

Carbon Sequestration: A New Weapon to fight Climate Change

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Abstract: Climate change is a big problem. Land clearing, intensive farming, burning fossil fuels like oil, natural gas and coal, these human activities all produces green house gases(GHGs). We need to slow down and reverse global warming, and its gases like Carbon dioxide or CO₂, that we need to reduce. We all are playing a role in the problem, and so we ought to play a role in any climate change solution. That is why we can invest a billions of dollars in carbon capture and storage. Carbon sequestration is the process of capture and long-term storage of atmospheric carbon dioxide (CO₂). That means we capture the CO₂ emitted by burning fossil fuels, compressing it into a liquid and transporting into a storage site. Then store it safely and permanently deep underground. Carbon dioxide is naturally captured from the atmosphere through biological, chemical, or physical processes. Artificial processes have been devised to produce similar effects, including large-scale, artificial capture and sequestration of industrially produced CO₂ using subsurface saline aquifers, reservoirs, ocean water, aging oil fields, or other carbon sinks. There are hundreds of active carbon capture and storage projects worldwide. Though there are major obstructions that cannot be neglected like large initial cost, danger of leaks, and large energy requirement. Capture-Transport-Storage techniques have all been successfully used since many years(from May 2010). The challenge now is creating a fully integrated system. One which can be built into new power plants and bolted on to the existing ones.

Key words: Carbon Capture and Sequestration(CCS), Green House Gases(GHG), Enhanced Oil Recovery(EOR) or CO₂, Geosequestration, Deep-Saline Formation.