Geological storage of carbon dioxide (CO_2)

2008/0015(COD) - 17/12/2008 - Text adopted by Parliament, 1st reading/single reading

The European Parliament adopted by 623 votes to 68 with 22 abstentions, a legislative resolution amending the proposal for a directive of the European Parliament and of the Council on the geological storage of carbon dioxide and amending Council Directives 85/337/EEC, 96/61/EC, Directives 2000/60 /EC, 2001/80/EC, 2004/35/EC, 2006/12/EC and Regulation (EC) No 1013/2006. The report had been tabled for consideration in plenary by Chris DAVIES (ADLE, UK), on behalf of the Committee on the Environment, Public Health and Food Safety. The amendments were the result of a compromise between the Council and the Parliament. MEPS secured the funding of demonstration projects by ensuring that 300 million ETS allowances will be awarded to large scale CCS projects in the EU.

The main amendments - adopted under the 1st reading of the codecision procedure - were as follows:

Objective: the compromise text clarifies that the directive establishes a legal framework for the environmentally safe geological storage of carbon dioxide 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.

Scope and prohibition: the Directive shall not apply to geological storage of CO2 undertaken for research, development or testing of new products and processes with a total intended storage below 100 kilo tonnes. Furthermore, the storage of CO2 in a storage site with a storage complex extending beyond the frontiers of the EU will not be permitted.

Selection of storage sites: Member States retain the right to determine the areas from which storage sites may be selected pursuant to the requirements of this Directive. This includes the right of Member States not to allow for any storage in parts or in the whole of their territory. Member States who intend to allow geological storage of CO2 in their territory shall undertake an assessment of the storage capacity available in parts or in the whole of their territory, including by allowing exploration pursuant to the Directive. The Commission may organise an exchange of information and best practices between those Member States. A geological formation shall only be selected as a storage site, if under the proposed conditions of use there is no significant risk of leakage, and if no significant environmental or health risks exist.

Exploration permits: the procedures for the granting of exploration permits must be open to all entities possessing the necessary capacities and permits must be granted or refused on the basis of objective, published and non-discriminatory criteria. The duration of a permit should not exceed the period necessary to carry out the exploration for which it is granted. However, Member States may prolong the permit where the stipulated duration is insufficient to complete the exploration in question and where the exploration has been performed in accordance with the permit. Exploration permits shall be granted for a limited volume area

Storage permits: no storage site may be operated without a storage permit, and there shall be only one operator for each storage site, and no conflicting uses must be permitted on such site. Priority for the granting of a storage permit for a given site shall be given to the holder of the exploration permit for that site, provided that the exploration of that site is completed, that any condition set in the exploration permit has been complied with, and that the application for a storage permit is made during the period of validity of the exploration permit.

Applications for storage permits : applications to the competent authority for storage permits shall include at least the prescribed information, inter alia: (i) the total quantity of CO2 to be injected and stored, as well as the prospective sources and transport methods, the composition of CO2 streams, the injection rates and pressures, and the location of injection facilities; (ii) description of measures to prevent significant irregularities; (iii) proof that the financial security or other equivalent provision as required will be valid and effective before commencement of injection .

Conditions for storage permits: the competent authority shall only issue a storage permit if certain conditions are met and the compromise text stresses the financial soundness of the operator. It also requires that in the case of more than one storage site in the same hydraulic unit, the potential pressure interactions are such that both sites simultaneously can meet the requirements of the Directive.

Commission review of draft storage permits: Member States shall make the permit applications available to the Commission within one month after receipt. They shall also make available other related material that shall be taken into account by the competent authority when it seeks to make a decision on the award of a storage permit. They shall inform the Commission of all draft storage permits and any other material taken into consideration for the adoption of the draft decision. Within four months after receipt of the draft storage permit, the Commission may issue a non-binding opinion on it. If the Commission decides not to issue an opinion, it shall inform the Member State within one month of submission of the draft permit and state its reasons.

Monitoring: Member States shall ensure that the operator carries out monitoring of the injection facilities, the storage complex (including where possible the CO2 plume), and where appropriate the surrounding environment for the purpose of, inter alia, detecting significant irregularities and updating the assessment of the safety and integrity of the storage complex in the short- and long-term including the assessment of whether the stored CO2 will be completely and permanently contained.

Inspections: competent authorities must organise a system of routine and non-routine inspections of all storage complexes. Routine inspections shall be carried out at least once a year until three years after closure and every five years until transfer of responsibility to the competent authority has occurred. They shall examine the relevant injection and monitoring facilities as well as the full range of relevant effects from the storage complex on the environment and on human health.

Transfer of responsibility: where a storage site has been closed all legal obligations relating to monitoring and corrective measures pursuant to the requirements laid down in this Directive, the surrender of allowances in cases of leakage and preventive and remedial action, shall be transferred to the competent authority on its own initiative or upon request from the operator, if certain conditions are met. These include whether a minimum period, to be determined by the competent authority has elapsed. This minimum period shall be no shorter than 20 years, unless the competent authority is convinced that all available evidence indicates that the stored CO2 will be completely and permanently contained.

When the competent authority is satisfied that the conditions are met, it shall prepare a draft decision of approval of the transfer of responsibility which will specify the method for determining that the site has been sealed and the injection facilities have been removed, as well as any updated requirements for the sealing of the storage site and for the removal of injection facilities. In cases where there has been fault of the operator, including cases of deficient data, concealment of relevant information, negligence, wilful deceit or malpractice the competent authority shall recover from the former operator the costs incurred after the transfer of responsibility has taken place.

Financial mechanism: the operator, on the basis of modalities to be decided by Member States, must make a financial contribution available to the competent authority before the transfer of responsibility has taken place. The contribution from the operator shall take into account those criteria referred to in Annex I

and elements relating to the history of storing CO2 relevant to determining the post-transfer obligations, and cover at least the anticipated cost of monitoring for a period of 30 years. This financial contribution may be used to cover the costs borne by the competent authority after the transfer of responsibility to ensure that the CO2 is completely and permanently contained in geological storages sites after the transfer of responsibility.

Information to the public: Member States shall make available to the public the elements relating to the geological storage of CO2 in accordance with applicable Community legislation.

Review: the Commission shall transmit to the European Parliament and to the Council a report on the implementation of this Directive within nine months of receiving Member States' reports. In the report that intervenes by 30 June 2015 on the basis of experience with the application of this Directive, in light of the experience with CCS and taking into account technical progress and the most recent scientific knowledge the Commission shall assess, in particular:

- whether permanent containment of CO 2 in such way as to prevent and reduce as far as possible negative effects on the environment and any resulting risk to human health and the environmental and human safety of CCS has been sufficiently demonstrated;;

- whether the procedures regarding the Commission's reviews of the draft storage permits (Article 10) and the draft decisions on transfer of responsibility (Article 18) are still required;

- experience with the provisions on CO2 stream acceptance criteria and procedure;

- experience with the provisions on third-party access and with the provisions on transboundary cooperation;

- the provisions applicable to combustion plants with a rated electrical output of 300 megawatts or more;

- prospects for geological storage of CO2 in third countries;

- further development and update of the criteria referred to in Annex I and Annex II;

- experience with incentives for applying CCS on installations combusting biomass;

- the need for further regulation on environmental risks related to CO2 transport;

and will present a proposal for revision of the Directive if appropriate.

Where permanent containment of CO2 in such 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, and the environmental and human safety of CCS have been sufficiently demonstrated, as well as its economic feasibility, the review shall examine whether it is needed and practicable to establish a mandatory requirement for emission performance standards for new electricity-generating large combustion installations.

Transposition: 2 years after publication.