

## **EURACOAL'S POSITION ON FUTURE LEGAL FRAMEWORK FOR CCS**

The development of carbon capture and storage (CCS) is regarded as a promising possibility to reduce CO<sub>2</sub> emissions from the combustion of fossil fuels for power generation purposes. Apart from economic and technical issues to be solved an underlying legal framework needs to be created as soon as possible. Consequently, the concept of developing such a legal framework for CCS put forward by DG Environment at the Stakeholder Consultation in Brussels on 8<sup>th</sup> May 2007 is generally welcomed by the coal and lignite industry. The legal framework should essentially cover the following basic aspects:

- Any clashes with existing EU legislation, particularly in the fields of waste and water, must be resolved as an indispensable precondition to introduce CCS.
- A clear and reliable legal framework needs to be created for the transport and storage of captured carbon, including general provisions for the approval and operation of suitable storage sites. This involves geology, safety and capacity-related issues. CCS must not be established only in theory.
- The provisions should be designed in a way they make it possible that first experience in large scale storage operations can be taken on board later.
- Because of the unity of legislation, the legal framework for CCS should apply in the same way to all fossil-fuel power plants. One-sided distortions of competition must be avoided by treating electricity generation-related CO<sub>2</sub> emissions from all sources in the same way.
- CCS shall be fully recognized under the EU ETS.
- A possible obligation for CCS is premature because CCS and particularly CO<sub>2</sub> storage are only at an experimental stage and its maturity for large technical use still has to be proven. Furthermore, committing to CCS only and too early could hinder the development of other technologies for the reduction of CO<sub>2</sub> emissions. This includes other chemical and biological processes. Europe can contribute to climate protection and security of supply most when investments in both enhancements of efficiency and CCS are encouraged; it therefore should be put forward by the EU as well.

In detail:

- 1. Risk management framework (Slide 2) \***
- 2. a) Capture**

According to DG Environment, CO<sub>2</sub> capture in a power plant can be approved in agreement with the IPPC Directive. Only the BREF Document (Best Available Technique Reference Document) for large combustion plants would have to be amended in view of capture.

Evaluation:

This approach is supported. The reference to the BREF document offers the advantage of being able to react flexibly to the further developments of capture techniques. This flexibility must be maintained. Therefore, the BREF document must not favour any particular capture technique. On the contrary, the BREF document should acknowledge various capture techniques taking account of their individual development states. Commitment to one particular capture technique in the BREF document -that would discriminate against other capture procedures- must therefore be avoided. In the context of the current review of the IPPC Directive it must also be avoided to declare the BREF document as binding.

“Capture Readiness” should not yet be defined as state-of-the-art in the BREF document. On the basis of the existing need for research into various capture routes, it is obviously difficult for power plant experts to make a statement as to what has to be understood by the term “Capture Readiness”. In view of capture techniques not yet known in detail, today only limited preliminary steps for the construction of new power plants can be taken for a later retrofitting (see also Page 5, Nr 9). There is a risk that premature “capture-readiness efforts” result in stranded investment and technology lock-in.

#### **b) Transport**

DG Environment sees no reason at the moment to establish completely new rules for the transport of captured CO<sub>2</sub>. Carrying over existing regulations for the transport of natural gas to the transport of captured CO<sub>2</sub> to the storage sites is being considered.

Evaluation:

It seems objective to not establish new rules for the transport of CO<sub>2</sub>, because sufficient and proven rules already exist for the transport of natural gas or oil that can be applied or further developed for the transport of CO<sub>2</sub>. The approach of DG Environment to the transport of CO<sub>2</sub> is therefore welcomed. The experience and knowledge gained (USA) when operating existing CO<sub>2</sub> transport networks should also be considered.

\* All slides quoted from Scott Brockett’s Presentation “Regulatory and legal issues: development of an enabling legal framework for carbon capture & storage in the EU” on 8 May 2007

## **2. Impacts and risks to be managed (Slide 3)**

DG Environment envisages including CO<sub>2</sub> storage under the IPPC Directive. A BREF document would then have to be developed, characterising the operation, the end of operations and the monitoring of storage. DG Environment considers whether during the initial phase, the safety of the first CO<sub>2</sub> storage sites would be controlled by a central body. It asks if the possibility of giving over the responsibility for the storage site to the state could be foreseen (after closure of the site) if its safety has been sufficiently proven. Furthermore, a financial cover must foresee the case of insolvency of the operators of the storage sites.

Evaluation:

This approach of the European Commission is to be supported in principle. In particular, a BREF document on the storage of CO<sub>2</sub> offers the possibility to react flexibly to technical developments. However, it should be left to the Member States to determine the appropriate financial guarantees to cover any related risks. The possibility to carry over the responsibility for the storage sites to the state level after cessation of operations is backed in view of the long-term aspect of storage also.

However, it is difficult to understand why the safety of the first CO<sub>2</sub> storage sites should be controlled centrally. Here, the Member States should decide which authorities are responsible for these controls, based on the opinion of legislators of the Member States as to who is most competent. International standards for controlling safety could be encouraged, when capture technology is more mature. It would be too early to already establish such standards today, because they can only be developed during the on-going research and demonstration phase.

### **3. Purity of CO<sub>2</sub> stream (Slide 4)**

DG Environment would like to ascertain that the maximum authorised concentrations of pollutants in the CO<sub>2</sub> stream are based on the status of the best available techniques and on the possible impact on the concerned transport and storage sites.

Evaluation:

This flexible approach of DG Environment to the degree of purity of the CO<sub>2</sub> stream can fundamentally also be followed. Establishing an inflexible qualitative degree of purity could hinder technical developments and is therefore to be rejected. It must therefore also be ascertained that the orientation on the status of technology does not lead to focusing on one single procedure and to discriminating against other capture techniques.

In the coal industry's opinion CCS should not be considered as a new form of removal of pollutants. DG Environment's approach to the degree of purity of the CO<sub>2</sub> stream should be checked again, as it refers to the high standards that apply to emissions in the air or in sea water columns because with CCS the CO<sub>2</sub> stream is not at all released into the air nor into sea water columns but is stored in underground geological formations. Establishing criteria for the purity of the CO<sub>2</sub> stream can therefore only apply to the concrete geological circumstances of the concrete geological storage formations considered in the concrete approval procedures, if an Environmental Impact Assessment (EIA) is foreseen. An appropriate authorisation of the Member States should be explicitly taken on board of the European legal framework for CCS technology.

### **4. Management options for storage (Slide 5)**

Here DG Environment again mentions its approach of regulating the individual phases of CO<sub>2</sub> storage by means of the IPPC Directive and the BREF document. In any case the storage of CO<sub>2</sub> should be preceded by an EIA and / or a Strategic Environmental Assessment (SEA).

Evaluation:

The coal industry supports the obligation to carry out an EIA or SEA for the storage of CO<sub>2</sub> because of acceptance reasons.

## **5. Rights for prospection and exploration (Slide 6)**

DG Environment plans to carry over the regulations of Directive 94/22/EC on the granting and using of authorisations for the prospection, exploration and production of hydrocarbons to the prospection and exploration of CO<sub>2</sub> storage sites.

Evaluation:

This concept of DG Environment is basically supported. According to Directive 94/22/EC Member States maintain the right to establish which areas can be made available for the prospection, exploration and production of hydrocarbons. The Directive guaranteed a fair treatment of all enterprises for the access to these activities and when pursuing them and establishes the procedure to be considered when granting authorisations. The authorisations must be granted on the basis of objective and non-discriminatory criteria. This excludes conflicts with potentially conflictual activities in the same region. Such regulations are also required for the exploration, construction and operation of CO<sub>2</sub> storage sites. It is therefore not sufficient to merely apply the provisions of Directive 94/22/EC to the prospection and exploration for CO<sub>2</sub> storage sites. On the contrary, the provisions of Directive 94/22/EC on the production of hydrocarbons must also be carried over or appropriately applied to the storage of CO<sub>2</sub>. Such regulations should acknowledge the very high costs of the first pilot and demonstrations installations.

## **6. Removal of barriers (Slide 7)**

### **a) Water**

DG Environment suggests inserting the following indent after the third indent in Article 11 para 3j of the EU Water Framework Directive: “Injection of CO<sub>2</sub> streams for storage purposes into geological formations which for natural reasons are permanently unsuitable for other purposes, provided that such injection is authorised under Directive XX/XX/EC.”

Evaluation:

This proposal of DG Environment is supported. The proposed addition to the WFD helps clarify that the “injection of CO<sub>2</sub> streams” (defined as introduction of captured CO<sub>2</sub> and connected substances) can be allowed by the Member States without going against the objectives of the WFD. It also shows that in individual cases the modifications caused by storage to the quality of ground water do not need to be rehabilitated in the sense of the EU Environment Liability Directive 2004/35/EC.

### **b) Waste**

Here DG Environment plans to not treat captured CO<sub>2</sub> as waste by means of the following addition to Art. 1 of the Waste Framework Directive: “CO<sub>2</sub> streams that are transported for the purposes of storage, injected or stored in accordance with the provisions of Directive XX/XX/EC are not considered to be waste as defined in paragraph (a).”

Evaluation:

This approach of DG Environment is supported because it shows that captured and stored CO<sub>2</sub> and connected substances are not treated as waste so that waste legislation does not apply.

## **7. Liability for leakage from storage site (Slide 8)**

DG Environment plans to let Member States legislate on damages caused by the storage of CO<sub>2</sub> to local property and to health. Here also potential conflicts can be expected between

the underground storage of CO<sub>2</sub> and the ownership of land. Considering local environmental damage caused by the storage of CO<sub>2</sub>, it would be envisageable to carry over regulations of the Environmental Liability Directive, especially concerning insured risks. There are references to Art. 14 of the Environmental Liability Directive.

Evaluation:

Considering varied ownership legislation in the individual Member States -notwithstanding issues of legal competence- it seems consequent to rule on the rapport between the storage of CO<sub>2</sub> and the ownership of land not at European level but at Member State level.

The application of provisions of the Environmental Liability Directive to environmental damage caused by the storage of CO<sub>2</sub> is supported.

### **8. Treatment under ETS (Slide 9)**

DG Environment is considering regulating non local damage caused by the storage of CO<sub>2</sub> in connection with climate protection by including CCS in the Emissions Trading Scheme.

Evaluation:

It should be clarified that “non local damage” can only occur when storing CO<sub>2</sub> to the extent that leakages of escaping CO<sub>2</sub> can influence the climate. Other non local damage cannot be perceived.

The approach of integrating CO<sub>2</sub> storage in the Emissions Trading Scheme and of regulating leakages of escaping CO<sub>2</sub> also in the Emissions Trading Scheme can basically be followed. It must be welcomed if CCS is introduced into the scheme through market mechanisms. It requires incentives in order to even out or eventually to cushion the high costs and risks of CCS by means of market mechanisms. The exact implementation of the inclusion of CCS in the Emissions Trading Scheme however needs further analysis. Specific regulations have to be established in today’s research and development phase for “Early Movers”.

### **9. Making CCS mandatory post-2020 (Slide 10)**

DG Environment deduces from the European Commission’s Communication “Sustainable Power Generation from Fossil Fuels” (COM (2006) 843 final) dated 10<sup>th</sup> January 2007 that new power plants are to be built capture-ready by 2020 and are to be retro-fitted after 2020 whereas after 2020 only CCS power plants will be allowed.

Evaluation:

Especially on the basis of the existing need for research, it is not possible at the moment to understand precisely what the concept “Capture Readiness” means. Clarification is required rapidly to avoid stranded investment and technology lock-in.

As CCS technology is still in a Research and Development phase, the large industrial use of CCS in the power plant sector and especially in the field of storage has not yet been proven and as other decisions concerning the market maturity of CCS still have to be taken in addition to the technical aspects, it would be too early to make the authorisation of fossil-fuel power plants after 2020 dependent on CCS already today. This would also hinder the development of other technologies for the reduction of CO<sub>2</sub> emissions, e.g. other possible chemical and technical processes. This should be avoided in all cases. In this context, the Conclusions of the Council (An Energy Policy for Europe) of 9<sup>th</sup> March 2007 (Document

7224/07) must be referred to, stipulating that the “technical, economic and regulatory framework (is to be developed) to bring environmentally safe carbon capture and sequestration (CCS) to deployment with new fossil-fuel power plants, if possible by 2020”. The Council has required making the authorisation of new fossil-fuel power plants after 2020 dependant on CCS already today.

Given the fact that neither the legal framework nor the required infrastructure has been developed for the transport and storage of CO<sub>2</sub> the fixing of dates as from which onwards power plants can only be authorized if equipped with CCS technology is a serious impediment to urgently needed investment into new power plants replacing existing less efficient ones.

#### **10. Non discriminatory access to operational CO<sub>2</sub> storage sites**

As it is not yet known how a pan-European CO<sub>2</sub> transport and storage infrastructure will develop, a regulation on the access to transport and storage infrastructure may become very important. DG Environment has not yet provided the Stakeholder Consultation on 8<sup>th</sup> May with any information on how to secure a non-discriminatory access to a transport and storage infrastructure. In the coal industry’s opinion, in this context, an orientation on the regulations of the Directive 2003/55/EC on common provisions for the Internal Gas Market could be considered.