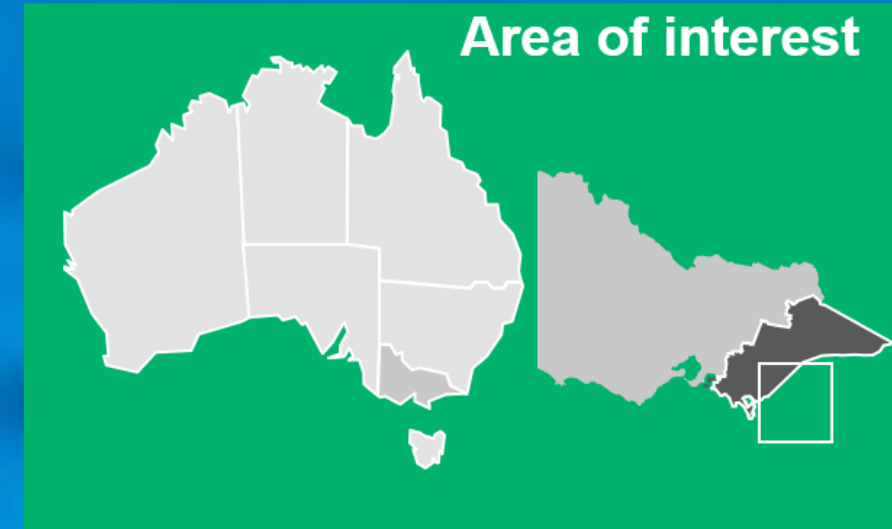


CCUS is required in all major global and Australian carbon abatement modelling scenarios*, even when renewable energy provides 100% of our power needs.

*International Energy Agency (IEA), International Renewable Energy Agency (IRENA), Intergovernmental Panel on Climate Change (IPCC), CSIRO, and NetZero Australia Report – Princeton, UoM, UoQ, Nous

CarbonNet is a government funded project

Established in 2009, CarbonNet is funded by the Commonwealth and Victorian State governments



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Market opportunity

The role of CCUS

Victoria has world class natural resources and opportunities to develop a substantial economic opportunity in CCUS

Opportunities in Victoria

Opportunities to support Australian and APAC decarbonisation

Decarbonising industry



Taking CO₂ from industrial processes, reducing emissions in Victoria

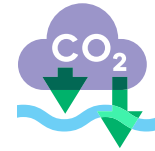
Low-carbon hydrogen, ammonia & urea



Domestic & Export

CCUS displaces grey hydrogen in industry, and fuels for shipping and aviation

Negative emissions



BECCS and DAC remove CO₂ from the atmosphere, offsetting hard-to-abate industries

CO₂ Shipping imports



Interstate & International

Projects can support decarbonisation of regions without local CO₂ stores by accepting shipping imports

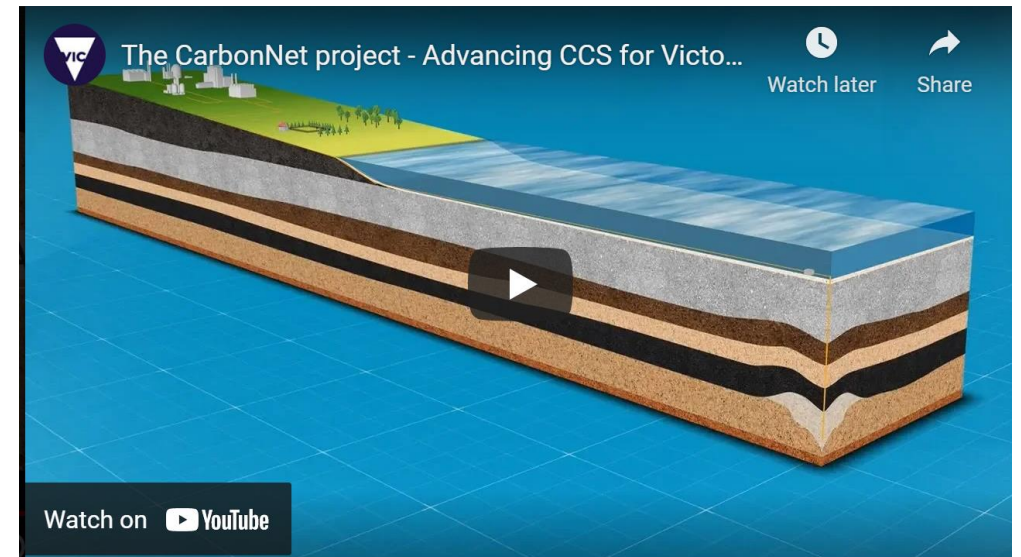
Near term opportunities targeted

Longer term opportunities

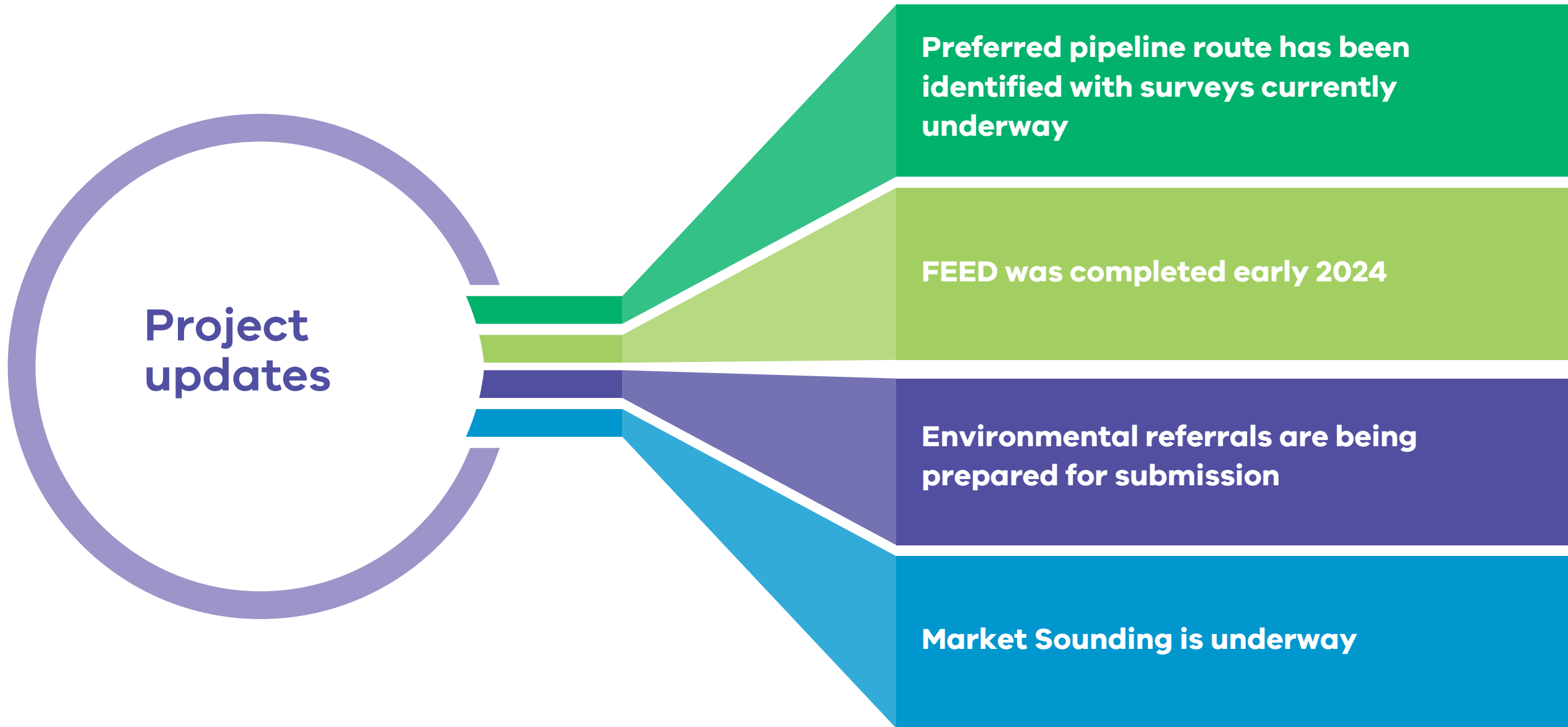
Project Overview

CarbonNet is progressing the development of a commercial-scale, multi-user Carbon Dioxide (CO₂) transport and storage network, connecting industry in the Latrobe Valley and further afield to world class CO₂ storage sites offshore in the Gippsland Basin.

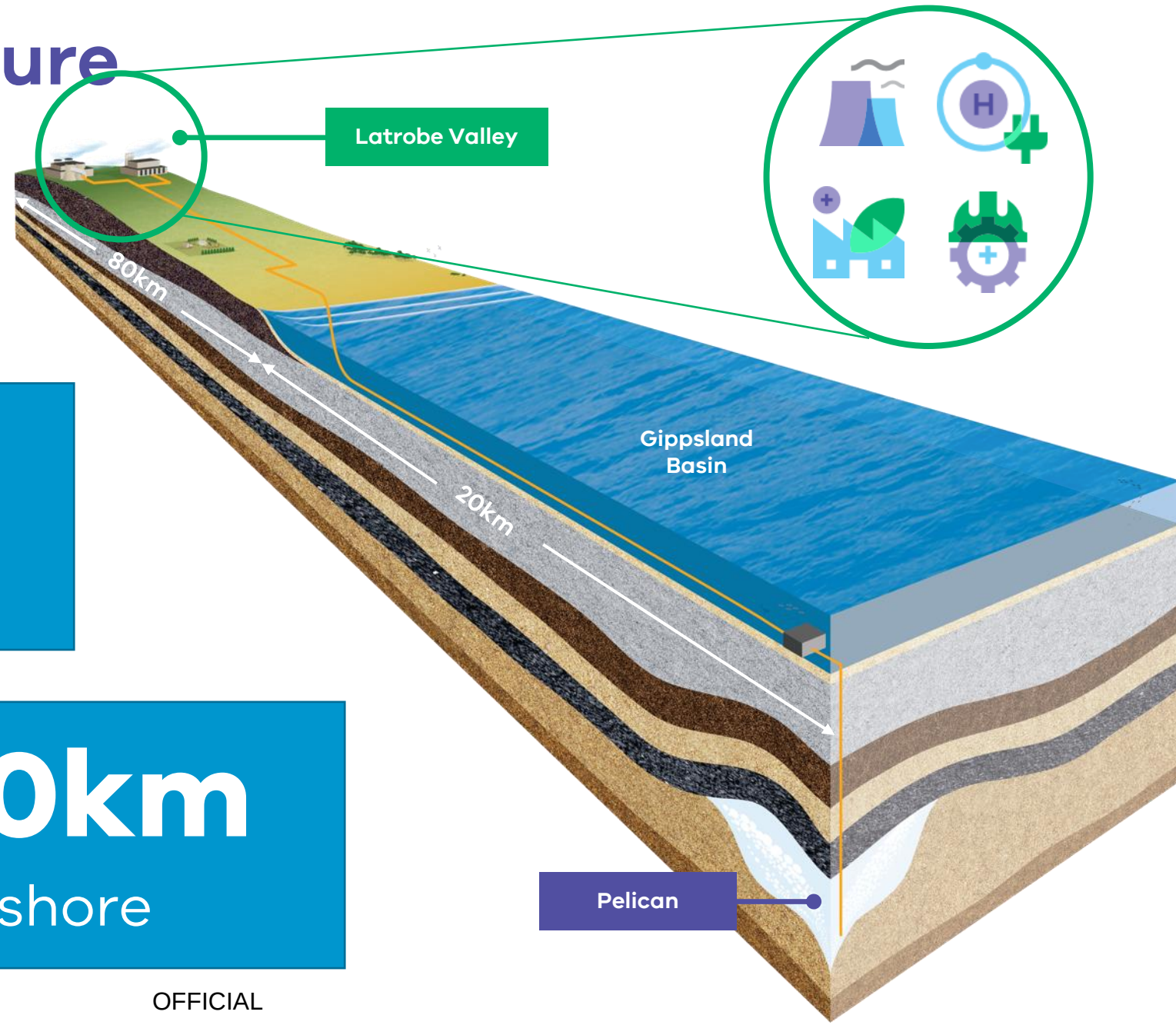
- Jointly funded by the Commonwealth and State governments
- 10+ yrs of significant research including work with CO2CRC, CSIRO and University of Melbourne.
- Feasibility studies across full CCS chain
- Environmental risk assessment: inc. air and groundwater
- Australia's first GHG Offshore Appraisal Well drilled in December 2019.
- Project is working within a complex regulatory framework



Watch our video for an overview of the project –
Google 'CarbonNet Project'



Project infrastructure



100km

Underground pipeline

80km

Onshore

|

20km

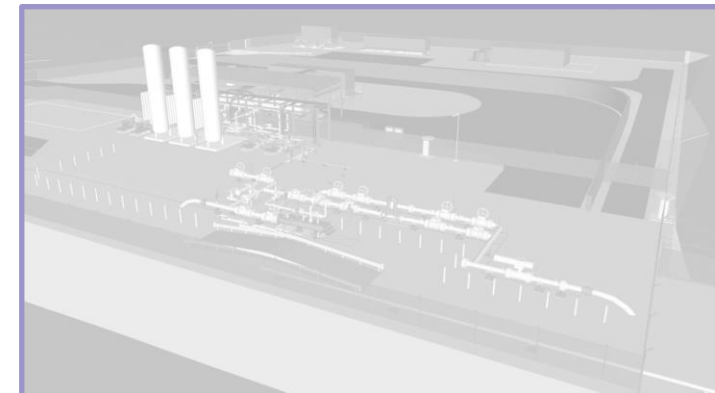
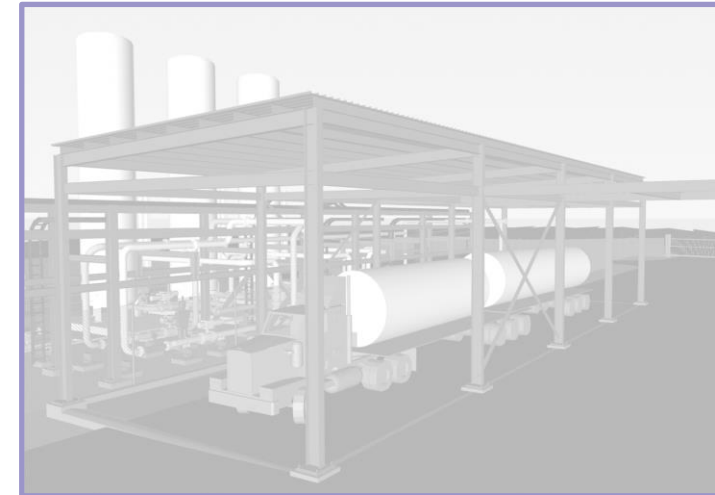
Offshore

CarbonNet's offshore permits

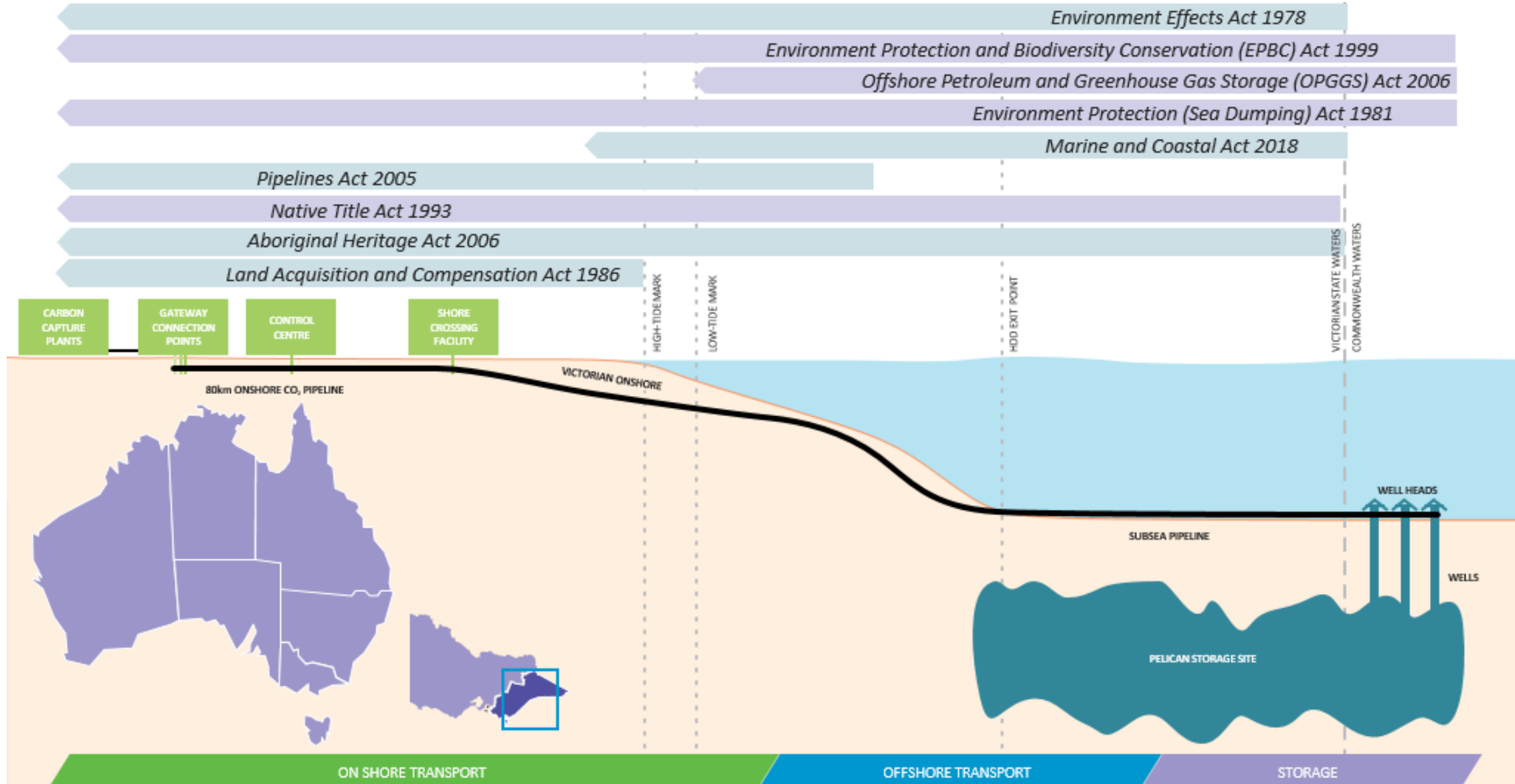


Front End Engineering Design (FEED) complete

- Commenced in May 2023, CarbonNet's FEED package was delivered by Worley. Final documentation approved in March 2024. Financial support from JOGMEC.
- Critical to Business Case and environmental referrals
- Will provide clarity around
 - class 3 capital cost estimate over 40+ years
 - operating cost estimate for the project life cycle
 - Single technical option
 - Size of equipment (e.g. diameter of pipeline)
 - Process and instrument diagrams
 - Procurement of long lead equipment
- Completed **critical** reviews (HAZID, HAZOP, SIL Review, SMS, Risk Review, 30% Design Review, Constructability Review, Cost Estimate Review)
- Detailed design underway.



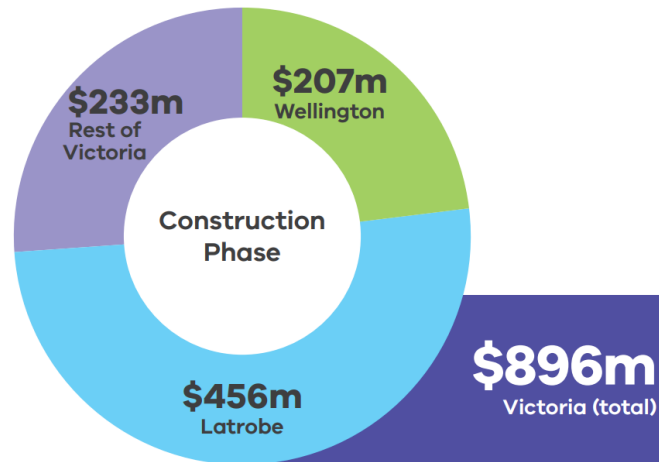
Planning, environment, heritage, land and culture



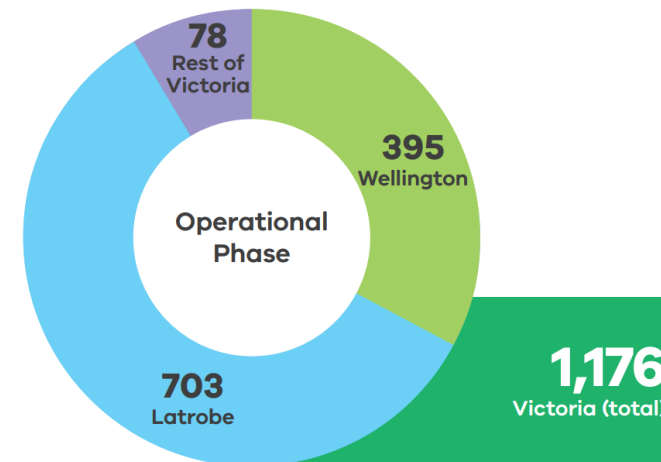
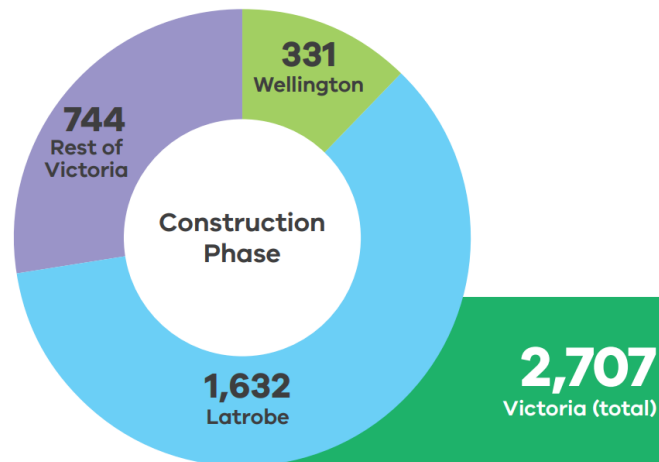
Economic benefits – Jobs & GRP



Boost to Gross Regional Product (GRP)



Jobs created

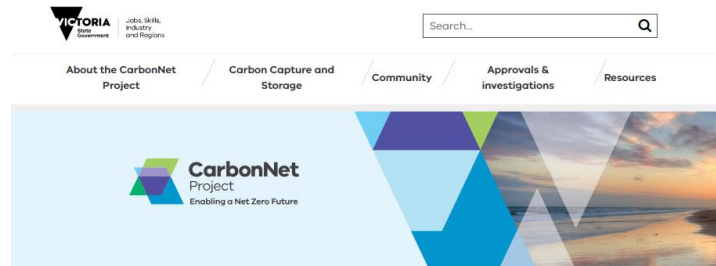


Community engagement



Keep up to date:

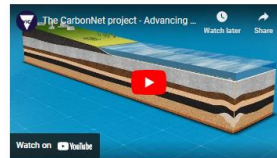
www.vic.gov.au/CarbonNet



The CarbonNet Project is working towards establishing a commercial scale Carbon Capture and Storage (CCS) hub in Gippsland, Victoria.

CCS is being investigated in Victoria, and implemented around the world, because it is recognised as having an important role in reducing greenhouse gas emissions from industry.

CarbonNet plans to build a 100km CO₂ pipeline from the Latrobe Valley to the Gippsland Basin, enabling new decarbonised industries to contribute to Victoria's 2035 interim emissions reduction target and a net zero emissions outcome by 2045.



[View transcript](#)



About CarbonNet

A Carbon Capture and Storage (CCS) project which will decarbonise industry in Gippsland.



What is CCS?

Carbon Capture and Storage (CCS) is one of the many solutions to achieving net-zero CO₂ emissions.



Why Gippsland

Gippsland is a world leading location for CO₂ storage.



Community consultation

Have your say and learn about upcoming events.



Approvals and investigations

CarbonNet's program of investigations and environmental approvals.



Carbon Capture and Storage FAQs

Discover answers to frequently asked questions.



October 2023

In this edition

- CarbonNet project update
- Building Australia's carbon removal industry
- CarbonNet at the Gippsland New Energy Conference
- Gipps Youth New Energy Summit
- Committee for Gippsland launch Hydrogen Roadmap
- New CO2CRC Essentials Course
- CCS news from around the world
- Upcoming industry events

CarbonNet Project update

On 25 August the Victorian Pipeline Regulator (within the Department of Energy, Environment and Climate Action) approved CarbonNet's Pipeline Consultation Plan (PCP). The approval of the PCP allowed for landholder liaison to commence across the proposed 80km onshore pipeline corridor in Gippsland. The CarbonNet team is currently working to individually contact all potentially impacted landholders to seek access to their land, initially to conduct Spring and Summer surveys. The proposed CarbonNet pipeline route is not final and will be informed by landholder and community engagement, front end engineering design and survey outcomes.

[View CarbonNet's Pipeline Consultation Plan](#)

Building Australia's carbon removal industry

Jane Burton and Victoria Mendes Da Costa from the CarbonNet project presented at the recent Atmospheric Carbon Removal Summit hosted by the University of Technology, Sydney. The summit was well attended by national and international representatives seeking to meet global emissions targets through removing CO₂ from the atmosphere via multiple methods. Topics included CO₂ sequestration, Direct Air Capture, Carbon Mineralisation, and the role of the ocean, rocks and agriculture in decarbonisation.

Roger Aimes, Senior Advisor for CO₂ Removal at the Office of the Under Secretary for Energy and Innovation at the US Dept of Energy, was the summit's keynote speaker. He provided an excellent insight into US strategy and government support for CO₂ removal technologies and the need to progress the sector in Australia. Speakers and attendees emphasised that all CO₂ removal methods are needed immediately, alongside emissions reduction. The geological storage of CO₂ at scale was acknowledged as critical to reduce CO₂ from the atmosphere.



CarbonNet's Jane Burton speaks on a panel at the summit. Image courtesy of the Atmospheric Carbon Removal Summit.

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