

Health and Equity Considerations for Carbon Capture and Storage

Carbon capture and storage (CCS) is a process through which carbon dioxide (CO₂) produced through energy generation and industrial processes is captured and stored, rather than emitted into the atmosphere. CCS is receiving considerable attention by industry and policymakers. Yet its cost, technical feasibility, scalability, and importantly, its health and safety impacts, raise questions about its value as a mitigation strategy⁷⁶ relative to other strategies such as electrification with renewable energy. Renewable energy avoids most of the health impacts associated with the production and combustion of fossil fuels (Case Study on Health Impacts of Pollution from Oil and Gas Production).

The 2022 Intergovernmental Panel on Climate Change Sixth Assessment Report (IPCC AR6) on mitigation suggests, in modeled scenarios, that removal of carbon from the atmosphere through technologies such as CCS may be required to meet global climate targets.⁷⁷ However, the IPCC

The health impacts of CCS remain largely unknown. Life cycle analyses of the health, equity, and climate impacts of CCS on workers and communities are needed to better understand the potential health harms. Safeguards for the protection of human health must additionally be integrated into any further deployment of CCS. This must include requiring implementation of the best available technologies to reduce direct emissions of harmful air pollutants from facilities that utilize CCS; preventing CO₂ leaks from CCS infrastructure; prohibiting the use of CCS for further fossil fuel extraction such as using captured CO₂ for enhanced oil or gas recovery; and requiring fossil-fuel facilities that receive CCS subsidies to develop phase-out plans. Finally, there must be robust community engagement in decisions regarding the siting of CCS facilities, transportation, and storage infrastructure.