

Legal and Regulatory Concerns

CO₂ capture and storage (CCS) projects will need to be subject to regulation and laws, and although there are some regional regulations that govern and allow pilot and demonstration projects, widespread and all encompassing regulations have so far been missing. There are numerous legal issues that will need to be addressed in order to draft full legislation that will regulate the CCS industry, specifically the storage side.

Is CO₂ a Waste or a Commodity?

This question has been answered and it is now known that CO₂ is to be classed as a commodity. There was a genuine worry that should it have been classed as a waste, there would have been issues relating to transport – wastes cannot be transported across international borders, so if CO₂ was classed as a waste, then some regions with less storage potential would have faced difficulties in mitigating their CO₂ emissions.

Permanence of Storage and Site Ownership

In order to be allocated credits under emissions trading programmes, the CO₂ must be permanently stored otherwise there would be no inherent desire of the operators to act to the best of their ability. In order to maximise operating efficiency, credits should only be allocated for confirmed permanent storage. However, the issue then lies in defining permanence. How long does the CO₂ need to stay there to be classed as permanent?

The aim of CCS is to store the CO₂ for thousands of years, but operators will need paying immediately, the issue of repayment in the event of leaks leads to a question of time limits... when does responsibility pass from the operator to another entity and which entity? Operators will not want to run sites where they are liable for many years after they stop injecting – at some point, the responsibility and ownership of the site will need to pass to a local or national authority, and this is debated around the world as to when this happens.

Ownership of Rocks

Another question comes up with the ownership of the pore space within the rocks. Landowners may want compensation, or other monetary exchange if CCS is taking place where the injected CO₂ will be under their land. In the USA, landowners generally own the geological formation under their land whereas in other regions of the world it is owned by other bodies depending on the presence of minerals and other factors. This will need addressing before CCS can take place.

As an example, some regions of the world have modified their laws so that the pore space within a rock formation is owned by the government while the rock and minerals remain the property of the landowner. This allows CCS to take place, but it remains to be seen how this will take effect in practice.

Sub Seafloor Storage

This is a more complicated area; the seafloor up to 12 miles from shore is subjected to the same laws as that country, however in northern Europe there are regulations in place that prohibit the disposal of wastes in or under the sea. This circles back to the question of whether CO₂ is a waste or a commodity.

Regional Laws

Some areas in the world have developed and implemented laws that will allow CCS to take place on an operational basis, providing that strict criteria have been met and safety measures are in place. These laws make some headway against the issues outlined above, but this is an ever-changing and developing area, so trying to define the conclusions in an Information Sheet such as this is not possible.

Summary

Regulations, legislation and laws will be required to successful deploy and operate CCS projects. Many regions are working on this, and some have put these into practice, but there is still some way to go before established legislation permits wide-scale deployment of CCS such as will be necessary to mitigate climate change.