

Pipeline Routing for Transportation of CO₂ in South Korea

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Greenhouse gases (GHG) are a growing concern all around the world. To mitigate the amount of GHG emissions and to sustain a healthy environment, carbon capture and storage (CCS) is considered as a major option. Although much research has been made in the field of carbon capture and storage, not much data exist in its actual applications. For practical implications of CCS, transportation of CO₂ in a cost effective way would be essential. There are many things to be considered, including means of transport, transporting conditions, impurities within transporting methods, etc. In this paper, requirements for practical transportation of CO₂ are investigated thoroughly, focusing on CO₂ transportation by pipeline in large scale. Basic routing algorithms and cost factors required are considered and various conditions are verified. This work will be the first step in building a mass CO₂ transportation network in Korea.