

Integrated Management Framework for Carbon capture and storage (CCS)

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Abstract

A major portion of total energy will be continuously dependent upon the fossil fuels, i.e. oil, gas and coal because of the industrialization of developing countries, which is supported by the petrochemical industry. These trends will increase the global CO₂ emissions to 80% in the next 40–50 years. Although shift from fossil fuel to renewable energy such as wind, solar and hydropower can provide energy with a low carbon footprint, but is not the sole solution for providing low carbon energy to meet regional or national energy demand. To reduce the greenhouse gas (GHG) emissions, while the fossil fuels are continues using as an energy source, the carbon capture and storage (CCS) technology could be a useful option. This work seeks to propose the multi objective optimization model based on integrated management planning system for the process of CCS. The model includes the elements of Environmental Assessment, Technology Assessment, and Economic Management for the process of CCS.