

# CCUS: A Net Zero Opportunity For Australia



## "Reaching net zero will be virtually impossible without carbon capture, utilisation and storage" | International Energy Agency 1

Carbon capture, utilisation and storage (CCUS) is critical to reaching net zero in Australia.<sup>2</sup> CCUS can reduce emissions in hard-to-abate industries including cement, steel, chemicals and

fertiliser production and produce low-carbon hydrogen. It can also remove carbon dioxide from the atmosphere through Direct Air Capture (DACC).<sup>3</sup>



### 25+ year proven track record of safe, secure CCUS operations.

50 large-scale CCUS projects operate globally today, with the capacity to capture 51 million tonnes (Mt) of  $CO_2$  per year<sup>4</sup> – equivalent to over 10% of Australia's total greenhouse gas emissions. The Sleipner CCUS project in Norway has been safely and permanently

storing up to 1 Mt of CO<sub>2</sub> per year since 1996.<sup>5</sup> The importance of CCUS is recognised by the Australian Government,<sup>6</sup> Geoscience Australia<sup>7</sup> and the Commonwealth Scientific and Industrial Research Organisation.<sup>8</sup>



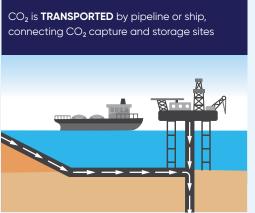
### How does CCUS work?

CCUS involves the capture of CO<sub>2</sub> from industry or directly from the air. CO<sub>2</sub> is transported, via pipeline or ship, to where it can be safely and permanently stored

in a suitable geological formation, at least 800m below the ground. Some captured  $\rm CO_2$  can be used by industry, including in chemical and cement production.







 $CO_2$  is permanently **STORED** underground in geological formations at least 800m below the surface (e.g. depleted gas fields).  $CO_2$  is monitored to show it stays in place



#### Sources

- <sup>1</sup>IEA, <u>Energy Technology Perspectives 2020 Special report on CCUS</u>, 2020
- <sup>2</sup>Net Zero Australia, <u>Modelling Summary Report</u>, 2023
- <sup>3</sup> IEA, <u>Carbon Capture, Utilisation and Storage</u>, website (accessed July 2025)
- <sup>4</sup> Global CCS Institute, <u>Global Status of CCS Report</u>, 2024
- <sup>5</sup> Equinor, <u>Sleipner area</u>, website (accessed July 2025)

- <sup>6</sup>Department of Industry, Science and Resources, <u>Future Gas Strategy</u>, 2024
- <sup>7</sup> Geoscience Australia, <u>Carbon Capture and Storage (CCS)</u>, website (accessed July 2025)
- <sup>8</sup> CSIRO, <u>Capturing global attention: Carbon capture, utilisation and storage,</u> website (accessed July 2025)



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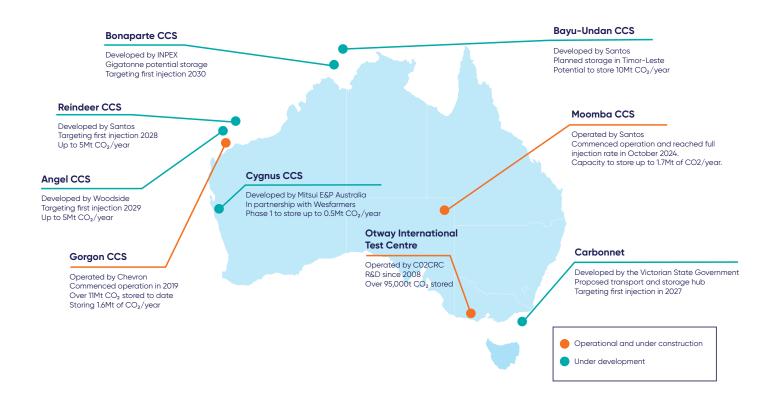
## Australia is a global leader in CCUS, hosting two of the largest CO<sub>2</sub> storage projects in the world.

Chevron's Gorgon CCS project in Western Australia and Santos and Beach Energy's Moomba CCS project in South Australia are two of the largest climate-focused CCUS projects operating in the world today.<sup>9</sup>

The Chevron Gorgon CCS project is storing 1.6 Mt of  $CO_2$  per year today. It has stored over 11 Mt of  $CO_2$  since  $2019^\circ$  – equivalent to taking more than 3 million

petrol cars off Australia's roads for a year.

The Moomba CCS project commenced operation in October 2024, with the capacity to store up to 1.7 Mt of  $CO_2$  per year – the equivalent of more than a tenth of South Australia's annual emissions. <sup>10</sup> Australia has several other CCUS projects that aim to start operation by 2030.





## The development of CCUS can foster Australian industry and manufacturing, attract investment, and support communities.

Net Zero Zones<sup>11</sup> that combine CCUS, renewable energy, low-carbon hydrogen, and natural gas, can fast-track emissions reductions, power regional manufacturing and industry and act as a magnet for investment – supporting communities and creating regional jobs.

Australia can help our trading partners decarbonise by transporting  $\rm CO_2$  from the region for permanent storage in Australia, at the same time creating a new multi-billion industry.<sup>12</sup>

#### Sources

Ohevron, gorgon carbon capture and storage, website (accessed July 2025)

<sup>&</sup>lt;sup>10</sup> Santos, <u>Moomba Carbon Capture and Storage</u>, website (accessed July 2025)

 $<sup>^{\</sup>rm II}$  Australian Energy Producers, <u>A review of Net Zero Energy and Industrial</u> Zones, 2023

<sup>&</sup>lt;sup>12</sup> Chiang, S. <u>Can Australia become APAC's CCS hub of choice?</u>, Australian Energy Producers Journal, 2024