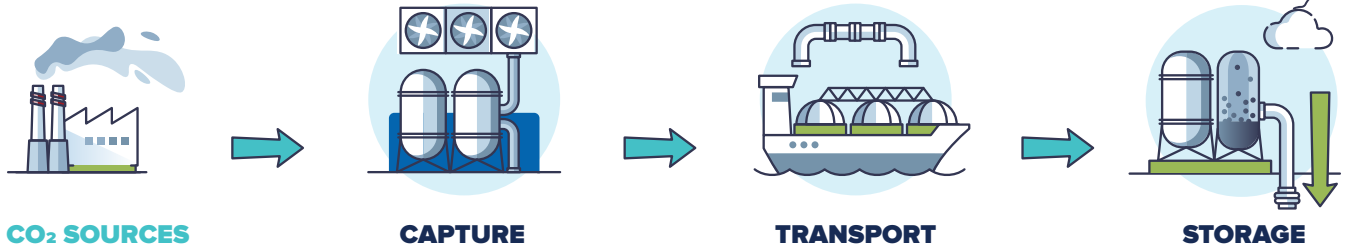


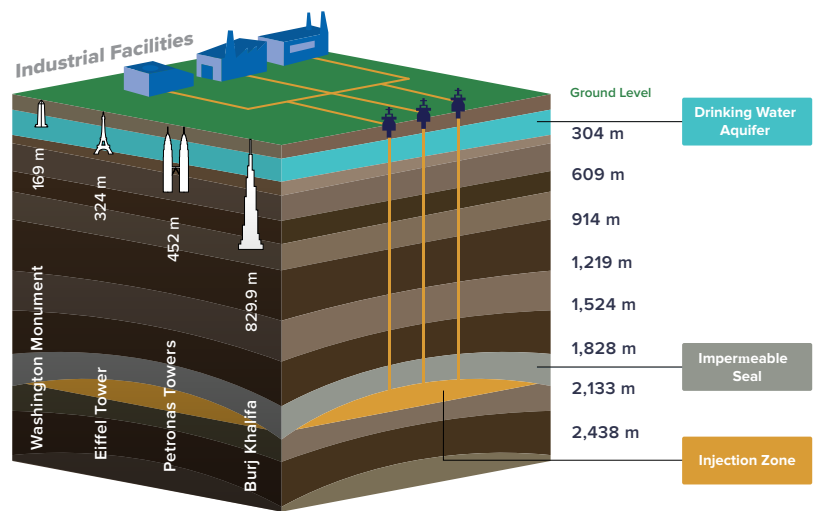
Carbon Capture and Storage (CCS) refers to a suite of technologies that capture and store the greenhouse gas carbon dioxide (CO₂), so that it does not reach the atmosphere and contribute to climate change.

The final stage in the CCS process involves the injection and storage of CO₂ at a suitable storage site.



GEOLOGIC STORAGE OF CAPTURED CO₂

Captured CO₂ is injected into carefully selected porous rock formations (“**storage formations**”). These can be depleted oil and gas reservoirs, or porous rock filled with unusable, saline water. Storage formations are always underground, typically at depths ~**2-3 kilometres** below the earth’s surface. The CO₂ is trapped in the storage formations by naturally occurring trapping mechanisms.



*For illustrative purposes only.

TRAPPING MECHANISMS

STRUCTURAL	RESIDUAL	DISSOLUTION	MINERAL
<p>At the time of injection, CO₂ is structurally trapped beneath an impermeable cap rock layer.</p> <p>This is how hydrocarbons have been naturally trapped underground for tens of millions of years.</p>	<p>Injected CO₂ enters the microscopic pore spaces of a storage formation, where it is permanently trapped by capillary forces that prevent it from exiting.</p>	<p>Over time, injected CO₂ dissolves in a storage formation’s saline water, becoming permanently trapped.</p>	<p>Over an extended period of time, injected CO₂ chemically reacts with the minerals in a storage formation to form a new, stable mineral product – locking it in a solid state permanently.</p>

CO₂ STORAGE IS MEASURED, MONITORED AND VERIFIED OVER THE ENTIRE STORAGE LIFECYCLE

CCS is conducted under robust regulatory frameworks that ensure environmentally safe and effective storage of CO₂. These begin with comprehensive processes for authorising storage, through to provisions to measure, monitor and verify storage of the injected CO₂ over the entire storage lifecycle - from pre-injection to operation and post-injection.



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