



**CarbonNet**  
Project

Enabling a Net Zero Future

## The CarbonNet Project: A solution for carbon removal

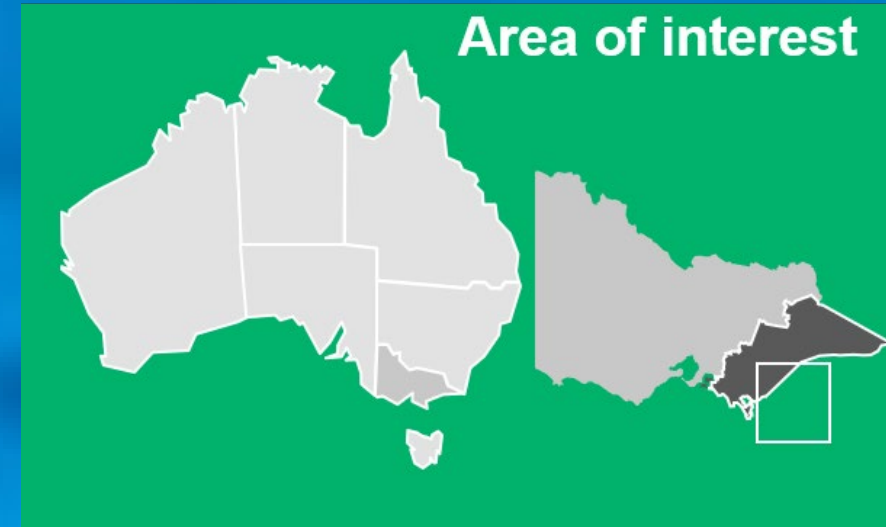
*Japan CCS Forum  
November 15 2023*

Jane Burton  
Project Director, The CarbonNet Project

13 November 2023

## CarbonNet is a government funded project

- Established in 2009, CarbonNet is funded by the Commonwealth and Victorian State governments
- The project's Final Investment Decision is scheduled for 2024.



**Australian Government**

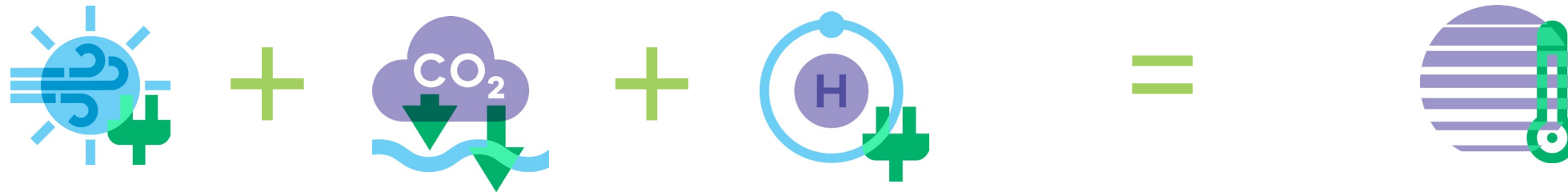
**Department of Climate Change, Energy,  
the Environment and Water**



Jobs, Skills,  
Industry  
and Regions

## 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

## We are a CO2 transport and storage project



**100km**

Underground pipeline

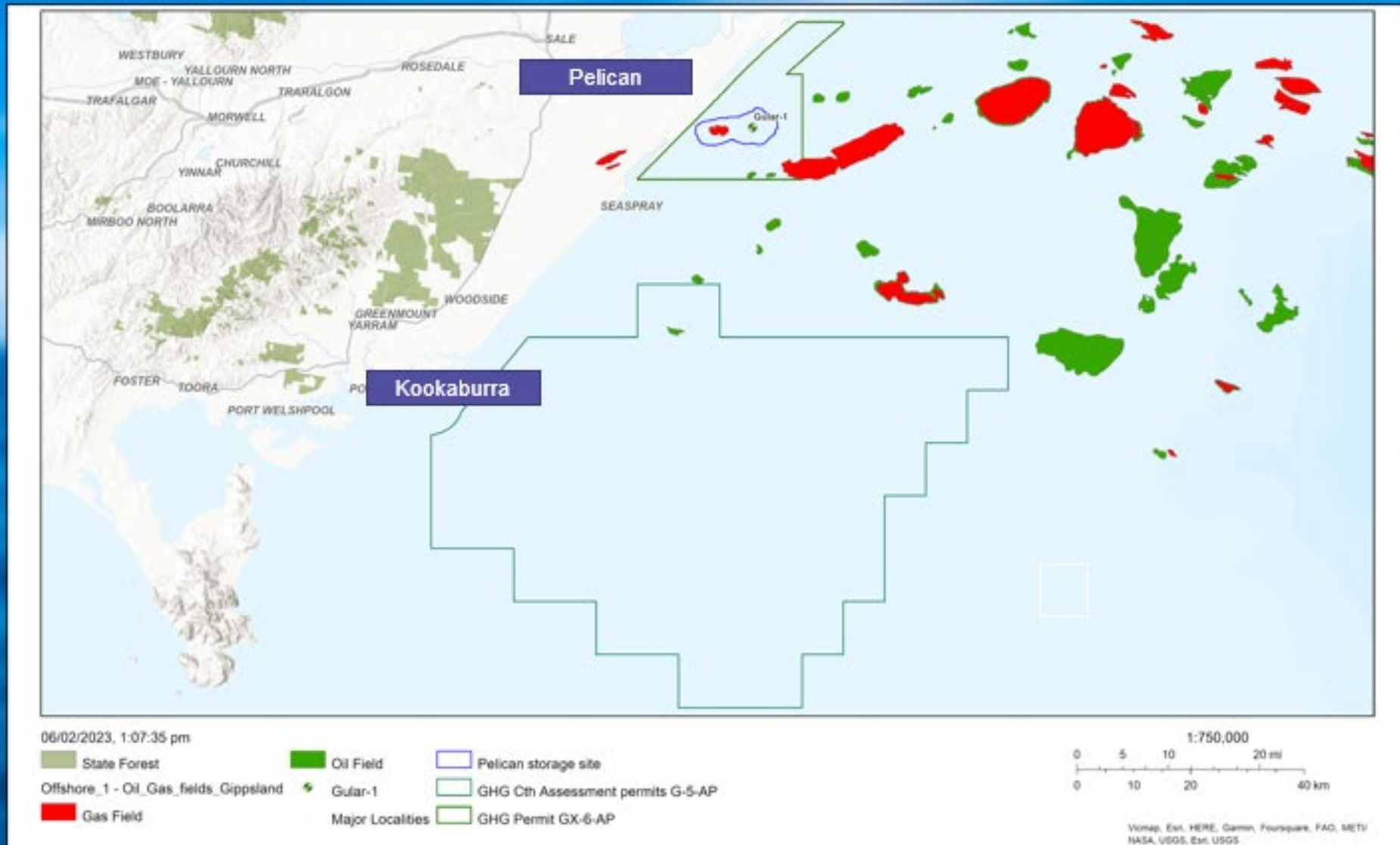
**80km**

Onshore

**| 20km**

Offshore

## We have two permitted sites in the Gippsland Basin



## The Concept

- 1 CO<sub>2</sub> is captured at industrial facilities, compressed and delivered to an offtake point

### CO<sub>2</sub> Pipeline

- 100km long
- 6 million tonnes of CO<sub>2</sub> per year

- 2 The liquid CO<sub>2</sub> is transported along a pipeline to the Pelican geological storage site

### Offshore

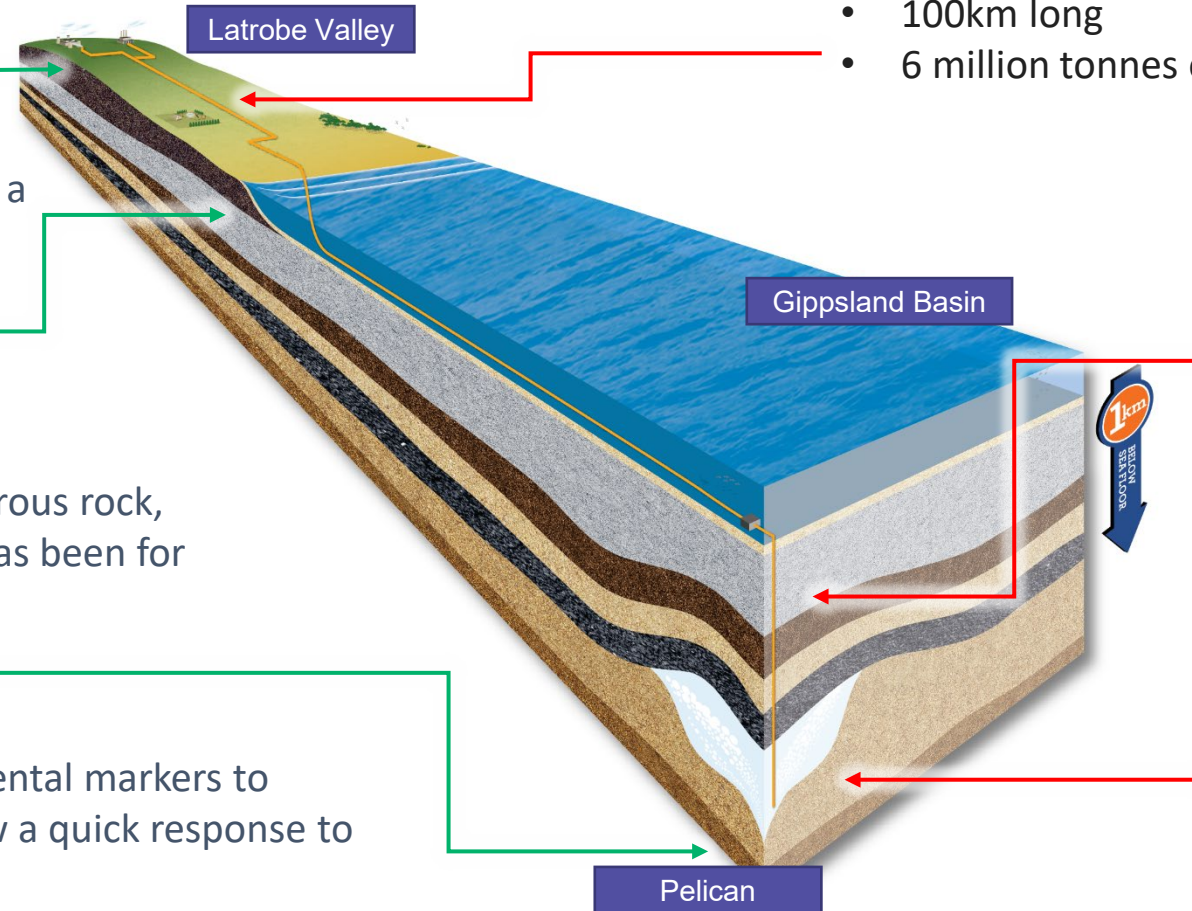
- 4-6 subsea injection wells
- Monitoring assets

- 3 The CO<sub>2</sub> is stored permanently in porous rock, just like oil and gas (including CO<sub>2</sub>) has been for millions of years

### Pelican Reservoir

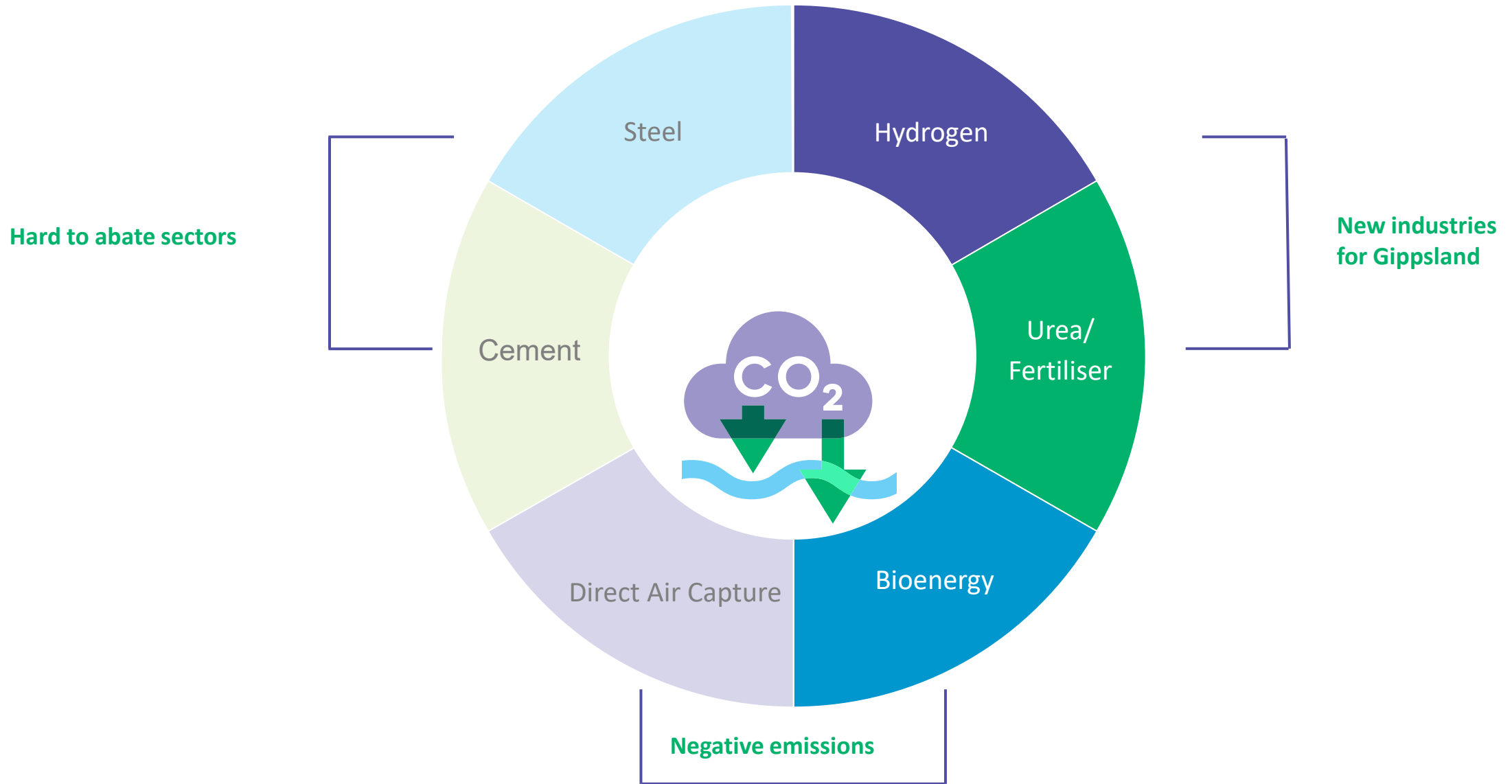
- Up to 168 Million tonnes capacity

- 4 The site is monitored for environmental markers to confirm safe containment and allow a quick response to any non-routine situations.





# Where will the CO<sub>2</sub> come from?



# Significant due diligence has been completed

“The Pelican site presents considerable positive indicators that it is a CO<sub>2</sub> storage site of significant potential to achieve stable and safe storage of 150mt-CO<sub>2</sub> with 5mtpa+ CO<sub>2</sub> sequestration for 30 years” AKER Solutions Report for HESC/Sumitomo, 2021

## Modelling the Pelican site

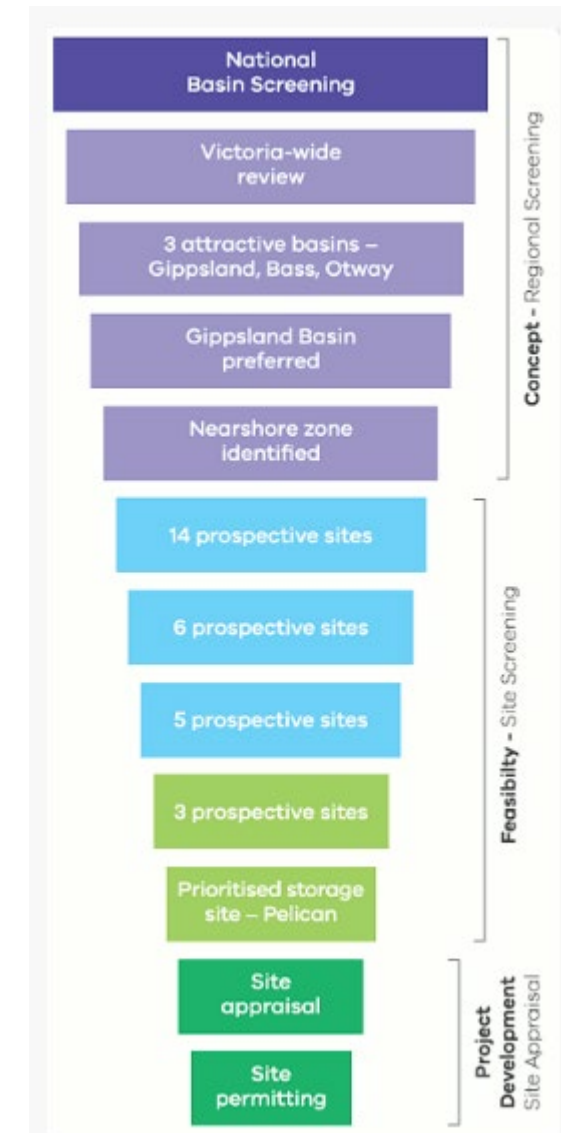
Modelling of the Pelican site was independently reviewed by:

- Geoscience Australia
- The British Geological Survey
- CSIRO
- The Geological Survey of Victoria

Modelling was also externally certified by world-leading CCS experts from [Det Norske Veritas](#).

## Completed investigations include

- 2017-2019 GippNet study (Uni of Melb, CO<sub>2</sub>CRC)
- 2018 Marine Seismic Survey
- 2019 Geophysical Survey
- 2019 Geotechnical Survey
- 2019/20 Offshore Appraisal Well
- 2020-22 Extensive core sample analysis at world-class labs
- 2023 CSIRO review



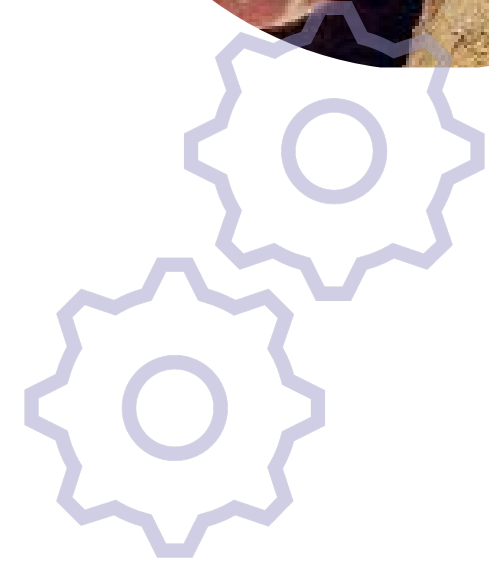


# Front End Engineering Design (FEED)

Completion early 2024

FEED will provide CarbonNet with:

- Cost estimate
- Materials and construction timeline
- Single option and multiple sub options
- Size of equipment (e.g. diameter of pipeline)
- Process & instrument diagrams
- Readyng the project to procure long lead equipment



# Regulatory Overview

On-Shore  
and  
Offshore  
Pipeline  
Approvals

## **Pipeline Consultation Plan approved by the Pipeline Regulator**

- Landowner liaison underway to achieve Land Access Agreements for survey work
- Collaborating with other projects in the region
- Onshore and Offshore Pipeline approvals (Commonwealth & State)

## **Various other approvals are required, which include**

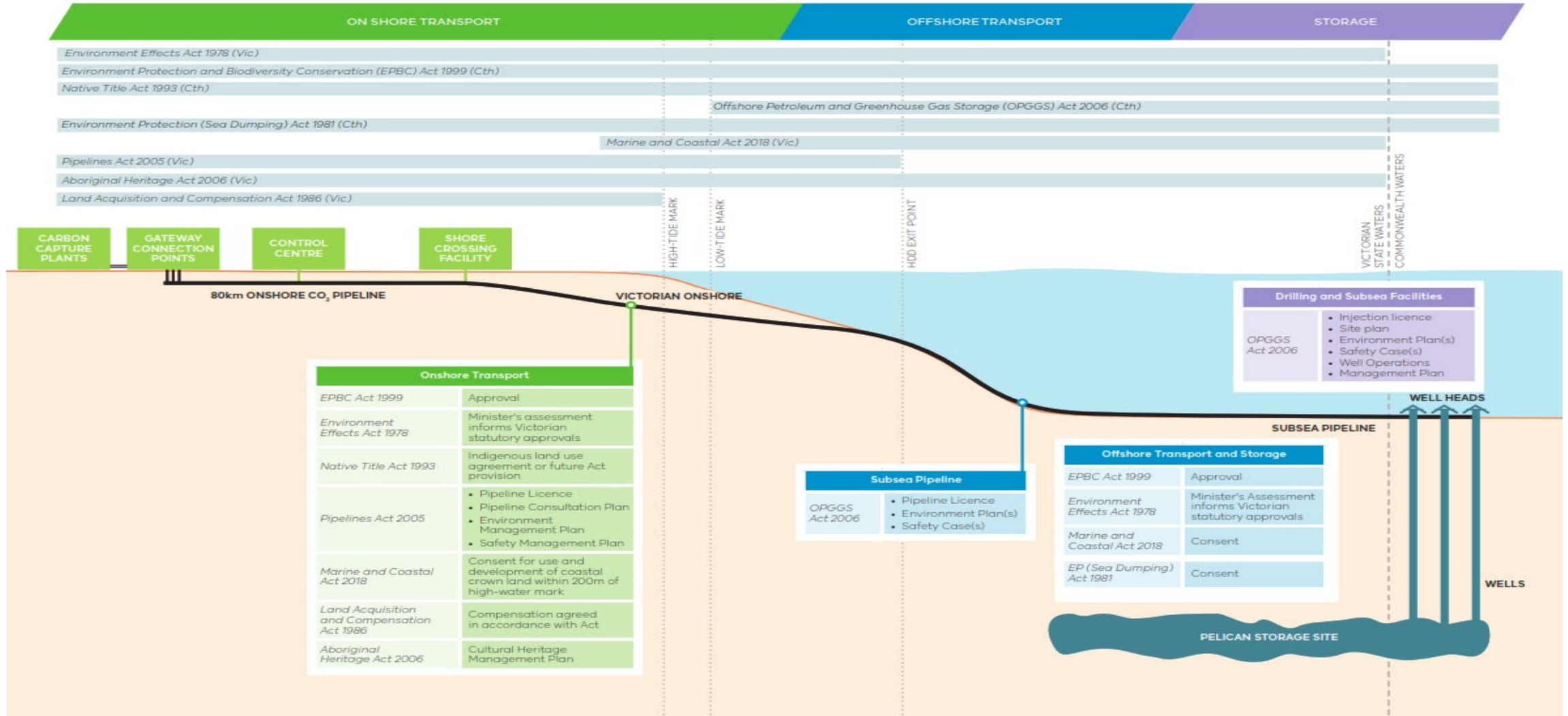
- Environment Effects Statement (State)
- Environmental Impact Statement (Commonwealth)
- Declaration of Storage (Commonwealth)
- Injection Licence (Commonwealth)
- Sea Dumping Permit (Commonwealth)
- Approvals expected to be complete in 2026, pending regulator timeframes.

Other Approvals



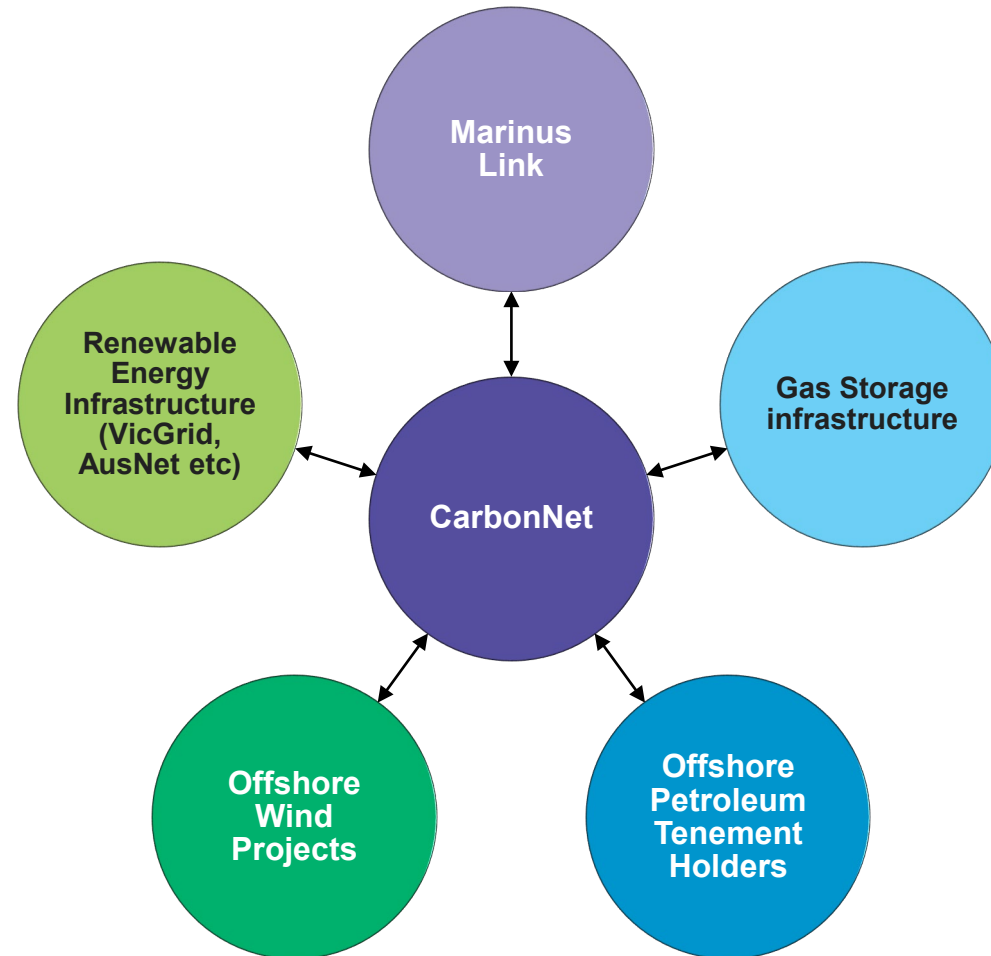
# Regulatory process

## KEY PRIMARY APPROVALS



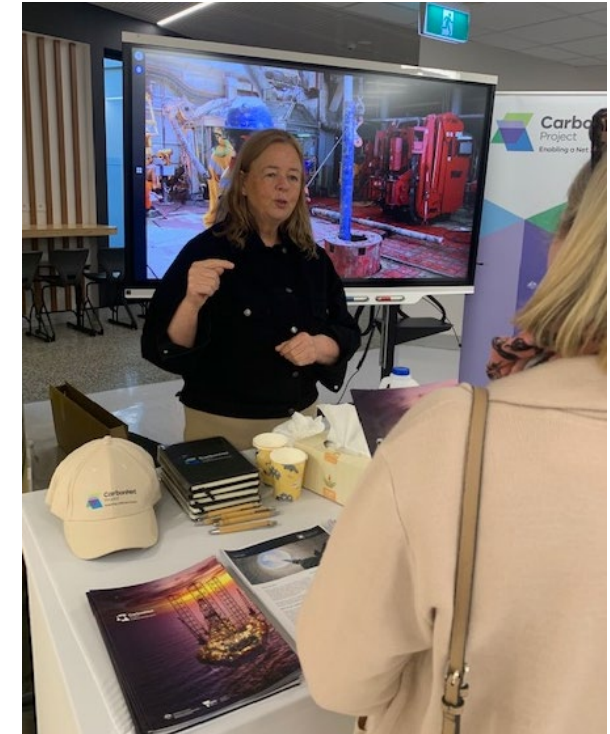
# Collaboration and Coexistence

Working towards a collegiate coexistence with other sectors and building confidence across community aimed at reducing consultation fatigue





# Community engagement



10 News First Melbourne @10NewsFirstMelb

A huge 150-metre-tall rig off the Victorian coast is drilling for rock to help combat climate change. The CarbonNet Project is exploring whether emissions could be commercially stored inside sandstone buried deep on the ocean floor. | @SimoLove @JaclynSyms @VicGovDJPR



# Community Engagement activities

<b>Engagement</b>	<b>Audience</b>	<b>Purpose</b>
<b>CN Community Reference Group</b>	Gippsland Community Members	Create community conduit, test communication
<b>Online community information sessions</b>	Community and stakeholders	Raise awareness and knowledge of CCS, Hydrogen and CarbonNet
<b>In person information sessions at Golden Beach</b>	Shoreline community	Provide updates and answer questions regarding project & offshore activities
<b>School program</b>	High school students	Provide balanced information on CCS and an emissions reduction technologies
<b>Science Week events</b>	Community and school kids	Raise awareness and knowledge of CCS and CarbonNet
<b>Reports, papers and presentations</b>	Business, industry & academia	Share knowledge about the project



## CarbonNet and Japan

MoUs signed with:

- JOGMEC
- JCOAL
- JCCSCo



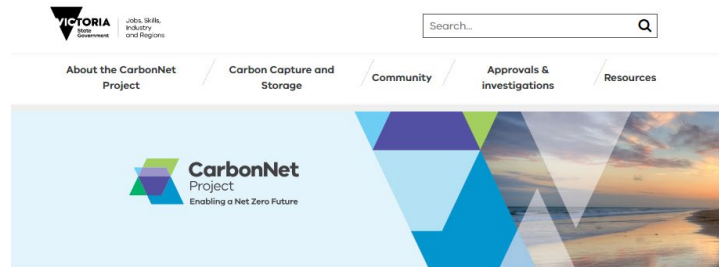
CarbonNet has a long and established relationship with Japanese organisations

- JOGMEC have provided financial support toward CarbonNet's Front End Engineering Design (FEED)
- Long standing and deep relationship with HESC
- CarbonNet and JOGMEC continue to deliver joint investment seminars in Japan
- Participation by CarbonNet in Japan Clean Coal Day activities

 **JAPAN CARBON FRONTIER ORGANIZATION**



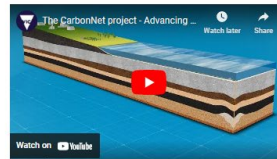
# Keep up to date: [www.vic.gov.au/CarbonNet](http://www.vic.gov.au/CarbonNet)



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 CO<sub>2</sub> 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](#)

<p><b>About CarbonNet</b> A Carbon Capture and Storage (CCS) project which will decarbonise industry in Gippsland.</p>	<p><b>What is CCS?</b> Carbon Capture and Storage (CCS) is one of the many solutions to achieving net-zero CO<sub>2</sub> emissions.</p>	<p><b>Why Gippsland</b> Gippsland is a world leading location for CO<sub>2</sub> storage.</p>
<p><b>Community consultation</b> Have your say and learn about upcoming events.</p>	<p><b>Approvals and investigations</b> CarbonNet's program of investigations and environmental approvals.</p>	<p><b>Carbon Capture and Storage FAQs</b> Discover answers to frequently asked questions.</p>



**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's 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 CO<sub>2</sub> from the atmosphere via multiple methods. Topics included CO<sub>2</sub> sequestration, Direct Air Capture, Carbon Mineralisation, and the role of the ocean, rocks and agriculture in decarbonisation.

Roger Arnes, Senior Advisor for CO<sub>2</sub> 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 CO<sub>2</sub> removal technologies and the need to progress the sector in Australia. Speakers and attendees emphasised that all CO<sub>2</sub> removal methods are needed immediately, alongside emissions reduction. The geological storage of CO<sub>2</sub> at scale was acknowledged as critical to reduce CO<sub>2</sub> 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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