LETA

# Energy Security and the Contribution of Carbon Capture and Storage to the Green Transition in Australia

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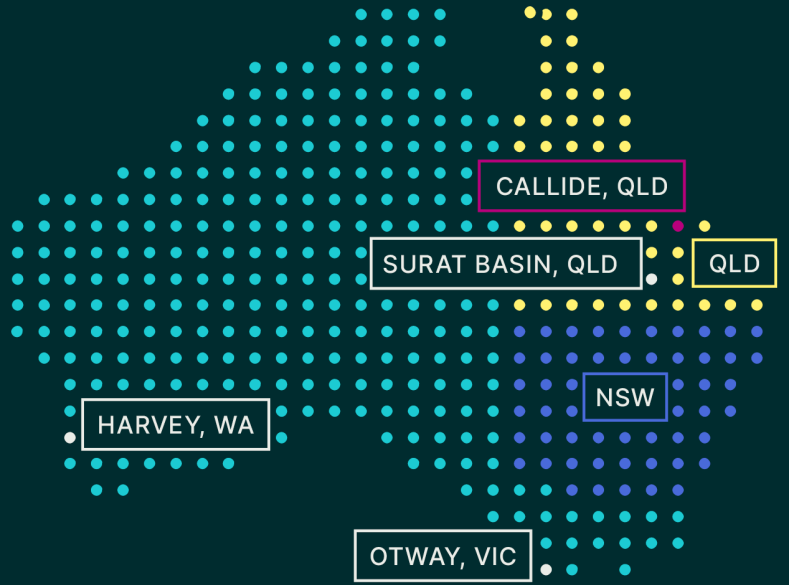
6 September 2023

## Achievements




INVESTED IN ONE OF MOST ADVANCED FIELD-SCALE CCUS RESEARCH SITES.

- WORLD'S FIRST CARBON CAPTURE DEMONSTRATION FROM A POWER PLANT.
- THREE WORLD-CLASS AND LARGE-SCALE STORAGE LOCATIONS IDENTIFIED IN QLD, VICTORIA AND WA.
- PROVEN BUSINESS CASE FOR AN ALLAM CYCLE PLANT.
- CRITICAL RESEARCH INTO MANAGING FUGITIVE EMISSIONS.

## Global partnerships

Collaboration is crucial to reducing emissions from essential but hard-to-abate industries such as steel and cement manufacturing. Our global and Australian partners include:

**GOVERNMENTS**
**INDUSTRY**
**UNIVERSITIES**
**RESEARCH INSTITUTES** (including CSIRO and CO2CRC)

## LETA's core priorities

**DEMONSTRATION** Demonstrating new, zero-emission energy technology and clean fuels

**DEPLOYMENT** Establishing multi-industry LET hubs, helping remove investment risk and encouraging industry involvement

**COMMUNICATION** Growing awareness, understanding and recognition of LETs and their role in a net-zero carbon economy

**ADVOCACY** Accelerating investment in LETs through incentive-based policy

**ENGAGEMENT** Increasing collaboration across industries to establish emissions reduction at scale and faster

"LETA's projects can help establish Australia as a world-leader in low emission technologies and clean energy exports."

# What we do

LETA invests in technologies that reduce carbon emissions from industry to help achieve a cleaner energy future.

These low emission technologies, working alongside renewables, create new low and zero-carbon energy, as well as significantly reduce emissions from heavy industry.

*LETA's projects can help establish Australia as a world leader in low emission technologies and cleaner energy exports.*

Est. **2006**

**$343M+** invested

**18+** low emission technology projects in development

**$260M** for new projects

**$212M** invested in CCUS

Supported by the Australian coal industry

# CCUS in Australia – a brief history

## 2003

CO2CRC established to support the development of an Australian CCUS industry

## 2006

ACALET established with $300 million funding

## 2008

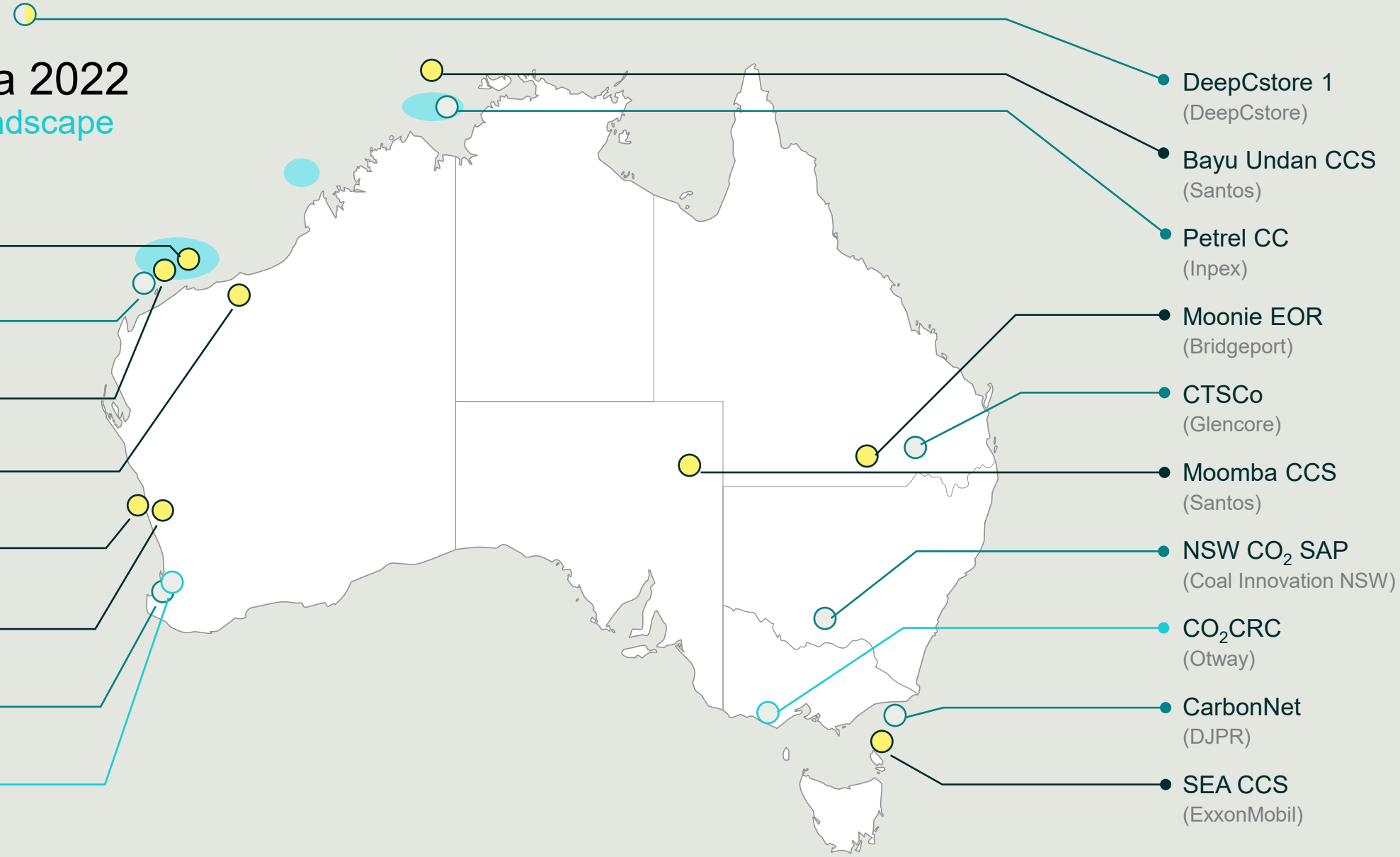
Otway Project safely stores 65,000 tonnes CO2

## 200

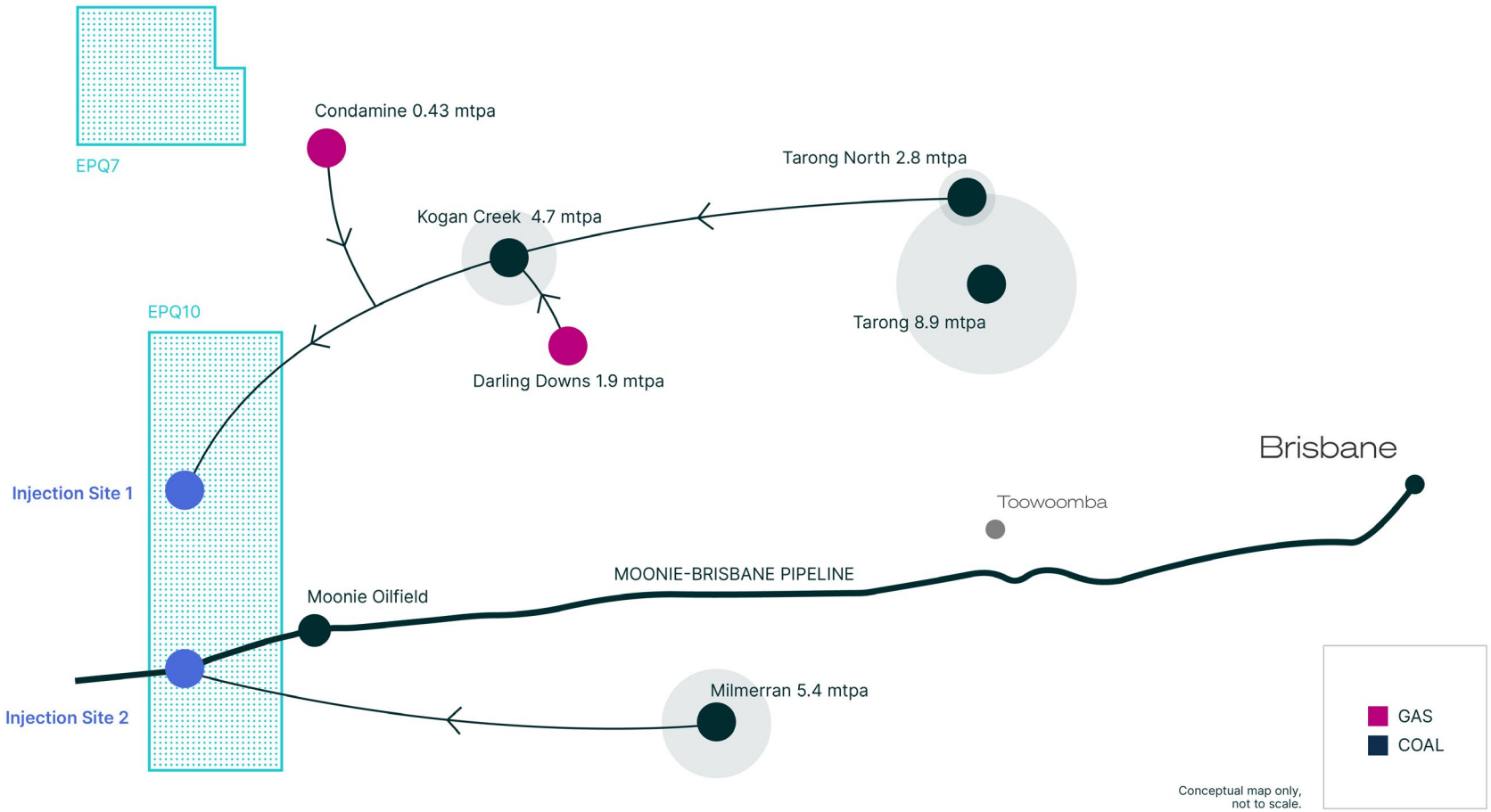
Carbo

# CCS in Australia 2022

## A rapidly evolving landscape

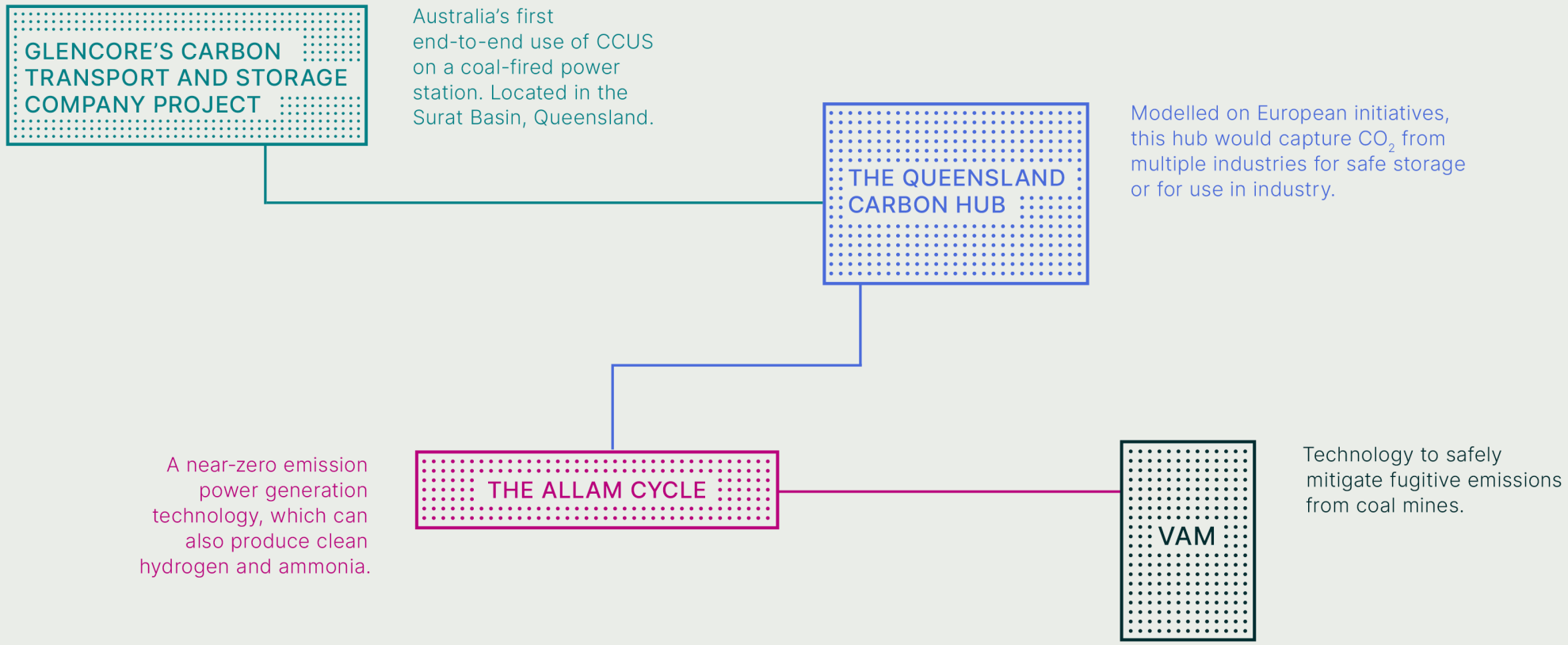


# Glencore's CTSCo Project

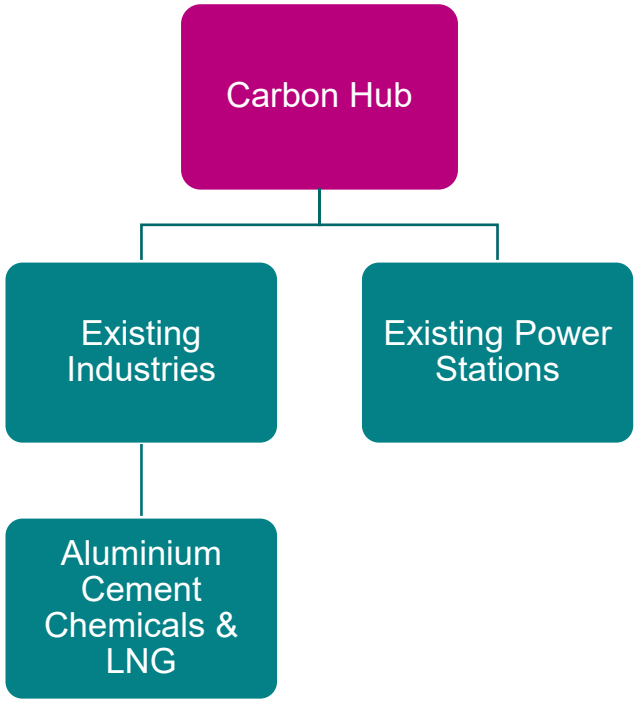


# Technology opportunity

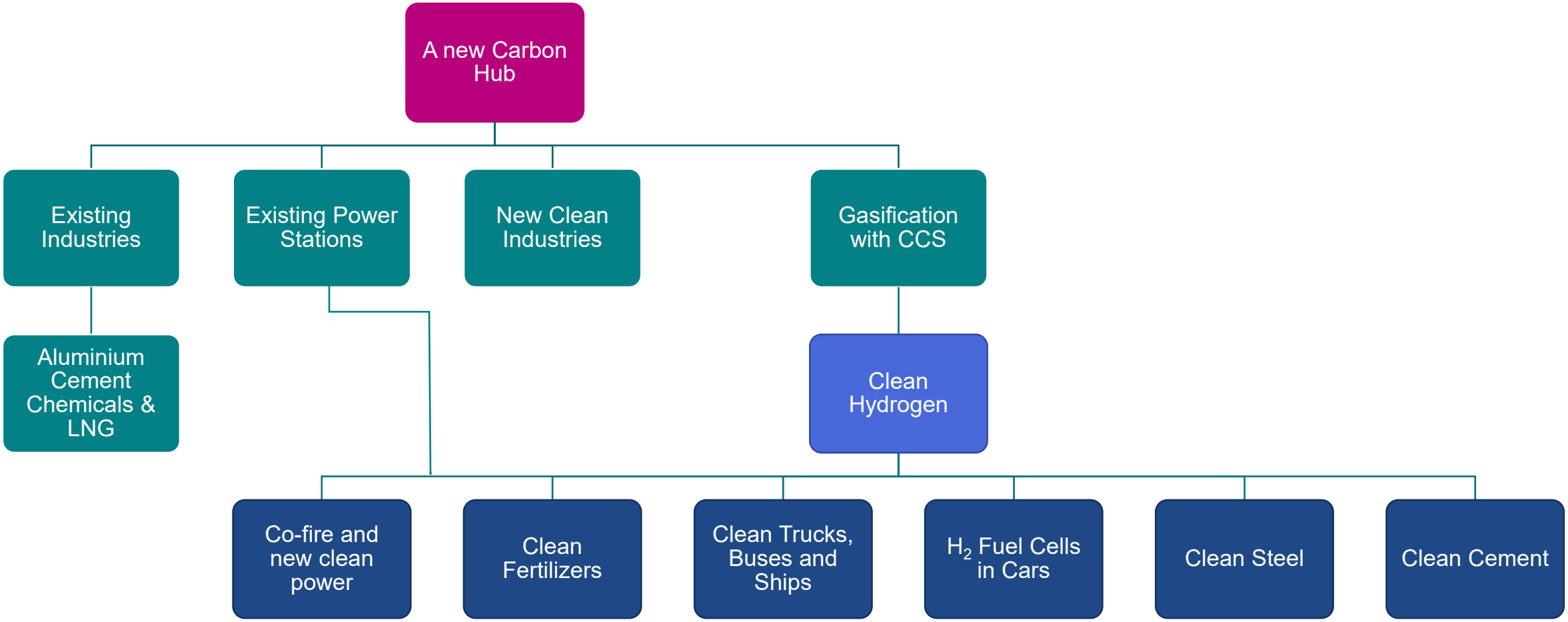
LETA projects focus on establishing large-scale carbon storage sites to reduce industrial emissions. On the path to net-zero, our investments are helping unlock the clean industries of the future.



# Australian Technology Opportunity with Large Scale Storage



# Australian Technology Opportunity with Large Scale Storage



# Australia – Japan Opportunities for Collaboration

| Towards Net Zero | Projects | Tech Possibilities | Co-benefits |
|---|---|---|---|
| **New clean industries** | Coal to Ammonia with CCS in QLD<br><br>Coal to ammonia with CCS in NSW<br><br>Coal to Japan, $CO_2$ to Australia | Allam Cycle<br><br>Gasification<br><br>IGCC<br><br>PCC | Clean ammonia to Japan and $CO_2$ to Australia<br><br>Cost competitive<br><br>Accelerates technology deployment |
| **New clean export opportunities** | Shipping clean ammonia to Japan & $CO_2$ to Australia | Transport logistics<br><br>Shipping<br><br>Pipelines | Establishing supply chain base for import and export |
| **Emission reductions – electricity sector** | Ammonia co-firing | New technology to retrofit boilers.<br><br>Test responsiveness of different coal in technology | Cleaner fuels from coal<br><br>Cost competitive |
| **Emission reductions – mining sector** | Ventilated air methane | New configurations for demonstration | Cooperation between Japan and Australia<br><br>Knowledge sharing |

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If I was to pick one technology that is vital to the planet it is CCUS

Dr Fatih Birol

*Executive Director, International Energy Agency*