

The role of carbon capture and storage in the global energy portfolio

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Abstrak

This review provides an insight for Carbon Capture and Storage (CCS) technology implementation possibilities in the niche of coal power generation plants. A brief explanation of the technology is necessary for understanding the technological and economic constraints affecting successful implementation. Barriers and opportunities for the technology are addressed, and the advantages for achieving climate change mitigation goals are discussed. Possible solutions to protect the technology and its implementation support are provided as well. This study maintains that international collaboration, government incentives, a positive investment climate, public awareness, and learning by doing experiments are needed to ensure that CCS technology operates successfully within coal power plants. Based on the conducted review, we conclude that renewable energy technologies must be developed rapidly and implemented as soon as possible; and until that time, CCS technology can provide a temporary solution by contributing to climate change mitigation plans.