

Geological storage of carbon dioxide (CO₂)

2008/0015(COD) - 23/04/2009 - Final act

PURPOSE: to establish a legal framework for the geological storage of carbon dioxide (CO₂).

LEGISLATIVE ACT : Directive 2009/31/EC of the European Parliament and of the Council on the geological storage of carbon dioxide and amending Council Directive 85/337/EEC, European Parliament and Council Directives 2000/60/EC, 2001/80/EC, 2004/35/EC, 2006/12/EC, 2008/1/EC and Regulation (EC) No 1013/2006.

CONTENT: following a first reading agreement with the European Parliament, the Council adopted this Directive which establishes a legal framework for the environmentally safe geological storage of carbon dioxide (CO₂) to contribute to the fight against climate change. The purpose of environmentally safe geological storage of CO₂ is permanent containment of CO₂ in such a way as to prevent and, where this is not possible, eliminate as far as possible negative effects and any risk to the environment and human health.

Carbon dioxide capture and geological storage (CCS) is a bridging technology that will contribute to mitigating climate change. It consists of the capture of carbon dioxide (CO₂) from industrial installations, its transport to a storage site and its injection into a suitable underground geological formation for the purposes of permanent storage. The Directive notes that this technology should not serve as an incentive to increase the share of fossil fuel power plants. Its development should not lead to a reduction of efforts to support energy saving policies, renewable energies and other safe and sustainable low carbon technologies, both in research and financial terms.

Preliminary estimates, carried out with a view to assessing the impact of the Directive indicate that **seven million tonnes of CO₂ could be stored by 2020, and up to 160 million tonnes by 2030**, assuming a 20 % reduction in greenhouse gas emissions by 2020 and provided that CCS obtains private, national and Community support and proves to be an environmentally safe technology. The CO₂ emissions avoided in 2030 could account for some 15 % of the reductions required in the Union.

Whether to use carbon capture and storage (CCS) or not is still a matter for independent decision by each EU Member State. For Member States that wish to do so, the Directive sets the framework and conditions for use of CCS technology in Europe. It introduces requirements for the separation and capture of CO₂, and for its transport by pipeline. It explains the procedure for the **identification and safe use of storage sites** in rock deep underground. The legislation provides for a private operator to pass responsibility to a Member State for the very long term storage of CO₂, but only after there is near absolute certainty that the possibility of leakage has been reduced to zero.

The Commission also proposes that all new power plants be built as 'capture-ready', capable of being equipped with CCS facilities during their operational lifetimes.

In order to ensure harmonised application throughout the European Union, the Commission will review draft storage permits and draft decisions on closure prepared by national authorities before their final approval.

Operators are obliged to monitor storage sites and report to Member State's authorities, both while storing carbon dioxide and after the closure of sites and the cessation of storage activities. Responsibility for a site reverts to a public authority when sufficient proof is obtained that the carbon dioxide will be completely and permanently contained.

Scope: the Directive will apply to the geological storage of CO₂ in the territory of the Member States, their exclusive economic zones and on their continental shelves within the meaning of the United Nations Convention on the Law of the Sea (Unclos). It does not apply to geological storage of CO₂, with a total intended storage below 100 kilotonnes, undertaken for research, development or testing of new products and processes. The storage of CO₂ in a storage site with a storage complex extending beyond the area referred to above is not permitted. Further, the storage of CO₂ in the water column is not permitted.

It should be noted that this Directive forms part of the climate-energy legislative package containing measures aimed at fighting climate change and promoting renewable energy. (See also [COD/2008/0013](#), [COD/2008/0014](#), [COD/2008/0016](#), [COD/2007/0019](#) and [COD/2007/0297](#)). The package is designed to achieve the EU's overall environmental target of a 20 % reduction in greenhouse gases and a 20 % share of renewable energy in the EU's total energy consumption by 2020.

ENTRY INTO FORCE: 25/06/2009.

TRANSPOSITION: 25/06/2011.