

Overview of the Draft of Korean Carbon Dioxide Capture, Utilization and Storage (CCUS) Act

MOON-HYUN KOH SR.

Soongsil University

Presenting Author: kohmh@ssu.ac.kr

As climate change issues continue to emerge, exacerbating the overall planet's ecosystem, nations including developed and developing countries have agreed on setting a common goal named INDC to mitigate the overall emission of CO₂ in 2015 Paris Agreement.

As Bill Gates emphasized the importance of technology development to cope with climate change in his new book, *How to Avoid a Climate Disaster* (2021), Carbon Capture, Utilization and Storage (CCUS) technology is a pivotal technology to reduce greenhouse gas in large scale. Many countries have developed Carbon Capture, Utilization and Storage (CCUS) technology to achieve tangible mitigation goals set by each country. Compared to other countries, South Korea still has a high proportion of dependence on fossil fuels. As CCUS projects are commonly executed in many countries, its technological advances in CO₂ capture, CO₂ transport, CO₂ utilization and CO₂ storage are being made continually.

In this CCUS system, CO₂ is recycled and utilized to make organic products such as foods, (bio) chemicals and other materials.

By the way, CCUS related technology is under development, both through private and public investment, but in most of the cases, without the presence of appropriate legal framework. While its technical implementation brings efficiency, CCUS technology also brings risks such as the leakage of CO₂ during transport or storage as well as other issues related to land use and its related infrastructure that require not only legislative framework to protect stakeholders and community but also appropriate regulations on public acceptance of CCUS.

We can't emphasize the importance of public acceptance too much considering the continual occurrence of natural disasters such as earthquakes in offshore areas located in Pohang, South Korea.

In this article, we introduce importance of CCUS technology and the outline of Draft of South Korean CCUS Act, and finally consider ways to increase public acceptance of CCUS. It is high time that we should develop CCUS technology which is very closely related to cope with challenges of global climate change.

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Moonhyun Koh(Soongsil University), Dongryun Kim(Shin Ansan University)

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