BANKTRACK

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Position papers on false solutions for the climate crisis.

#3 Carbon Capture, Utilisation and Storage

What is CCUS?

Carbon Capture, Utilisation and Storage (CCUS) is the process of capturing carbon dioxide (CO2) emissions from burning fuels, industrial activities, or directly from the air. Once captured, the CO2 can either be stored underground (onshore or offshore), or used as a raw material in manufacturing.

Most CCUS projects capture CO2 from large sources like power plants or factories that burn fossil fuels or biomass. If not used on-site, the CO2 is compressed and transported (by pipeline, ship, rail, or truck) to either be used or stored in deep underground rock formations.

The key difference between **CCUS and Carbon Dioxide Removal (CDR)** is that **CDR removes CO2 already in the atmosphere**, while **CCUS prevents new CO2 emissions from entering the atmosphere**.

CCUS capacity vs. Climate goals

The IEA's Net Zero Emissions (NZE) roadmap outlines how the world can reach net zero by 2050, in line with the 1.5°C climate target. It considers **CCUS** an essential tool. But today, CCUS only captures **0.1% of the energy sector's total yearly emissions**. While planned CCUS projects could increase capacity eight times by 2030 (from 45 million tonnes currently), **only 5% of these projects have secured final investment**. Some projects expected to be running since 2010 are still only "planned" as of April 2025. This shows that CCUS is not delivering at scale and over-reliance on this technology is risky.

CCUS is expensive and unreliable

These figures support the IEA's conclusion that "**the history of CCUS has largely been one of underperformance**". A 2021 study revealed that 43% of all CCUS projects since 1995 have been cancelled or put on hold, and this figure raised to 78% for larger projects intended to capture over 0.3 MtCO2 per year. Another analysis from 2024 shows that CCUS facilities often capture less than 80% of their intended capacity. This raises serious concerns about the role that the CCUS can play in the decarbonization of the energy sector. Due to these issues, the IEA **reduced its 2050 expectations** for CCUS in the power sector by about **40%** in its 2023 NZE update.

Even after **30 years** and over **$80 billion** invested (expected to reach $100 billion by 2025), CCUS still isn't proven at scale. It also requires **customised setups**, making rollout slower and riskier. With an average **6-year project timeline**, it's unrealistic to expect a 20x scale-up by 2030. This would also require **CO2 pipeline infrastructure** to grow from 9,500 km today to **30,000–50,000 km**.

CCUS helps fossil fuel companies delay change

Although CCUS is now marketed as a climate solution, it was originally developed to **boost oil and gas extraction.** In fact, most CO2 sequestered so far has been used to increase oil recovery. The IEA found that the oil and gas industry is involved in 90% of current CCUS capacity in operation, and 40% of CCUS investment since 2010 went to oil and gas-related projects. The IEA warns that the fossil fuel sector places **too much hope in CCUS**. The World Resources Institute says that in over **200 scenarios** that limit warming to 1.5°C, **none rely on CCUS to continue current fossil fuel use**, let alone increase it.

CCUS is a false solution, not a just transition

The **One Earth Climate Model**, developed by the philanthropic organisation One Earth, follows a path that avoids overshooting the carbon budget. It does **not rely on unproven technologies** like CCUS to fix the problem later. Even though some models assume CCUS could help reduce emissions, its **high cost, low effectiveness, technical issues, and potential health risks for local communities** make it a poor solution.

Banks and investors should **stop funding CCUS** as part of their sustainable finance goals. Instead, they should focus on **real climate solutions** like **renewable energy—especially wind, solar, grids, and storage**.

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