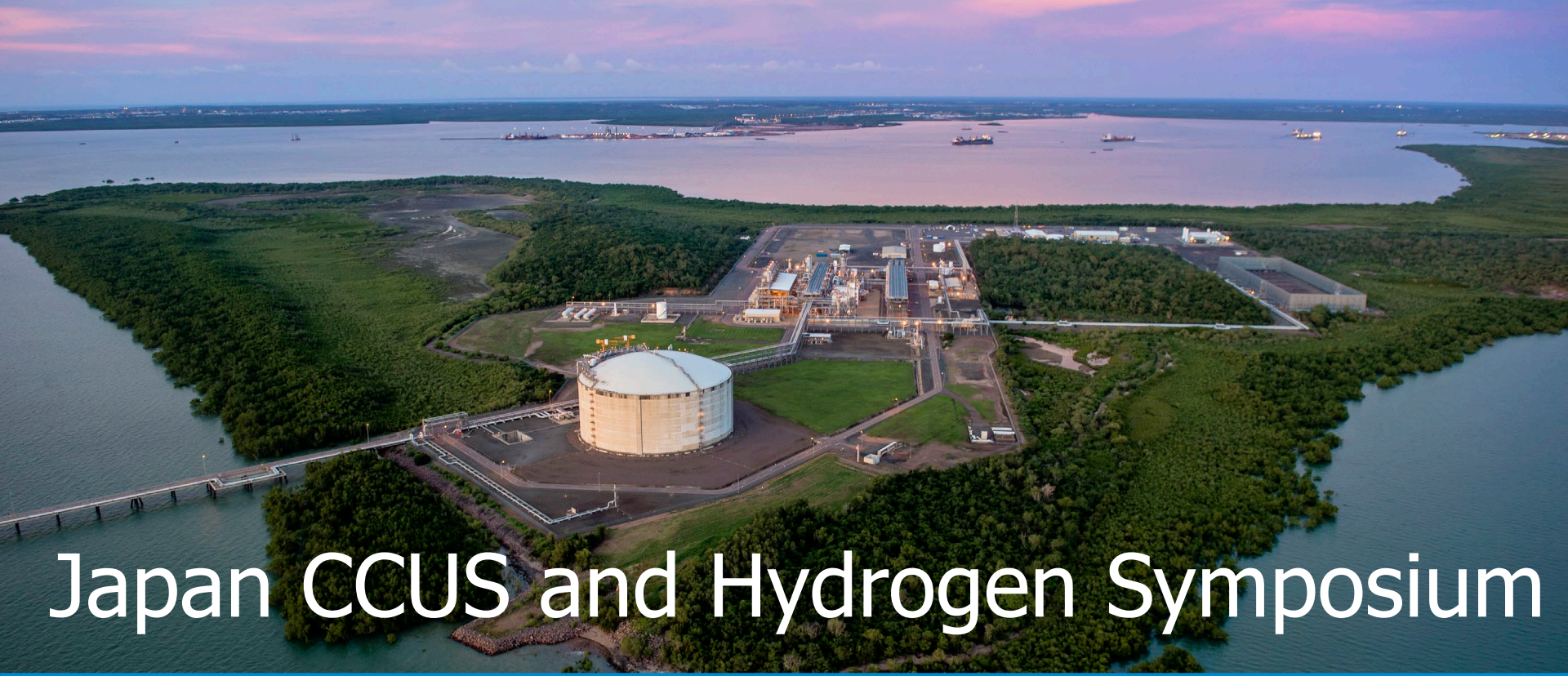


Japan CCUS and Hydrogen Symposium

Chad Wilson
26 August 2022

Santos

About Santos – a leading Asia-Pacific LNG supplier

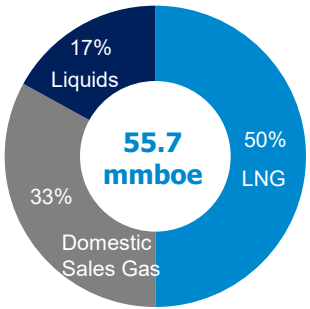
Santos

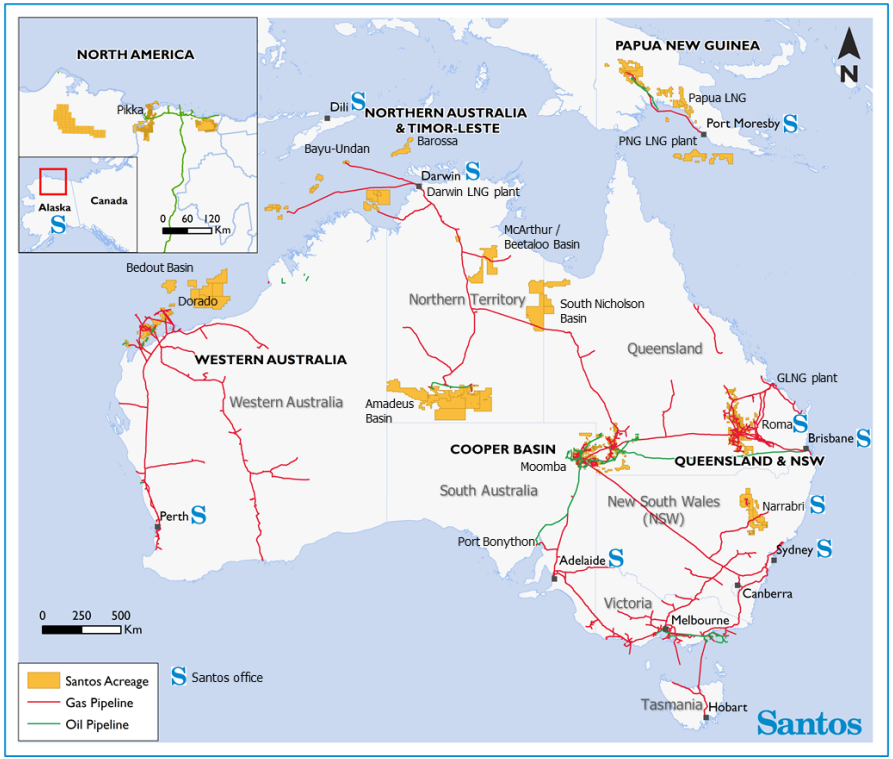
Santos is a low-cost producer of oil and gas, with a diversified portfolio of operations across Australia, Papua New Guinea and Timor-Leste

Diversified and balanced portfolio of low-cost, long-life oil and gas assets

+ Leading supplier of LNG, supplying 8% of Asia's contracted LNG
+ Portfolio of high-quality LNG projects with significant growth opportunities

1H 2022 sales volumes





[1] as at 26 July 2022
[2] as at 31 December 2021

Our goal is to achieve net-zero Scope 1 & 2 emissions by 2040

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New 2030 Scope 1 and 2 absolute and emissions intensity reduction targets

2030

Absolute
Target
30% reduction in Scope 1 and 2 absolute emissions by 2030 [1]

Intensity
Target
40% reduction in Scope 1 and 2 emissions intensity by 2030 [2]

Absolute
Target
Reduce Scope 3 (customer emissions) by at least 1.5MtCO2/yr by 2030 from the sale of clean fuels

2040

Target
Net-zero Scope 1 and 2 emissions

New Policy commitments

- A commitment to only selling our products to customers from countries that have a net-zero commitment or that are signatories to the Paris Agreement
- Final investment decisions on new offshore greenfield projects from 2025 will require abatement or offset of reservoir CO2 emissions

1. Baseline: Santos and Oil Search combined 2019/20 of 5.9 MtCO2.
2. Baseline: Santos 2019/20 baseline of 55 ktCO2e/mmboe.

Santos' carbon removal options

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	Carbon Capture and Storage (CCS) Projects	Carbon Capture and Storage (CCS) Services	Direct Air Capture (DAC)	Post Combustion Capture (PCC)
				
Locations	Western Australia, Eastern Australian and Northern Australia & Timor-Leste		Trial location in South Australia	Trial locations in South Australia and Western Australia
Description	Three operated CCS hubs to support the decarbonisation of natural gas and enables CCS services	Three operated CCS hubs offer potential for CCS storage services for domestic and international third parties.	DAC partnerships utilising storage resources in the three CCS hubs	PCC partnerships utilising storage resources in the three CCS hubs
Projects	Moomba CCS - FID taken in 4Q 2021, first injection ~ 2024 Bayu CCS – FEED Q2 2022 WA CCS – Technical Study phase	Provide storage services: • Moomba CCS > 20Mtpa • Northern CCS > 10Mtpa • WA CCS > 2Mtpa	Partnership with Australia's science agency, CSIRO (Commonwealth Scientific and Industrial Research Organisation) to trial CarbonAssist technology Engaging carbon removal technology companies for trials at Moomba	Partnership with Australia's science agency, CSIRO to trial CarbonAssist technology 250tpd unit in Q3 2023

Moomba Carbon Capture & Storage Project

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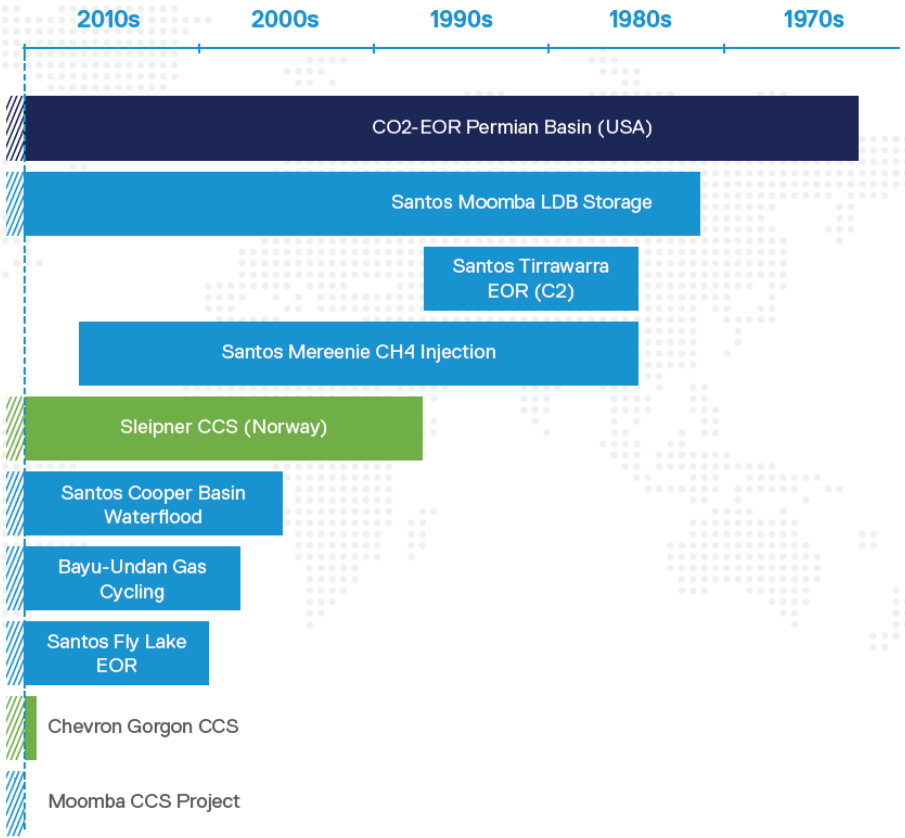
We have decades of experience injecting and storing fluids in reservoirs



The Energy Industry has decades of experience injecting CO_2 and other fluids deep underground

+ CO_2 has been routinely injected into oil reservoirs around the world for enhanced recovery since the 1970s
+ Sleipner CCS has been safely operating offshore in Norway for more than 20 years
+ Santos has decades of experience injecting fluids into reservoirs for storage and enhanced recovery
+ The Moomba LDB project has been safely injecting sales gas into Cooper Basin reservoirs for storage since the 1980s

Moomba CCS Low cost abatement

+ Cooper Basin CO_2 injection cost <A$30/tonne
+ Low cost operating model utilised across project
+ Technical Services Agreement with Occidental Petroleum, global leaders in CO_2 injection
+ Knowledge sharing with CSIRO, CO2CRC, GCCSI

OXY CO2CRC

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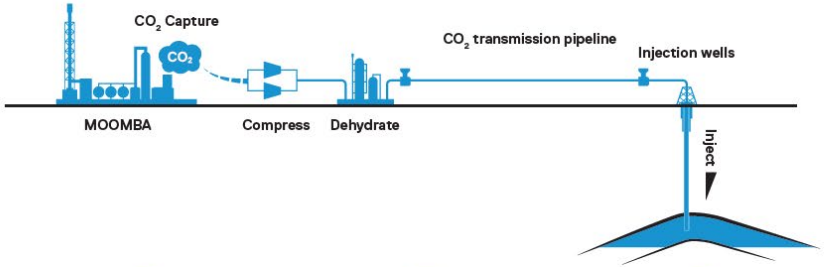
What is Carbon Capture and Storage (CCS)?

Moomba CCS Example provides an opportunity to achieve low cost and large-scale emissions reduction.



1. CO_2 is captured from the Moomba Gas Plant (around 1.7 million tonnes per year)
2. CO_2 is dehydrated to avoid corrosion and compressed for transportation
3. CO_2 is transported via pipeline to the storage site, the Strzelecki and Marabooka gas fields
4. CO_2 is injected via wells around 1800m deep underground
5. CO_2 is permanently stored in depleted reservoirs with proven seals and capacity that have previously produced natural gas*

*Depleted gas fields do not require pressure management wells

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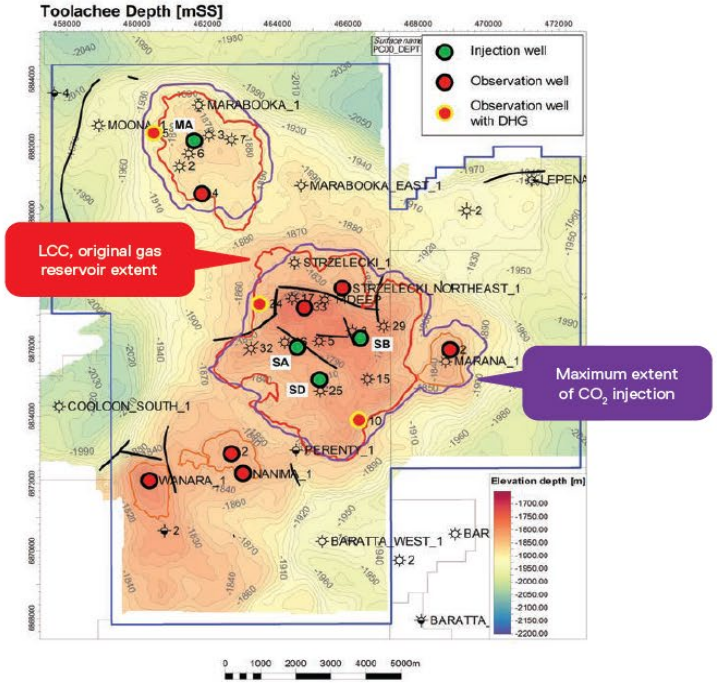
Moomba CCS – Monitoring and verification plan

Utilise existing wells to enable direct observation and measurement of reservoir conditions, monitor CO_2 plume and verify containment.



MEASURE

- Establish baseline conditions
- Accurately measure the volume of CO_2 injected into the reservoir
- Measure reservoir pressure, temperature and other reservoir fluid properties

MONITOR

- Determine the shape and movement the injected CO_2
- Ongoing assessment of reservoir parameters and subsurface data
- Monitor the integrity of the storage complex and wells

MANAGE

- Detect deviations to expectations and facilitate timely response
- Assess the effectiveness of any implemented risk control measures

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Timor Leste / Northern Australia CCS Hub

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Timor Leste / Northern Australia Low Emissions Hub

Historic operations in the Timor Leste Bayu-Undan gas field have demonstrated significant injection potential to provide a carbon storage solution for a Darwin low emissions hub.

See expanded view

- Existing pipelines
- CO_2 pipeline
- Proposed gas pipeline
- CCS Infrastructure
- Potential CO_2 Sources

1. Bayu-Undan CCS
2. DLNG CCS Facilities
3. Barossa Development
4. Re-purpose Pipeline
5. Ichthys LNG
6. Evans Shoal | DLNG T2
7. Clean Fuels (H_2)
8. Industrial CCS
9. 3rd Party Power

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Bayu-Undan CCS Project Overview

Proposed foundation project captures CO_2 from Darwin LNG facility for storage in Bayu-Undan

Capture

Darwin LNG

+ Construct new CO_2 capture / export facilities
+ Initial volume ~2.3 mtpa from Barossa Project
+ CO_2 Hub Growth Potential (up to 10 mtpa) – 3rd Party CO_2

Transmission

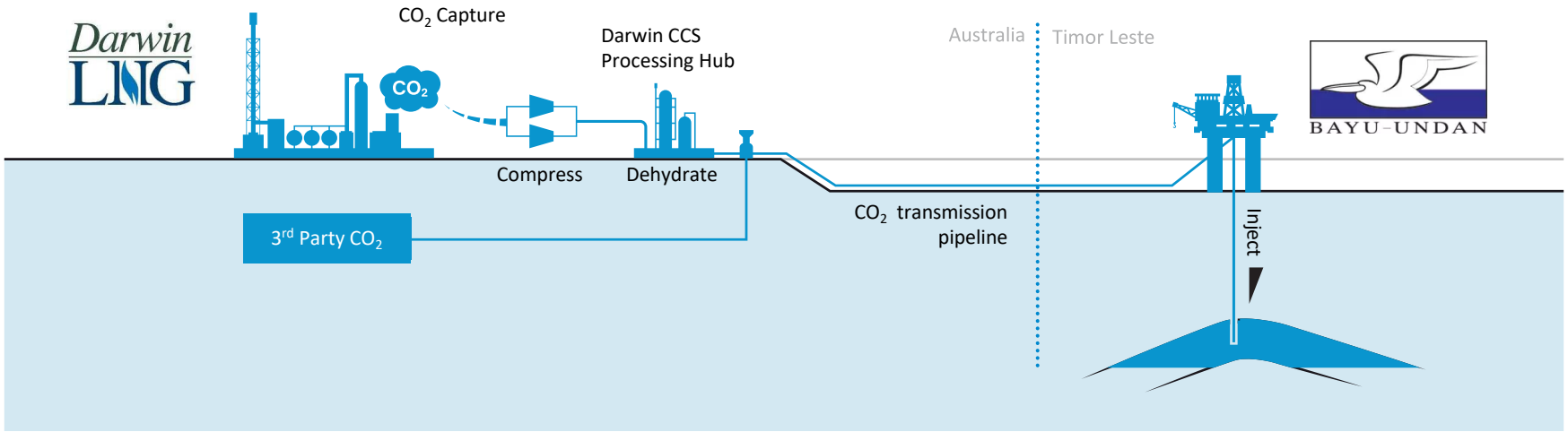
Bayu-Undan gas export pipeline

+ Repurpose existing pipeline to transport CO_2

Storage

Bayu-Undan

+ Repurpose offshore platform facilities with modifications
+ Repurpose wells for injection & observation



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Bayu-Undan Storage Suitability

Depleted hydrocarbon reservoirs are well characterised and understood through decades of exploration, appraisal and production data, making them the ideal storage targets.

Capacity

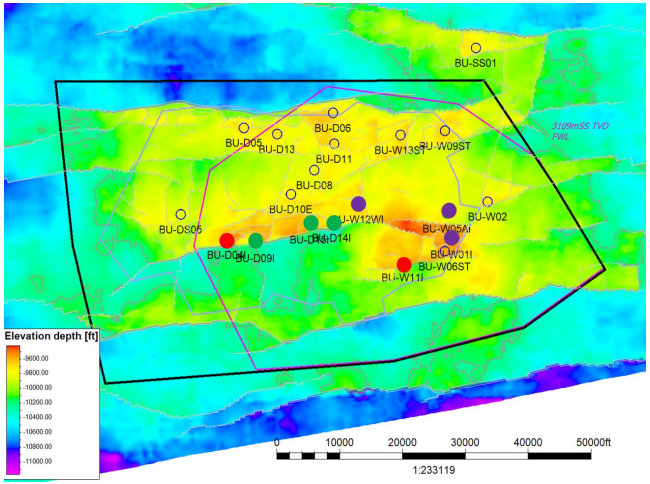
+ Large capacity demonstrated through years of hydrocarbon production
+ Strong and laterally extensive aquifer acts as pressure sink

Injectivity

+ High permeability available over large interval
+ Historic hydrocarbon gas injection provides confidence on injectivity

Containment

+ Reservoir seals proven through hydrocarbon containment for tens of millions of years
+ Structural trapping primary mechanism for containing CO_2



Conceptual Plan

- Proposed Injection Wells
- Potential Observation wells
- Potential Alternate Injectors

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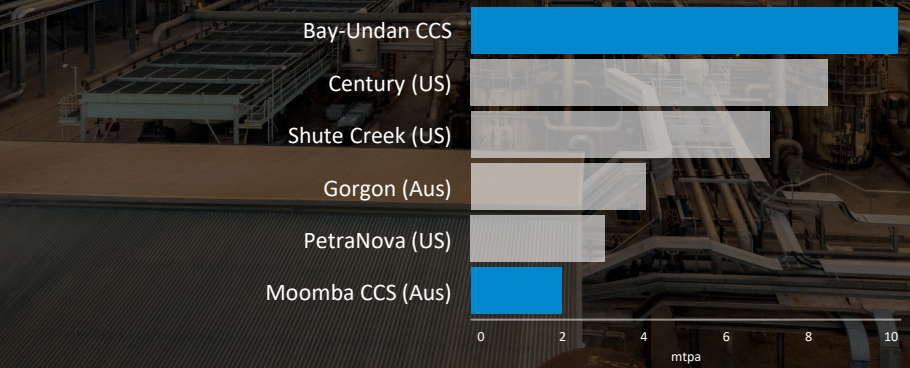
Bayu-Undan has scale for a world-leading CCS project

>12 mtpa
Potential market for CCS in the region

>10 mtpa
CO_2 annual injection rate at Bayu-Undan

>20 yrs
CO_2 storage capacity at Bayu-Undan

Global large-scale CCS/CCUS projects



Well Understood Subsurface

+ >20 years storage modelled, with further upside potential
+ Proven reservoir seal and high injectivity

Established pipeline, wells and platforms

+ Opportunity to re-purpose existing facilities with modifications
+ Provides significant advantage vs. greenfield projects

Potential to store Barossa reservoir emissions early in production

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