What is CCS?

CO2 Capture and Storage (CCS) is a climate-change mitigation technology that returns the carbon back to where it came from: deep underground

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CO_2 is a greenhouse gas produced in large quantities by human activities (e.g. transport, agriculture, industry, energy production); its accumulation in the atmosphere is disrupting the climate.

Capture processes, already used for decades, can collect CO_2 from flue gas at large emission sources (e.g. cement and steel factories, incineration facilities, biomass/gas/coal plants) or from feedstock before combustion, to avoid polluting the atmosphere. CO_2 can also be captured directly from the air. Once separated, the CO_2 may be used for various industries or compressed and transported to a suitable site for storage.

Storage involves the injection of CO_2 deep underground (>800 m) where it becomes trapped in the natural spaces between rock grains (pores). Storage sites are selected for their reservoir properties and the presence of an overlying impermeable caprock that keeps the CO2 safely stored. Natural CO_2 reservoirs demonstrate the long-term trapping of CO_2.