The study of CCS legal and regulatory framework in China

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Abstract

With increasing international attention towards the expected consequences of global climate change, particularly among academic researchers and policy makers, an emerging technology, carbon capture and storage (CCS), is considered to have great potential in reducing carbon emissions and mitigating anthropogenic climate change. Supported by the International Energy Agency’s prediction, that the mitigation contribution from CCS technologies has the potential to grow from 3% of the global mitigation portfolio in 2020 to 10% in 2030 and reaching 19% in 2050, CCS technologies may become the largest single response in the global climate mitigation portfolio. These technologies enable humanity to significantly reduce carbon emissions, while also allowing the continuation of fossil fuel use in order to meet already pressing energy demands. China’s heavy reliance on coal, as well as its surging energy consumption and rapid economic development, have led the nation to currently rank first as the greatest gross carbon emitter globally. Given these circumstances, CCS may become the technological solution to meet China’s energy needs and to mitigate its environmental concerns, while also enabling the country to move closer to a low-carbon future. However, although some scholars in this field have achieved initial results, the law foundation is weak and the relevant legal system has yet to be established in China. Therefore, this paper summarizes the existing CCS technology of legislation and put forwards the corresponding countermeasures and suggestions in order to develop a comprehensive CCS framework for China’s national conditions of the construction of legal system.

Firstly, we demonstrate the necessity of carbon capture and storage technology legislation. From the perspectives of the reality need and the urgency to circumvent the risk of CCS technology, this paper expounds the necessity of legislation of CCS technology.

Secondly, foreign legal systems of CCS technology are summarized. We sum up the world in legislative laws and regulations relating to the CCS, comb them out in the legislative experience of CCS technology.

Thirdly, we point out the legal problems of carbon capture and storage in China. In this part, we mainly focus on the carbon capture and sequestration, carbon capture and storage security legal regulation and problems of property rights of carbon capture and sequestration project and carbon capture and sequestration of legal responsibility.

Finally, we give some suggestions of specific building legal system of CCS in China. Aiming at the legal problems of carbon capture and storage, we put forward some ideas about constructing carbon capture and storage of special law, involving the security law regulation, property ownership, legal liability, contingency plans, the liability for compensation, public participation and so on.
Overall, CCS technology has been recognized as a key technological option for carbon abatement across the world. In China, CCS currently is still in the phase that most projects are in demonstration and ultimately to achieve the industry level. Therefore, the corresponding legal and regulatory aspects orientation at different stages are the forceful guarantee of China’s CCS industrial development. This paper firstly reviews and summarizes the CCS technology development journey in China and points out the existing legal and regulatory barriers. Then, according to the historical experience of other technological and environmental policies, this paper put forwards a full life-cycle legal and regulatory framework to ensure CCS projects carry out smoothly from the angles just like financial support, technical applications, market construction, risk management, public awareness, etc. These findings could give some hints to the government to make better CCS industry policies.