

About Carbon Capture and Storage

Carbon capture and storage (CCS) is a process in which a nearly pure carbon dioxide (CO₂) stream is separated and captured from a large point source emitter, such as a coal-fired power plant. The CO₂ is compressed and transported to a storage site then is injected underground into a specifically selected geological formation for long term storage (Figure 1). Continuous monitoring processes are implemented from commencement of injection to manage and control risks. They are also used to follow the evolution of CO₂ and continually check the integrity of the formation in which it is injected.

The regions with the highest potential for CO₂ storage are sedimentary basins that contain active or depleted hydrocarbon reservoirs, saline aquifers, and coal seams (Figure 2). A saline aquifer is a rock formation that is filled with brine, or salty water. CO₂ injection for enhanced oil recovery (EOR) has been used safely and effectively in places like west Texas and Weyburn, Saskatchewan for years.

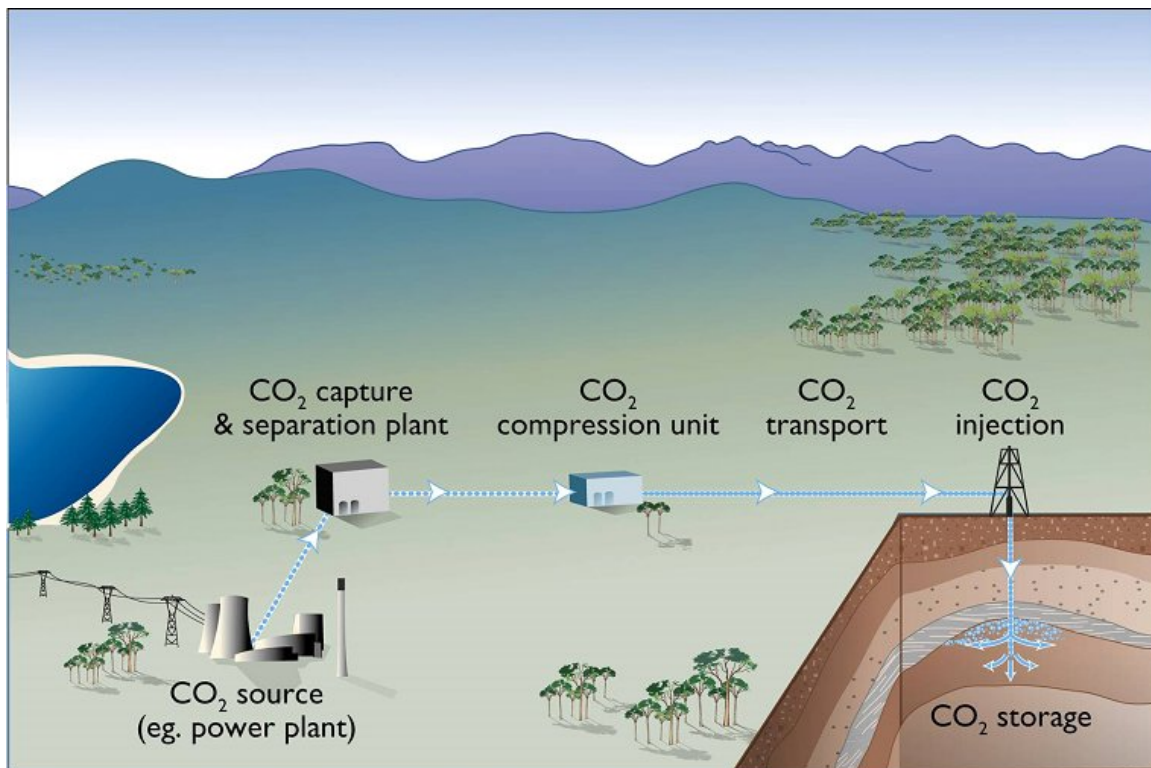


Figure 1: The basic elements of a CCS project: capture & separation, compression & transport, and injection & storage (Courtesy of CO₂CRC).

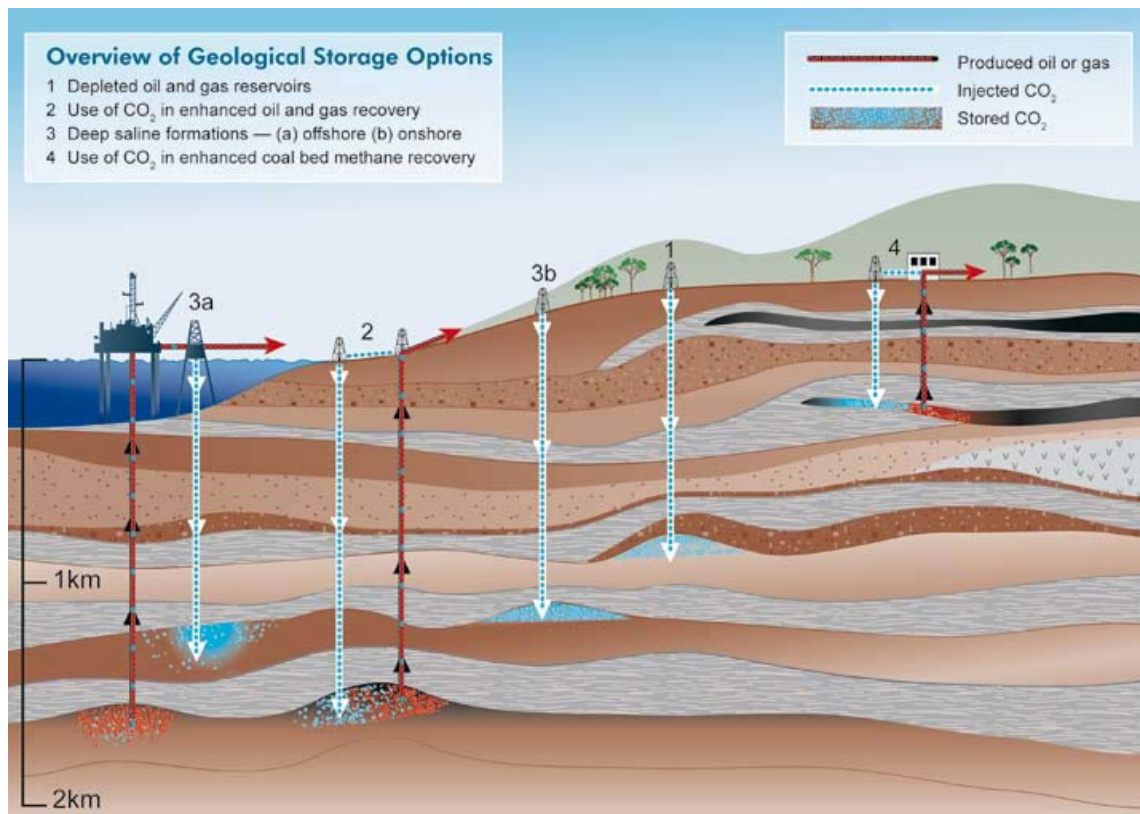


Figure 2: Geologic formations with the highest potential for CO₂ storage (Courtesy of CO2CRC).

Please refer to the Links Page for more information on Carbon Capture and Storage.