

# EUROPEAN PARLIAMENT

2004



2009

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*Committee on the Environment, Public Health and Food Safety*

**2008/0015(COD)**

5.6.2008

**\*\*\*I**

## **DRAFT REPORT**

on 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 (COM(2008)0018 – C6-0040/2008 – 2008/0015(COD))

Committee on the Environment, Public Health and Food Safety

Rapporteur: Chris Davies

### ***Symbols for procedures***

- \* Consultation procedure  
*majority of the votes cast*
- \*\*I Cooperation procedure (first reading)  
*majority of the votes cast*
- \*\*II Cooperation procedure (second reading)  
*majority of the votes cast, to approve the common position  
majority of Parliament's component Members, to reject or amend  
the common position*
- \*\*\* Assent procedure  
*majority of Parliament's component Members except in cases  
covered by Articles 105, 107, 161 and 300 of the EC Treaty and  
Article 7 of the EU Treaty*
- \*\*\*I Codecision procedure (first reading)  
*majority of the votes cast*
- \*\*\*II Codecision procedure (second reading)  
*majority of the votes cast, to approve the common position  
majority of Parliament's component Members, to reject or amend  
the common position*
- \*\*\*III Codecision procedure (third reading)  
*majority of the votes cast, to approve the joint text*

(The type of procedure depends on the legal basis proposed by the Commission.)

### ***Amendments to a legislative text***

In amendments by Parliament, amended text is highlighted in ***bold italics***. In the case of amending acts, passages in an existing provision that the Commission has left unchanged, but that Parliament wishes to amend, are highlighted in **bold**. Any deletions that Parliament wishes to make in passages of this kind are indicated thus: [...]. Highlighting in *normal italics* is an indication for the relevant departments showing parts of the legislative text for which a correction is proposed, to assist preparation of the final text (for instance, obvious errors or omissions in a given language version). Suggested corrections of this kind are subject to the agreement of the departments concerned.

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## DRAFT EUROPEAN PARLIAMENT LEGISLATIVE RESOLUTION

on 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 (COM(2008)0018 – C6-0040/2008 – 2008/0015(COD))

(Codecision procedure: first reading)

*The European Parliament,*

- having regard to the Commission proposal to the European Parliament and the Council (COM(2008)0018),
  - having regard to Articles 251(2) and 175(1) of the EC Treaty, pursuant to which the Commission submitted the proposal to Parliament (C6-0040/2008),
  - having regard to Rule 51 of its Rules of Procedure,
  - having regard to the report of the Committee on the Environment, Public Health and Food Safety and the opinion of the Committee on Industry, Research and Energy (A6-0000/2008),
1. Approves the Commission proposal as amended;
  2. Calls on the Commission to refer the matter to Parliament again if it intends to amend the proposal substantially or replace it with another text;
  3. Instructs its President to forward its position to the Council and Commission.

### Amendment 1

#### Proposal for a directive

#### Recital 15

*Text proposed by the Commission*

(15) Member States should retain the right to determine the areas within their territory from which storage sites may be selected. The selection of the appropriate storage site is crucial to ensure that the stored CO<sub>2</sub> will be completely contained for the indefinite future. A site should therefore only be selected as a storage site, if ***there is no significant*** risk of leakage, ***and if in any case no significant environmental or***

*Amendment*

(15) Member States should retain the right to determine the areas within their territory from which storage sites may be selected. The selection of the appropriate storage site is crucial to ensure that the stored CO<sub>2</sub> will be completely contained for the indefinite future. A site should therefore only be selected as a storage site, if ***under the proposed conditions of use no*** risk of leakage ***is anticipated that could have a***

**health impacts are likely to occur.** This should be determined through a characterisation and assessment of a potential storage complex pursuant to specific requirements.

**negative impact on human health or the environment.** This should be determined through a characterisation and assessment of a potential storage complex pursuant to specific requirements.

Or. en

#### *Justification*

*The word 'significant' leaves room for uncertainty. It would be wholly unacceptable for a commercial storage permit to be granted if a leakage was anticipated (Oxford English Dictionary definition – “regarded as probable”) that could have a detrimental effect upon human health or the environment.*

## **Amendment 2**

### **Proposal for a directive**

#### **Recital 18**

##### *Text proposed by the Commission*

(18) **All** draft storage permits **should be submitted to the Commission in order for it to be able to issue an opinion on the draft permits within six months of their submission. The national authorities should take this opinion into consideration when taking a decision on the permit and should justify any departure from the Commission's opinion. The review** at Community level should help to ensure consistency in implementation of the requirements of the Directive across the Community and also enhance public confidence in CCS, especially in the early phase of the implementation of the Directive.

##### *Amendment*

(18) Draft storage permits **shall be awarded by the competent authority in each Member State. The Commission shall have a maximum of one month after the competent authority has awarded a permit to register an objection, in which case the permit will be suspended pending the outcome of discussions. The scrutiny** at Community level should help to ensure consistency in implementation of the requirements of the Directive across the Community and also enhance public confidence in CCS, especially in the early phase of the implementation of the Directive.

Or. en

#### *Justification*

*While procedural delays should be kept to a minimum, a failure by any one Member State to ensure that permits provide for the safe storage of CO<sub>2</sub> could threaten public confidence in*

CCS across Europe. It is therefore appropriate for the Commission to be able to exercise a final check.

### Amendment 3

#### Proposal for a directive

##### Recital 19

###### *Text proposed by the Commission*

(19) The competent authority should review and where necessary update or withdraw the storage permit *inter alia* if it has been notified of **significant** irregularities or leakages, if the reports submitted by the operators or the inspections carried out show non-compliance with permit conditions or if it is made aware of any other failure by the operator to meet the permit conditions. After the withdrawal of a permit, the competent authority should either issue a new permit or close the storage site. In the meantime, the competent authority should take over the responsibility for the storage site including all ensuing legal obligations. To the extent possible, costs incurred should be recovered from the former operator.

###### *Amendment*

(19) The competent authority should review and where necessary update or withdraw the storage permit *inter alia* if it has been notified of irregularities or leakages **that could have a negative impact on human health or the environment.**, if the reports submitted by the operators or the inspections carried out show non-compliance with permit conditions or if it is made aware of any other failure by the operator to meet the permit conditions. After the withdrawal of a permit, the competent authority should either issue a new permit or close the storage site. In the meantime, the competent authority should take over the responsibility for the storage site including all ensuing legal obligations. To the extent possible, costs incurred should be recovered from the former operator.

Or. en

###### *Justification*

*The word 'significant' leaves room for uncertainty.*

### Amendment 4

#### Proposal for a directive

##### Recital 27

###### *Text proposed by the Commission*

(27) After the transfer of responsibility, monitoring should be allowed to cease, but

###### *Amendment*

(27) After the transfer of responsibility, monitoring should be allowed to cease, but

should be re-activated, if leakages or significant irregularities are identified. There should be no recovery of costs incurred by the competent authority from the former operator after the transfer of responsibility.

should be re-activated, if leakages or significant irregularities are identified. There should be no recovery of costs incurred by the competent authority from the former operator after the transfer of responsibility ***unless inaccurate information was supplied to justify the transfer of responsibility.***

Or. en

## Amendment 5

### Proposal for a directive

#### Recital 28

##### *Text proposed by the Commission*

(28) Financial provision should be made ***provided*** in order to raise confidence that closure and post-closure obligations, obligations arising from inclusion under Directive 2003/87/EC, and obligations under this Directive to take corrective measures in case of significant irregularities or leakages, can be met. Member States should ensure that financial provisions, by way of financial security or any other equivalent, are made by the applicant prior to the ***submission of the permit application.***

##### *Amendment*

(28) Financial provision should be made in order to raise confidence that closure and post-closure obligations, obligations arising from inclusion under Directive 2003/87/EC, and obligations under this Directive to take corrective measures in case of significant irregularities or leakages, can be met. Member States should ensure that financial provisions, by way of financial security or any other equivalent, are made by the applicant prior to the ***commencement of the CO<sub>2</sub> injection process.***

Or. en

##### *Justification*

*i) Delete unnecessary word*

*ii) Subject to the financial standing of the operator being accepted there need be no requirement to put financial security in place prior to the commencement of the actual work.*



## Amendment 6

### Proposal for a directive Recital 29

*Text proposed by the Commission*

(29) Access to CO<sub>2</sub> transport networks and storage sites could become a condition for entry into or competitive operation within the internal electricity and heat market, depending on the relative prices of carbon and CCS. It is therefore appropriate to make arrangements for potential users to obtain such access. This should be done in a manner to be determined by each Member State, applying the objectives of fair and open access and taking into account inter alia the transport and storage capacity which is available or can reasonably be made available as well as the proportion of its CO<sub>2</sub> reduction obligations pursuant to international legal instruments and to Community legislation intended to meet through CO<sub>2</sub> capture and geological storage. ***Member States should also establish dispute settlement mechanisms to enable expeditious settlement of disputes regarding access to CO<sub>2</sub> transport networks and storage sites.***

*Amendment*

(29) Access to CO<sub>2</sub> transport networks and storage sites could become a condition for entry into or competitive operation within the internal electricity and heat market, depending on the relative prices of carbon and CCS. It is therefore appropriate to make arrangements for potential users to obtain such access. This should be done in a manner to be determined by each Member State, applying the objectives of fair and open access and taking into account inter alia the transport and storage capacity which is available or can reasonably be made available as well as the proportion of its CO<sub>2</sub> reduction obligations pursuant to international legal instruments and to Community legislation intended to meet through CO<sub>2</sub> capture and geological storage.

Or. en

*Justification*

*A dispute settlement mechanism should be established that is capable of mediating in matters others than access to transport networks and storage sites. See new Preamble 30(a) below.*

## Amendment 7

### Proposal for a directive Recital 30 a (new)

*Text proposed by the Commission*

*Amendment*

***(30a) Member States should establish dispute settlement mechanisms and an***

*independent authority to enable expeditious settlement of disputes regarding access to CO2 transport networks and storage sites and to provide mediation between a competent authority and the holders of exploration or storage permits in the case of differences that might otherwise result in protracted legal disputes.*

Or. en

*Justification*

*The dispute mechanism proposed by the Commission for transport networks should be available also in relation to other matters.*

**Amendment 8**

**Proposal for a directive**

**Recital 31**

*Text proposed by the Commission*

(31) The competent authority should establish and maintain a register of all closed storage sites and surrounding storage complexes, including maps of their spatial extent to be taken into consideration by the competent national authorities in relevant planning and permitting procedures. The register should also be reported to the Commission.

*Amendment*

(31) The competent authority should establish and maintain a register of all **operating and** closed storage sites and surrounding storage complexes, including maps of their spatial extent to be taken into consideration by the competent national authorities in relevant planning and permitting procedures. The register should also be reported to the Commission.

Or. en

*Justification*

*Storage site operation may continue for a very long time. Registers that will be used as a source of reference for many other purposes need to be comprehensive and to include both operating and closed storage sites.*

## Amendment 9

### Proposal for a directive Article 1 – paragraph 1

*Text proposed by the Commission*

1. This Directive establishes a legal framework for the geological storage of carbon dioxide (hereinafter "CO<sub>2</sub>").

*Amendment*

1. This Directive establishes a legal framework for the geological storage of carbon dioxide (hereinafter "CO<sub>2</sub>") **to contribute to the fight against climate change.**

Or. en

*Justification*

*It should be spelt out that there is only one reason why anyone should seek to store CO<sub>2</sub> underground and that is to avoid its release into the atmosphere where it will contribute to the problem of global warming.*

## Amendment 10

### Proposal for a directive Article 1 – paragraph 2

*Text proposed by the Commission*

2. The purpose of geological storage is **permanent containment of CO<sub>2</sub>** in such a way as to prevent **or reduce as far as possible negative effects on the environment and any resulting risk to human health.**

*Amendment*

2. The purpose of geological storage is **to provide an alternative to the release of CO<sub>2</sub> into the atmosphere by containing it permanently and safely underground** in such a way as to prevent **a negative impact on human health or the environment.**

Or. en

*Justification*

*The Directive can only be regarded as acceptable if it makes provision for the containment of CO<sub>2</sub> in a manner that is permanent, safe, and should have no negative impacts upon human health or the environment.*

## Amendment 11

### Proposal for a directive Article 2 – paragraph 2

*Text proposed by the Commission*

2. This Directive shall not apply to geological storage of CO<sub>2</sub> undertaken for research, development or testing of new products and processes.

*Amendment*

2. This directive shall not apply to geological storage of CO<sub>2</sub> undertaken for research, development or testing of new products and processes. ***It shall however apply to demonstration projects with a total intended storage of 100 kilotonnes or more.***

Or. en

#### *Justification*

*It is important to gain experience of controlling CCS provision by regulating the demonstration projects proposed by the European Council. (Also proposed in Preamble 14).*

## Amendment 12

### Proposal for a directive Article 2 – paragraph 3

*Text proposed by the Commission*

3. The storage of CO<sub>2</sub> in ***geological formations*** extending beyond the area referred to in paragraph 1 shall ***not*** be permitted.

*Amendment*

3. The storage of CO<sub>2</sub> in ***storage complexes*** extending beyond the area referred to in paragraph 1 shall ***only*** be permitted ***in accordance with Article 11a and in a manner consistent with international agreements.***

Or. en

#### *Justification*

*A geological formation can be vast in size and extend beyond EU limits. The procedures laid down in this Directive need concern only those parts of it designated as storage complexes.*

*To be taken in conjunction with proposed new Article 11a. The Directive shall not rule out the export of CO<sub>2</sub> for storage purposes provided strict conditions are met and so long as there is no question of sub-sea storage in contravention of the London Convention.*

## Amendment 13

### Proposal for a directive Article 3 – paragraph 3

*Text proposed by the Commission*

(3) 'storage site' means a **specific** geological formation used for the geological storage of CO<sub>2</sub>;

*Amendment*

(3) 'storage site' means a **defined area within a** geological formation used for the geological storage of CO<sub>2</sub>; **a single 'storage site' may include defined areas within separate geological formations at different levels.**

Or. en

*Justification*

*A storage site may be only in one part of a very much larger geological formation, and may include geological formations on different levels.*

## Amendment 14

### Proposal for a directive Article 3 – paragraph 5

*Text proposed by the Commission*

(5) 'leakage' means any release of CO<sub>2</sub> from the storage complex;

*Amendment*

(5) 'leakage' means any **measurable** release of CO<sub>2</sub> from the storage complex **to the ground surface, atmosphere or hydrosphere confirmed, if necessary, by monitoring systems using best available technology;**

Or. en

*Justification*

*The amendment makes the definition of leakage more consistent with IPCC guidelines for best practice and seeks to avoid the potential for dispute over the source or extent of any CO<sub>2</sub> released. 'Hydrosphere' includes oceans, lakes and all waters of the Earth's surface.*

## Amendment 15

### Proposal for a directive Article 3 – paragraph 8

*Text proposed by the Commission*

(8) 'exploration permit' means a written and reasoned decision authorising exploration issued by the competent authority pursuant to the requirements of this Directive;

*Amendment*

(8) 'exploration permit' means a written and reasoned decision authorising exploration ***and specifying the conditions under which it may take place***, issued by the competent authority pursuant to the requirements of this Directive;

Or. en

## Amendment 16

### Proposal for a directive Article 3 – paragraph 10

*Text proposed by the Commission*

(10) 'storage permit' means a written and reasoned decision authorising the geological storage of CO<sub>2</sub> in a storage site, issued by the competent authority pursuant to the requirements of this Directive;

*Amendment*

(10) 'storage permit' means a written and reasoned decision authorising the geological storage of CO<sub>2</sub> in a storage site ***and specifying the conditions under which such storage may take place***, issued by the competent authority pursuant to the requirements of this Directive;

Or. en

## Amendment 17

### Proposal for a directive Article 3 – paragraph 11

*Text proposed by the Commission*

(11) 'substantial change' means a change ***which may have significant effects on the environment***;

*Amendment*

(11) 'substantial change' means a change ***that may result in an increased risk of leakage***;

*Justification*

*The primary objective must be to avoid leakage and any risks that this may pose for human health and the environment.*

**Amendment 18****Proposal for a directive  
Article 3 – paragraph 12***Text proposed by the Commission*

(12) 'CO<sub>2</sub> stream' means a flow of substances that results from **carbon dioxide** capture processes;

*Amendment*

(12) 'CO<sub>2</sub> stream' means a flow of substances **containing not less than 90% carbon dioxide** that results from capture processes, **into which no waste or other matter may be added for the purpose of disposal**;

*Justification*

*This is a specific definition to complement that proposed for Article 12 to replace the vague term 'overwhelmingly' with a definition that provides greater clarity. A higher figure than 90% could be demanded if only post-combustion capture processes were to be considered, but this would be likely to exclude development of promising new oxy-combustion technology. However, as the balance in this case would be made up of the inert gases of argon, nitrogen and oxygen this should not create concern.*

**Amendment 19****Proposal for a directive  
Article 3 – paragraph 16***Text proposed by the Commission*

(16) 'significant irregularity' means any irregularity in the injection or storage operations or in the **condition of the site itself, which implies** the risk of a leakage;

*Amendment*

(16) 'significant irregularity' means any irregularity in the injection or storage operations, or in the **performance of the storage complex, that materially increases** the risk of a leakage;

*Justification*

*The definition of "significant irregularity" should specifically relate to the possibility that something may have occurred beneath the ground surface that suggests a real need for corrective measures to be taken to prevent the possible future risk of leakage.*

**Amendment 20****Proposal for a directive  
Article 3 – paragraph 17***Text proposed by the Commission*

(17) 'corrective measures' means any measures taken to correct significant irregularities *or to close leakages* in order to prevent or *minimise the release of CO<sub>2</sub> from the storage complex*;

*Amendment*

(17) 'corrective measures' means any measures taken to correct significant irregularities in order to prevent or *stop leakage*;

*Justification*

*Clearer definition of the corrective measures necessary if significant irregularities are detected. Leakage of any CO<sub>2</sub> that might have a negative impact on human health or the environment is unacceptable.*

**Amendment 21****Proposal for a directive  
Article 4 – paragraph 2***Text proposed by the Commission*

2. 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 negative environmental or health impacts are likely to occur.*

*Amendment*

2. A geological formation shall only be selected as a storage site, if under the proposed conditions of use no risk of leakage *is anticipated that could have a negative impact on human health or the environment.*



### *Justification*

*The requirement must be more definite than proposed by the Commission. It would be wholly unacceptable for a commercial storage permit to be granted if a leakage was anticipated (Oxford English Dictionary definition – “regarded as probable”) that could have a detrimental effect upon human health or the environment.*

## **Amendment 22**

### **Proposal for a directive Article 4 – paragraph 3**

#### *Text proposed by the Commission*

3. The suitability of a geological formation for use as a storage site shall be determined through a characterisation and assessment of the potential storage complex and surrounding area pursuant to the criteria specified in Annex I.

#### *Amendment*

3. The suitability of a geological formation for use as a storage site shall be determined through a characterisation and assessment of the potential storage complex and surrounding area pursuant to the criteria specified in Annex I **and by following best practice and guidelines that shall be developed by the Commission.**

Or. en

### *Justification*

*The annexes provide the basic framework necessary for assessing a potential storage site but the implementation process will be improved, and there will be greater public confidence, if the requirement is introduced that best practice is followed and guidelines are produced to assist competent authorities in Member States.*

## **Amendment 23**

### **Proposal for a directive Article 5 – paragraph 2**

#### *Text proposed by the Commission*

2. Member States shall ensure that the procedures for the granting of exploration permits are open to all entities possessing the necessary capacities and that the permits are granted on the basis of objective, published criteria.

#### *Amendment*

2. Member States shall ensure that the procedures for the granting of exploration permits are open to all entities possessing the necessary capacities and that the permits are granted on the basis of objective, published **non-discriminatory**

criteria.

*The procedures should take account of the fact that holders of exploration permits will own the data obtained during the exploration and will have priority should they apply for a storage permit before the expiry of the exploration permit. Member States may introduce requirements for the subsequent sale or transfer of any data obtained during the validity of the exploration permit in order to facilitate any subsequent competition for a storage permit should the holder of the exploration permit not wish to apply for a storage permit or if it fails to satisfy other conditions.*

Or. en

#### *Justification*

*The potential for contradiction in the procedures proposed by the Commission must be resolved. While the process of awarding both exploration and subsequent storage permits should be non-discriminatory there will be no incentive for carrying out exploration work on a commercial basis unless the likelihood exists that those who do it will also be able to undertake CO2 storage or be recompensed for their investment. The procedure for awarding exploration permits should therefore take account of the fact that it is directly linked to the procedure for the subsequent award of storage permits.*

#### **Amendment 24**

##### **Proposal for a directive Article 5 – paragraph 3**

*Text proposed by the Commission*

3. Exploration permits shall be granted for a limited volume area **and for a maximum of two years, renewable once for a maximum of two years.**

*Amendment*

3. Exploration permits shall be granted for a limited volume area. **The duration of a permit shall not exceed the period necessary to carry out the exploration of the potential site for which it is granted. Member States may extend the permit provided the exploration is being carried out in accordance with its requirements.**

Or. en

### *Justification*

*The time period proposed by the Commission will in many cases be too short. It can be assumed that those Member States that grant exploration permits have a genuine interest in facilitating the safe storage of CO<sub>2</sub>. They can therefore be left to determine their own requirements for the duration of exploration permits without fear that undue delays may result.*

## **Amendment 25**

### **Proposal for a directive Article 5 – paragraph 4**

#### *Text proposed by the Commission*

4. The holder of an exploration permit shall have the sole right to explore the potential CO<sub>2</sub> storage complex. Member States shall ensure that no conflicting uses of the complex are permitted during the period of validity of the permit.

#### *Amendment*

4. The holder of an exploration permit shall have the sole right to explore the potential CO<sub>2</sub> storage complex. Member States shall ensure that no conflicting uses of the complex are permitted during the period of validity of the permit ***and that the interests and property rights of third parties holding pre-existing hydrocarbon, coal or other mineral production licences will be respected and preserved when CO<sub>2</sub> storage site exploration permits are awarded.***

Or. en

### *Justification*

*Amendment to emphasise the rights of other undertakings operating in the same geographical area.*

## **Amendment 26**

### **Proposal for a directive Article 5 – paragraph 4 a (new)**

#### *Text proposed by the Commission*

#### *Amendment*

***4a. The exploration permit shall no longer be valid as from the date of its expiry unless prior to this time its holder applies for a storage permit for the same area in***

*accordance with Article 6.*

*The holder of the exploration permit shall have the sole right to apply for a storage permit pursuant to Articles 6 and 7 up to the date of its expiry.*

Or. en

*Justification*

*The potential for contradiction in the procedures proposed by the Commission must be resolved. While the process of awarding both exploration and subsequent storage permits should ideally be non-discriminatory there will be no incentive for carrying out exploration work on a commercial basis unless the likelihood exists that those who do it will also be able to undertake CO2 storage or be recompensed for their investment. It must also be assumed that holders of exploration permits will retain the intellectual and commercial rights to the data they gather, and that it will be impossible for others to operate a storage site unless they purchase the rights to this data. The holders of an exploration permit must therefore be given preference when the procedure for the award of a storage permit commences.*

**Amendment 27**

**Proposal for a directive  
Article 6 – paragraph 1**

*Text proposed by the Commission*

1. Member States shall ensure that no storage site is operated without a storage permit.

*Amendment*

1. Member States shall ensure that no storage site is operated without a storage permit, ***that there shall be only one operator for each storage site, and that no conflicting uses of the storage complex are permitted during the period of validity of the permit.***

Or. en

*Justification*

*To ensure absolute clarity about responsibilities and liabilities there must be only one operator of a storage site; this needs emphasising particularly to avoid possible conflict with petroleum rights holders in the case of offshore storage.*

## Amendment 28

### Proposal for a directive Article 6 – paragraph 2

*Text proposed by the Commission*

2. Member States shall **ensure that the** procedures for the granting of storage permits are open to all entities possessing the necessary capacities and that the permits are granted on the basis of objective, published criteria.

*Amendment*

2. **Without prejudice to Article 5(4a),** Member States shall **establish** procedures for the granting of storage permits **that seek to ensure that they** are open to all entities possessing the necessary capacities and that the permits are granted on the basis of objective, published **non-discriminatory** criteria.

Or. en

### *Justification*

*The potential for contradiction in the procedures exists in the proposals made by the Commission. While the process of awarding contracts should ideally be non-discriminatory this removes the incentive for carrying out exploration work. This amendment must therefore be read in conjunction with that proposed in Article 5(2).*

## Amendment 29

### Proposal for a directive Article 7 – paragraph 1

*Text proposed by the Commission*

(1) name and address **of the applicant and, if different,** of the potential operator;

*Amendment*

(1) name and address of the potential operator;

Or. en

## Amendment 30

### Proposal for a directive Article 7 – paragraph 2

*Text proposed by the Commission*

(2) proof of the technical competence of

*Amendment*

(2) proof of the technical competence of

*the applicant or* the potential operator;

the potential operator;

Or. en

*Justification*

*It is essential to establish the technical competence of the organisation that will be directly responsible for operations.*

**Amendment 31**

**Proposal for a directive  
Article 7 – paragraph 4**

*Text proposed by the Commission*

(4) the total quantity of CO<sub>2</sub> to be injected and stored as well as the prospective sources, composition of CO<sub>2</sub> streams *and* injection rates;

*Amendment*

(4) the total quantity of CO<sub>2</sub> to be injected and stored as well as the prospective sources, composition of CO<sub>2</sub> streams, injection rates *and pressures, the location of injection facilities and the transport methods*;

Or. en

*Justification*

*Essential information required in order to make a proper assessment.*

**Amendment 32**

**Proposal for a directive  
Article 7 – paragraph 9**

*Text proposed by the Commission*

(9) proof of the financial security or other equivalent provision as required under Article 19.

*Amendment*

(9) proof of the financial *standing of the applicant and of its ability to put in place the* security or other equivalent provision as required under Article 19 *before commencement of the CO<sub>2</sub> injection process*;

Or. en

*Justification*

*For the purpose of the Directive evidence of the financial standing of the undertaking, or its parent company, should be sufficient at the time the application is made.*

**Amendment 33**

**Proposal for a directive  
Article 7 – paragraph 9 a (new)**

*Text proposed by the Commission*

*Amendment*

***(9a) a proposed public information and consultation plan in accordance with Directive 2003/4/EC that shall endeavour to ensure that the maximum technical and other decision-making information is made available to the public when the application is first submitted and when any revisions are made, and that the public has a formal opportunity to submit comments to the competent authority.***

Or. en

*Justification*

*Reinforcing existing legal requirements regarding the provision of environmental information.*

**Amendment 34**

**Proposal for a directive  
Article 8 – paragraph 1 – point b**

*Text proposed by the Commission*

*Amendment*

***(b) the management of the storage site will be in the hands of a **natural person who is technically competent and reliable to manage the site; professional and technical development and training of this person and all staff are provided;*****

***(b) the management of the storage site will be in the hands of a **financially sound undertaking with proven technical competence;*****

Or. en

*Justification*

*It is essential to establish clear and legally enforceable lines of responsibility. By definition a technically competent undertaking will appoint appropriate people to manage the site on a day to day basis.*

**Amendment 35**

**Proposal for a directive**

**Article 8 – paragraph 1 – point b a (new)**

*Text proposed by the Commission*

*Amendment*

***(ba) in the case of more than one operator injecting into the same hydrostatically connected system, the potential pressure interactions are such that both sites simultaneously can meet the requirements of this Directive;***

Or. en

*Justification*

*The competent authority must take care not to issue permits to two operators who might make use of a hydrostatically connected storage complex, not least because if there are parallel injection operations it will prove difficult to be absolutely certain how to allocate responsibility for liabilities.*

**Amendment 36**

**Proposal for a directive**

**Article 8 – paragraph 2**

*Text proposed by the Commission*

*Amendment*

***(2) the Commission has issued its opinion on the draft permit pursuant to Article 10(1);***

***(2) either no communication of objections has been made by the Commission pursuant to Article 10, point (f), or agreement has been reached between the competent authority and the Commission and has been made public, pursuant to the same provision;***

Or. en



### *Justification*

*Wording suggested by the Commission to replace Article 8(2) and 8(3) and bring the provisions into line with the proposed new wording of Article 10.*

#### **Amendment 37**

##### **Proposal for a directive Article 8 – paragraph 3**

*Text proposed by the Commission*

(3) the competent authority has ***considered this opinion pursuant to Article 10(2).***

*Amendment*

(3) the competent authority has ***provided an explanation and, if appropriate, a justification to all members of the public who have made specific and individual comments with regard to the application and who have provided their name and contact details.***

Or. en

### *Justification*

*To ensure that the competent authority is required fully to take into account the specific comments, suggestions and concerns communicated by members of the public communicating in an individual capacity and not simply as signatories to a petition or organised electronic lobby.*

#### **Amendment 38**

##### **Proposal for a directive Article 10**

*Text proposed by the Commission*

***Commission review of draft storage permits***

***1. Member States shall inform the Commission of all draft storage permits, the permit applications and any other material taken into consideration by the competent authority when adopting its draft decision. Within six months of their submission to the Commission, the***

*Amendment*

***Approval of storage permits***

***Member States shall introduce the following procedure:***

*Commission may issue an opinion on the draft permits.*

*(a) Applicants for storage permits shall provide the competent authority with two copies of all documentation required.*

*(b) the competent authority shall, on receipt of the documentation from the applicant, provide the Commission with details of each application for a permit and all other 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.*

*(c) The Commission shall confirm receipt of the required documentation to the competent authority upon its arrival.*

*(d) The competent authority shall notify the Commission if and when it authorises the issuing of a storage permit.*

*(e) The Commission shall confirm receipt of the notice of authorisation immediately upon its arrival.*

*(f) The Commission may, within one calendar month of it having received notice that a storage permit has been authorised, inform the competent authority that it has objections that shall be based on the requirements of this Directive. Such objections shall suspend the permit until such time as an agreement is reached between the competent authority and the Commission and made public.*

*(g) The storage permit shall be deemed approved if no such objections are received from the Commission within the timescale specified.*

*2. The competent authority shall notify the final decision to the Commission, stating the reasons if it deviates from the Commission opinion.*

Or. en

### *Justification*

*The Commission proposes that it should have six months in which to inform the competent authority of its decision. This is a bureaucratic nightmare and clearly unacceptable.*

*The rapporteur judges that the Commission should have the right to provide a final check as a failure adequately to protect human health and the environment in any one Member State could threaten public confidence in CCS across Europe.*

*The procedure proposed in this amendment enables the Commission to work in parallel with the competent authorities of Member States.*

### **Amendment 39**

#### **Proposal for a directive**

#### **Article 11 – paragraph 2**

##### *Text proposed by the Commission*

2. Member States shall ensure that no substantial change is implemented without a new storage permit issued in accordance with this Directive.

##### *Amendment*

2. Member States shall ensure that no substantial change is implemented without a new storage permit issued in accordance with this Directive. ***Storage permits may be amended to permit changes of a minor nature in accordance with guidelines that shall be prepared by the Commission.***

Or. en

### *Justification*

*These amendments are intended to provide greater legal certainty. Note that Article 16 also provides for the competent authority to be able to require that action be taken to prevent leakage, or to take action itself.*

*Information from a whistleblower or other source may also be taken into account (3a).*

*The competent authority should not have to await the breakdown in negotiations to require the operator to pay before using the funds available.*

## Amendment 40

### Proposal for a directive

#### Article 11 – paragraph 3 – introductory part

*Text proposed by the Commission*

3. The competent authority shall review and where necessary update or withdraw the storage permit:

*Amendment*

3. The competent authority shall review and where necessary update or withdraw the storage permit, ***or require the permit holder to undertake corrective measures:***

Or. en

*Justification*

*See justification to Article 11, paragraph 2.*

## Amendment 41

### Proposal for a directive

#### Article 11 – paragraph 3 – point a

*Text proposed by the Commission*

(a) if it has been notified of significant irregularities or leakages pursuant to Article 16(1);

*Amendment*

(a) if it has been notified ***or made aware*** of significant irregularities or leakages ***that could have a negative impact on human health or the environment*** pursuant to Article 16(1);

Or. en

*Justification*

*See justification to Article 11, paragraph 2.*

## Amendment 42

### Proposal for a directive

#### Article 11 – paragraph 4

*Text proposed by the Commission*

4. After a ***permit has been withdrawn***

*Amendment*

4. After a ***competent authority has taken***

pursuant to paragraph 3, the competent authority shall either issue a new storage permit or close the storage site pursuant to point (c) of Article 17(1). Until a new storage permit has been issued, the competent authority shall take over the responsibility for the storage site, including all ensuing legal obligations. To the extent possible, the competent authority shall recover any costs incurred from the former operator.

***action to review, update or withdraw a storage permit*** pursuant to paragraph 3, the competent authority shall either issue a new storage permit or close the storage site pursuant to point (c) of Article 17(1). ***In the latter case***, until a new storage permit has been issued the competent authority shall take over the responsibility for the storage site, including all ensuing legal obligations. To the extent possible, the competent authority shall recover any costs incurred from the former operator, ***including by drawing on the financial security pursuant to Article 19(2)***.

Or. en

#### *Justification*

*See justification to Article 11, paragraph 2.*

### **Amendment 43**

#### **Proposal for a directive Article 11 a (new)**

*Text proposed by the Commission*

*Amendment*

#### ***Article 11a***

***Export of CO<sub>2</sub> to third countries for the purpose of geological storage***

***1. Where CO<sub>2</sub> is to be exported from the Community to a third country for the purpose of geological storage, the holder of the CO<sub>2</sub> shall submit an application for authorisation of the export to the competent authority of the Member State of origin.***

***2. The competent authority of the Member State of origin shall notify for consent the competent authority of the country of destination.***

***3. The competent authority of the Member State of origin may only authorise the***

*export if:*

*(a) the consent of the competent authority of the country of destination has been given;*

*(b) it can be ensured that the geological storage of the CO<sub>2</sub> in the country of destination takes place in line with the requirements laid out in this Directive;*

*(c) the geological storage of CO<sub>2</sub> is covered by an emission trading system in the country of destination, which is linked to the EU Emission Trading Scheme established pursuant to Directive 2003/87/EC.*

*4. The export of CO<sub>2</sub> shall not be authorised without the specific assent of the Commission.*

Or. en

#### *Justification*

*The Directive should not rule out the possibility of exporting CO<sub>2</sub> for the purpose of geological storage in cases where the storage arrangements meet equivalent safety criteria to those within the EU.*

#### **Amendment 44**

##### **Proposal for a directive Article 12 – paragraph 1**

###### *Text proposed by the Commission*

1. A CO<sub>2</sub> stream shall consist **overwhelmingly** of carbon dioxide. To this end, no waste and other matter may be added for the purpose of disposing of that waste or other matter. However, a CO<sub>2</sub> stream may contain incidental associated substances from the source, capture or injection process. Concentrations of those substances shall be below levels that would adversely affect the integrity of the storage site and relevant transport infrastructure and pose a **significant** risk to the

###### *Amendment*

1. A CO<sub>2</sub> stream shall consist of **not less than 90%** carbon dioxide. To this end, no waste and other matter may be added for the purpose of disposing of that waste or other matter. However, a CO<sub>2</sub> stream may contain incidental associated substances from the source, capture or injection process, **and trace elements may be added to assist in monitoring and verifying CO<sub>2</sub> migration**. Concentrations of those substances shall be below levels that would adversely affect the integrity of the storage

environment or breach the requirements of applicable Community legislation.

site and relevant transport infrastructure and pose a risk to the environment or breach the requirements of applicable Community legislation.

Or. en

#### *Justification*

*The word 'overwhelming' provides insufficient clarity. A higher figure than 90% could be demanded if only post-combustion capture processes were to be considered, but this would exclude development of new oxy-combustion technology. However, as the balance in the CO<sub>2</sub> stream in this instance would be made up of the inert gases of argon, nitrogen and oxygen this should not create concern.*

*Similarly the word 'significant is unacceptable'. A concentration of contaminants that would breach acceptable standards and that might pose some kind of threat cannot be tolerated.*

### **Amendment 45**

#### **Proposal for a directive**

#### **Article 13 – paragraph 1 – introductory part**

##### *Text proposed by the Commission*

1. Member States shall ensure that the operator carries out monitoring of the injection facilities, the storage complex (including *where possible* the CO<sub>2</sub> plume), and where appropriate the surrounding environment for the purpose of:

##### *Amendment*

1. Member States shall ensure that the operator carries out monitoring of the injection facilities, the storage complex (including the CO<sub>2</sub> plume), and where appropriate the surrounding environment for the purpose of:

Or. en

#### *Justification*

*The most important part of any monitoring plan is to determine whether there have been significant changes in the storage patterns of the CO<sub>2</sub> (in particular whether there has been migration that might lead to leakage), and whether action needs to be taken to address them.*

*Monitoring the CO<sub>2</sub> plume is essential if potential leakage is to be anticipated, so the words 'where possible' should be deleted.*

## Amendment 46

### Proposal for a directive

#### Article 13 – paragraph 1 – point a a (new)

*Text proposed by the Commission*

*Amendment*

***(aa) verifying the amount of stored CO<sub>2</sub>;***

Or. en

*Justification*

*See justification to Article 13, paragraph 1, introductory part.*

## Amendment 47

### Proposal for a directive

#### Article 13 – paragraph 1 – point d

*Text proposed by the Commission*

*Amendment*

(d) detecting ***significant*** adverse effects for the surrounding environment, human populations, or users of the surrounding biosphere;

(d) detecting adverse effects for the surrounding environment, human populations, or users of the surrounding biosphere;

Or. en

*Justification*

*Any negative impact on human health or the environment is unacceptable, so the word 'significant' must be deleted.*

## Amendment 48

### Proposal for a directive

#### Article 13 – paragraph 1 – point (f)

*Text proposed by the Commission*

*Amendment*

(f) ***assessing*** whether the stored CO<sub>2</sub> will be completely contained for the indefinite

(f) ***updating the assessment of the safety and integrity of the storage site in the***



future.

***short and long term, including the assessment of*** whether the stored CO<sub>2</sub> will be completely contained for the indefinite future.

Or. en

*Justification*

*See justification to Article 13, paragraph 1, introductory part.*

**Amendment 49**

**Proposal for a directive  
Article 13 – paragraph 2**

*Text proposed by the Commission*

2. The monitoring shall be based on a monitoring plan designed by the operator pursuant to the requirements laid out in Annex II, submitted to and approved by the competent authority pursuant to Articles 7(5) and 9(5). The plan shall be updated pursuant to the requirements laid down in Annex II and in any case every five years to take account of ***technical developments***. Updated plans shall be re-submitted for approval to the competent authority.

*Amendment*

2. The monitoring shall be based on a monitoring plan designed by the operator pursuant to the requirements laid out in Annex II, ***including details on the monitoring in accordance with the guidelines established pursuant to Articles 14 and 23(2) of Directive 2003/87/EC***, submitted to and approved by the competent authority pursuant to Articles 7(5) and 9(5). The plan shall be updated pursuant to the requirements laid down in Annex II and in any case every five years to take account of ***changes to the assessed risk of leakage, new scientific knowledge, and improvements in best available technology***. Updated plans shall be re-submitted for approval to the competent authority. ***The monitoring plan and any updated plans shall be made available for public inspection.***

Or. en

*Justification*

*The monitoring and reporting requirements need to be aligned with those of the ETS Directive.*

*The regulatory process needs to be adjusted to take account of lessons learnt through experience and new technical knowledge.*

*To maintain confidence it must be emphasised that the monitoring plans shall be made known to the public.*

## **Amendment 50**

### **Proposal for a directive Article 14 – paragraph 3**

*Text proposed by the Commission*

(3) proof of the maintenance of *the* financial security pursuant to Articles 19 and 9(9);

*Amendment*

(3) proof of the ***putting in place and*** maintenance of financial security pursuant to Articles 19 and 9(9) ;

Or. en

*Justification*

*The amendment provides for some flexibility in the provision of financial security, not least to allow for the financial standing of any parent company to be taken into account.*

## **Amendment 51**

### **Proposal for a directive Article 15 – paragraph 3**

*Text proposed by the Commission*

3. Routine inspections shall be carried out ***at least*** every year. They shall examine the relevant injection and monitoring facilities as well as the full range of relevant environmental effects from the storage complex.

*Amendment*

3. Routine inspections shall be carried out every year ***in the first five years after the injection has started and thereafter as often as deemed necessary by the competent authority.*** They shall examine the relevant injection and monitoring facilities as well as the full range of relevant environmental effects from the storage complex.

Or. en

### *Justification*

*If there is a problem it is most likely to become apparent soon after the injection process has commenced, and regular inspections are therefore appropriate. However, the geology of each storage site will differ and it should be up to competent authorities to determine the longer term inspection regime most appropriate for the circumstances.*

### **Amendment 52**

#### **Proposal for a directive Article 16 – paragraph 1**

##### *Text proposed by the Commission*

1. Member States shall ensure that in case of significant irregularities or leakages, the operator immediately notifies the competent authority and takes the necessary corrective measures.

##### *Amendment*

1. Member States shall ensure that in case of significant irregularities or leakages ***that could have a negative impact on human health or the environment***, the operator immediately notifies the competent authority and takes the necessary corrective measures.

Or. en

### *Justification*

*The amendments give storage site operators greater legal clarity by providing a requirement for the competent authority to justify its demands, while also strengthening the competent authority's ability to act should there be any breach of the permit conditions or any threat to human health or the environment.*

### **Amendment 53**

#### **Proposal for a directive Article 16 – paragraph 3**

##### *Text proposed by the Commission*

3. The competent authority may at any time ***request*** the operator to take additional or different corrective measures than those laid out in the corrective measures plan. ***It may also at any time take corrective measures itself and shall then recover the costs from the operator.***

##### *Amendment*

3. The competent authority may at any time ***require*** the operator to take additional or different corrective measures than those laid out in the corrective measures plan ***if the actions in the corrective measures plan have proven to be ineffective, if the circumstances have changed substantially since the adoption of the corrective***

*measures plan, or if there is a risk of leakage that could have a negative impact on human health or the environment,*

Or. en

*Justification*

*See justification to Article 16, paragraph 1.*

**Amendment 54**

**Proposal for a directive  
Article 16 – paragraph 4**

*Text proposed by the Commission*

4. If the operator fails to take the *necessary* corrective measures, the competent authority shall take the necessary corrective measures itself and recover the costs from the operator.

*Amendment*

4. If the operator fails to take the corrective measures *within the time necessary to prevent leakage that could have a negative impact on human health or the environment*, the competent authority shall take the necessary corrective measures itself and recover the costs from the operator.

Or. en

*Justification*

*See justification to Article 16, paragraph 1*

**Amendment 55**

**Proposal for a directive  
Article 17 – paragraph 1 – point b**

*Text proposed by the Commission*

(b) at the request of the operator, after authorisation of the competent authority;

*Amendment*

(b) at the request of the operator, after authorisation of the competent authority; **or**

Or. en

## Amendment 56

### Proposal for a directive

#### Article 17 – paragraph 3 – introductory part

##### *Text proposed by the Commission*

3. The obligations referred to in paragraph 2 shall be fulfilled on the basis of a post-closure plan designed by the operator based on best practice and in accordance with the requirements laid down in Annex II 2. A provisional post-closure plan shall be submitted to and approved by the competent authority pursuant to Articles 7(7) and 9(7). Prior to the closure of a storage site pursuant to points (a) or (b) of paragraph 1, the provisional post-closure plan shall be:

##### *Amendment*

3. The obligations referred to in paragraph 2 shall be fulfilled on the basis of a post-closure plan designed by the operator based on best practice and ***guidelines that shall be developed by the Commission*** in accordance with the requirements laid down in Annex II 2. A provisional post-closure plan shall be submitted to and approved by the competent authority pursuant to Articles 7(7) and 9(7). Prior to the closure of a storage site pursuant to points (a) or (b) of paragraph 1, the provisional post-closure plan shall be:

Or. en

## Amendment 57

### Proposal for a directive

#### Article 17 – paragraph 3 – point a

##### *Text proposed by the Commission*

(a) updated as necessary, ***in particular in view of*** best practice;

##### *Amendment*

(a) updated as necessary, ***taking account of risk analysis, best practice and technological improvements, but not imposing new requirements of an unreasonable nature;***

Or. en

## Amendment 58

### Proposal for a directive Article 18 – paragraph 1

#### *Text proposed by the Commission*

1. Where a storage site has been closed pursuant to points (a) or (b) of Article 17(1), the responsibility for the closed site, including all ensuing legal obligations, shall be transferred to the competent authority on its own initiative or upon request from the operator, if and when all available evidence indicates that the stored CO<sub>2</sub> will be completely contained for the indefinite future. To this end, the operator shall prepare a report documenting that this criterion has been met and submit it to the competent authority for the latter to approve the transfer of responsibility.

#### *Amendment*

1. Where a storage site has been closed pursuant to points (a) or (b) of Article 17(1), the responsibility for the closed site, including all ensuing legal obligations, shall be transferred to the competent authority on its own initiative or upon request from the operator, if and when all available evidence indicates that the stored CO<sub>2</sub> will be completely contained for the indefinite future ***and the criteria laid down in the storage permit for transferring responsibility have been met.*** To this end, the operator shall prepare a report documenting that the criteria have been met and submit it to the competent authority for the latter to approve the transfer of responsibility.

Or. en

#### *Justification*

*Provides legal certainty for the operator. The criteria will of course include the requirements that CO<sub>2</sub> is completely contained.*

## Amendment 59

### Proposal for a directive Article 18 – paragraph 4

#### *Text proposed by the Commission*

4. Together with the decision of approval referred to in paragraph 3, the competent authority may communicate updated requirements for the sealing of the storage site and the removal of the injection facilities pursuant to Article 17(2) and (3) to the operator. The transfer of responsibility shall take place after the site

#### *Amendment*

4. Together with the decision of approval referred to in paragraph 3, the competent authority may communicate updated ***and reasonable*** requirements for the sealing of the storage site and the removal of the injection facilities pursuant to Article 17(2) and (3) to the operator. The transfer of responsibility shall take place after the site

has been sealed and the injection facilities have been removed.

has been sealed and the injection facilities have been removed.

Or. en

*Justification*

*The operator should not have to risk the uncertainty that legally unreasonable requirements may be imposed on it by a competent authority that may be seeking to avoid accepting the long term responsibility for the site that is fundamental to the Directive.*

**Amendment 60**

**Proposal for a directive  
Article 18 – paragraph 5**

*Text proposed by the Commission*

5. After the transfer of responsibility pursuant to paragraphs 1 to 4, monitoring may cease. However, if any leakages or significant irregularities are identified, monitoring shall be reactivated as required to assess the scale of the problem and the effectiveness of corrective measures.

*Amendment*

5. After the transfer of responsibility pursuant to paragraphs 1 to 4, monitoring may cease. However, if any leakages or significant irregularities are identified ***as a result of monitoring and other procedures undertaken in order to meet the requirements of existing Community legislation, including the Directives 92/43/EEC, 2000/60/EC and 2006/118/EC, or as a result of information obtained for any other purpose***, monitoring shall be reactivated as required to assess the scale of the problem and the effectiveness of corrective measures.

Or. en

*Justification*

*A condition of the transfer of responsibility from the operator to the competent authority is that there should be no question of leakage occurring and therefore no need for a formal monitoring regime. Monitoring that can detect the presence of CO<sub>2</sub> is required by various existing Directives (Habitats, Water Framework, Groundwater) which will be supplemented by others now being considered (for example Marine Strategy).*

## Amendment 61

### Proposal for a directive Article 18 – paragraph 6

*Text proposed by the Commission*

6. There shall be no recovery of costs incurred from the former operator after the transfer of responsibility to the competent authority pursuant to paragraphs 1 to 4.

*Amendment*

6. There shall be no recovery of costs incurred from the former operator after the transfer of responsibility to the competent authority pursuant to paragraphs 1 to 4.  
***This shall not apply in cases where it is established that, due to the fault or negligence of the operator, or through an act of deliberate and wilful falsification, the evidence provided for the purposes of paragraph 1 had been based on inaccurate information.***

Or. en

*Justification*

*Amendment to protect the Member State from negligent or fraudulent operators.*

## Amendment 62

### Proposal for a directive Article 19 – paragraph 1

*Text proposed by the Commission*

1. Member States shall ensure that adequate provisions, by way of financial security or any other equivalent, on the basis of modalities to be decided by the Member States, are made by the applicant prior to the ***submission of the application for a storage permit*** to ensure that all obligations arising under the permit issued pursuant to this Directive, including closure procedures and post-closure provisions, as well as any obligations arising from inclusion under Directive 2003/87/EC can be met.

*Amendment*

1. Member States shall ensure that adequate provisions, by way of financial security or any other equivalent, on the basis of modalities to be decided by the Member States, are made by the applicant prior to the ***commencement of the CO<sub>2</sub> injection process*** to ensure that all obligations arising under the permit issued pursuant to this Directive, including closure procedures and post-closure provisions, as well as any obligations arising from inclusion under Directive 2003/87/EC can be met.



*Justification*

*Certainty that financial security is provided is required only prior to the commencement of CO<sub>2</sub> injection. To demand it beforehand would impose a financial burden for no good reason.*

**Amendment 63**

**Proposal for a directive**

**Article 19 – paragraph 1 – subparagraph 1 a (new)**

*Text proposed by the Commission*

*Amendment*

***Subject to a transparent, risk-based assessment, Member States shall determine the acceptable forms of financial security with due regard to the range of products available on international markets and the associated costs.***

*Justification*

*Member States should be able to negotiate methods of providing financial security that do not necessarily tie up capital or put the economic viability of projects beyond the reach of many medium and smaller market companies.*

**Amendment 64**

**Proposal for a directive**

**Article 20 – paragraph 2 – introductory part**

*Text proposed by the Commission*

*Amendment*

2. The access referred to in paragraph 1 shall be provided in a manner determined by the Member State. The Member State shall apply the objectives of fair and open access, taking into account:

2. The access referred to in paragraph 1 shall be provided in a ***non-discriminatory*** manner determined by the Member State. The Member State shall apply the objectives of fair and open access, taking into account:

### *Justification*

*Amendment to emphasise that undertakings that provide transport and storage facilities must be able to secure a proper return on their investment and manage the enterprises on a commercial basis, subject to permit conditions.*

### **Amendment 65**

#### **Proposal for a directive**

#### **Article 20 – paragraph 2 – point d**

##### *Text proposed by the Commission*

(d) the need to respect the duly substantiated reasonable needs of the owner or operator of the storage site or of the CO<sub>2</sub> transport network and the interests of all other users of the storage or the network or relevant processing or handling facilities who may be affected; and;

##### *Amendment*

(d) the need to respect the duly substantiated reasonable needs **and justified financial interests** of the owner or operator of the storage site or of the CO<sub>2</sub> transport network, **including their right to enter into long-term contractual agreements about access to transport and storage capacity so long as this does not restrict third-party access if the capacity available will not be used to the full under the current storage plan**, and the interests of all other users of the storage or the network or relevant processing or handling facilities who may be affected; and;

Or. en

### *Justification*

*Amendment to emphasise that undertakings that provide transport and storage facilities must be able to secure a proper return on their investment and manage the enterprises on a commercial basis, subject to permit conditions.*

### **Amendment 66**

#### **Proposal for a directive**

#### **Article 21 – paragraph 1**

##### *Text proposed by the Commission*

1. Member States shall ensure that they have in place dispute settlement arrangements, including an authority

##### *Amendment*

1. Member States shall ensure that they have in place dispute settlement arrangements, including an authority

independent of the parties with access to all relevant information, to enable disputes relating to access to CO<sub>2</sub> transport networks and to storage sites to be settled expeditiously, taking into account the criteria referred to in Article 20(2) and the number of parties which may be involved in negotiating such access.

independent of the parties with access to all relevant information.

*The authority should seek:*

*(a) to enable disputes relating to **the development of CO<sub>2</sub> infrastructure** and access to CO<sub>2</sub> transport networks and to storage sites to be settled expeditiously, taking into account the criteria referred to in Article 20(2) and the number of parties which may be involved in negotiating such access;*

*(b) to provide mediation between a competent authority and the holders of exploration or storage permits in the case of differences that might otherwise result in legal disputes.*

Or. en

#### *Justification*

*A dispute settlement procedure that can provide mediation to avoid the need for expensive and lengthy legal challenges will be useful and should not be reserved solely to deal with matters involving the transport network. It should also be available to mediate in disputes between the competent authority and operators or permit applicants. Therefore, a revised version of the dispute settlement provision should be introduced under Article 23 a (new) - Chapter 6 (General Provisions).*

## **Amendment 67**

### **Proposal for a directive Article 22**

#### *Text proposed by the Commission*

Member States shall establish or designate the competent authority or authorities responsible for fulfilling the duties

#### *Amendment*

Member States shall establish or designate the competent authority or authorities responsible for fulfilling the duties

established under this Directive. Where more than one competent authority is designated, the work of these authorities undertaken pursuant to this Directive shall be co-ordinated.

established under this Directive. Where more than one competent authority is designated, ***Member States shall establish arrangements for the coordination of*** the work of these authorities undertaken pursuant to this Directive.

Or. en

## Amendment 68

### Proposal for a directive Article 22 a (new)

*Text proposed by the Commission*

*Amendment*

#### ***Article 22a***

##### ***Technical Review Committee***

***The Commission shall establish a technical review committee to assist it in the preparation of best practice guidelines for the use of competent authorities and operators. The proceedings of the committee shall be open and transparent.***

Or. en

## Amendment 69

### Proposal for a directive Article 24 – title

*Text proposed by the Commission*

*Amendment*

Register of ***closed*** storage sites

Register of storage sites

Or. en

#### *Justification*

*Storage site operation may continue for a very long time. Registers that will be used as a source of reference for many other purposes need to be comprehensive and to include both*

*operating and closed storage sites. However, to avoid unnecessary bureaucracy there should be no need to provide Brussels with details of every change more than once every three years.*

## **Amendment 70**

### **Proposal for a directive Article 24 – paragraph 1**

*Text proposed by the Commission*

1. The competent authority shall establish and maintain a register of all closed storage sites and surrounding storage complexes, including maps of their spatial extent.

*Amendment*

1. The competent authority shall **immediately** establish and **thereafter** maintain a register of all **operating and** closed storage sites and surrounding storage complexes, including maps of their spatial extent.

Or. en

*Justification*

*See justification to Article 24, title.*

## **Amendment 71**

### **Proposal for a directive Article 24 – paragraph 2**

*Text proposed by the Commission*

2. The register shall be taken into consideration by the competent national authorities in relevant planning procedures and when permitting any activity that could affect or be affected by the geological storage of CO<sub>2</sub> in **the** closed storage sites.

*Amendment*

2. The register shall be taken into consideration by the competent national authorities in relevant planning procedures and when permitting any activity that could affect or be affected by the geological storage of CO<sub>2</sub> in **operating and** closed storage sites.

Or. en

*Justification*

*See justification to Article 24, title.*

## Amendment 72

### Proposal for a directive Article 24 – paragraph 3

*Text proposed by the Commission*

3. The register shall be reported to the Commission **after it has been established and whenever it is updated.**

*Amendment*

3. The register shall be reported to the Commission **when it is established. Updated reports shall be submitted every three years together with the reports provided for in Article 25(1).**

Or. en

*Justification*

*See justification to Article 24, title.*

## Amendment 73

### Proposal for a directive Article 32 Directive 2001/80/EC Article 9a

*Text proposed by the Commission*

"Article 9a

Member States shall ensure that all combustion plants **with a capacity of 300 megawatts or more for which the original construction licence or, in the absence of such a procedure, the original operating licence is granted after the entry into force of Directive XX/XX/EC of the European Parliament and of the Council. (\*)**, have suitable space on the installation site for the equipment necessary to capture and compress CO<sub>2</sub> and that the availability of suitable storage sites and suitable transport facilities, and the technical feasibility of retrofitting for CO<sub>2</sub> capture have been assessed.

*Amendment*

"Article 9a

**"1.** Member States shall ensure that all **electricity generating** combustion plants **designed with a rated output capacity of 300 megawatts or more, and that are expected to emit in excess of 350g CO<sub>2</sub>/Kwh, for which the original construction licence is applied for after the entry into force of this Directive:**

*(a) are sited and planned so as to facilitate capture of the CO<sub>2</sub>, or to facilitate other means for achieving the equivalent reduction in emissions;*

*(b) are authorised only after approval by the competent authority of a report prepared by the operator that shall indicate a proposed site for the geological storage of CO<sub>2</sub> captured, and that shall propose the means (and, in the case of a pipeline, the route) by which the CO<sub>2</sub> will be transported to the storage site. The report shall be made public prior to any authorisation being granted.*

*In the absence of a construction licence the original operating licence shall apply."*

Or. en

#### *Justification*

*This amendment clarifies the requirements for the capture-ready status proposed by the Commission.*

*The 350g CO<sub>2</sub>/Kwh definition is intended specifically to prohibit the construction of any coal-fired generating plant unless it is prepared for eventual conversion to be CCS-equipped. However, in order to provide Member States with flexibility, such a limit WILL permit construction of CHP-equipped gas-fired plants and 'conventional' gas-fired plants so long as they make use of best available technology.*

#### **Amendment 74**

##### **Proposal for a directive**

##### **Article 32**

Directive 2001/80/EC

Article 9a - paragraph 1 a (new)

*Text proposed by the Commission*

*Amendment*

***"1a. Member States shall ensure that all electricity-generating combustion plants designed with a rated output capacity of 300 megawatts or more, and that are expected to emit in excess of 350g CO<sub>2</sub>/Kwh, for which the original***

*construction licence is applied for on or after 1 January 2015, are operated such that at least 90% of their CO<sub>2</sub> emissions are captured then transported and stored in a suitable geological formation, or that an equivalent reduction of emissions into the atmosphere is achieved by other means.*

*In the absence of a construction licence the original operating licence shall apply."*

Or. en

#### *Justification*

*It will take at least 5 years to construct a CCS-equipped combustion plant together with the associated transport network so this amendment in fact requires new plants commencing operations from 2020 to be CCS-equipped. This is the objective of the ZEP (Zero Emission Fossil Fuel Power Plants Technology Platform) established by the Commission in partnership with industry, scientists and NGOs. Power plant manufacturers Alstom have now declared that CCS-equipped plants will be commercially available from 2015 if the planned demonstration projects are approved shortly, and other manufacturers are voicing similar confidence. Introduction of this mandatory requirement will give a clear signal to investors and accelerate CCS development.*

#### **Amendment 75**

##### **Proposal for a directive**

##### **Article 32**

Directive 2001/80/EC

Article 9a - paragraph 1 b (new)

*Text proposed by the Commission*

*Amendment*

***"1b. Member States shall ensure that the electricity generating combustion plants referred to in paragraph 1 are from 1 January 2025 operated such that at least 90% of their CO<sub>2</sub> emissions are captured and stored in a suitable geological formation, or an equivalent reduction of emissions into the atmosphere is achieved by other means."***



*Justification*

*Post-combustion CO<sub>2</sub> capture technology is already available and over the next decade and more the cost of it can be expected to fall substantially. Introduction of this mandatory requirement will give a clear signal to investors and accelerate CCS development.*

**Amendment 76****Proposal for a directive****Article 32**

Directive 2001/80/EC

Article 9a - paragraph 1 c (new)

*Text proposed by the Commission**Amendment*

***"1c. No later than 2015, and taking account of technological progress and the latest scientific evidence, the Commission shall review the requirements limiting the application of this Article only to electricity-generating combustion plants designed with a rated output capacity of 300 megawatts or more, and that are expected to emit in excess of 350g CO<sub>2</sub>/Kwh."***

*Justification*

*By 2015, depending on technological progress, it would be appropriate for the Commission to consider proposing that CCS requirements be introduced for a greater range of combustion plants.*

**Amendment 77****Proposal for a directive****Annex I – paragraph 1***Text proposed by the Commission**Amendment*

The characterisation and assessment of storage sites referred to in Article 4 shall

The characterisation and assessment of storage sites referred to in Article 4 shall

be carried out in four steps according to the following criteria. Derogations from one or more of these criteria **are** permitted so long as the capacity of the characterisation and assessment to enable the determinations pursuant to Article 4 is not affected.

be carried out in four steps according to **best available techniques** and the following criteria. Derogations from one or more of these criteria **may be** permitted **by the competent authority** so long as the capacity of the characterisation and assessment to enable the determinations pursuant to Article 4 is not affected. **The Commission shall seek the assistance of the technical review committee to produce the guidelines, provided for in Article 4(3), for competent authorities on effective use of the criteria according to best available techniques.**

Or. en

#### *Justification*

*The competent authority must determine what information is needed in each case to make appropriate judgements to best assess the risk of leakage. Some of the criteria are unclear, and they vary greatly in importance, so the production of guidelines on best available techniques is essential.*

#### **Amendment 78**

##### **Proposal for a directive Annex I – Step 1 – introductory sentence**

###### *Text proposed by the Commission*

*Sufficient data shall be accumulated to construct a volumetric and dynamic three-dimensional (3-D)-earth model for the storage site and storage complex including the caprock, and the surrounding area including the hydraulically connected areas. This data shall cover at least the following intrinsic **complex** characteristics:*

###### *Amendment*

***To establish the risk of leakage sufficient information and*** data shall be accumulated to construct a volumetric and dynamic three-dimensional (3-D)-earth model for the storage site and storage complex including the caprock, and the surrounding area including the hydraulically connected areas. This data shall cover at least the following intrinsic characteristics ***of the storage complex:***

Or. en

**Amendment 79**

**Proposal for a directive**  
**Annex I – Step 1 – point (g)**

*Text proposed by the Commission*

(g) Presence and condition of natural and man-made pathways which could provide leakage pathways;

*Amendment*

(g) Presence and condition of natural and man-made pathways ***including wells and boreholes*** which could provide leakage pathways;

Or. en

## EXPLANATORY STATEMENT

For many decades to come the world will rely upon the use of coal to generate a significant proportion of its electricity. Without the use of Carbon Capture and Storage technology to prevent the release into the atmosphere of CO<sub>2</sub> it will be impossible to achieve the global reduction in emissions necessary to prevent very severe consequences of climate change.

The Directive sets the framework and conditions for use of CCS technology in Europe. It introduces requirements for the separation and capture of CO<sub>2</sub>, 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 CO<sub>2</sub>, 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.

CCS will not be viewed favourably by every environmentalist; burying CO<sub>2</sub> is hardly an ideal 'green' solution. But it may act as a bridging technology, helping our industrial civilisation buy time to develop alternatives on the scale necessary to permit a wholesale shift from fossil fuels to zero carbon means of power production. It can be applied to gas-fired power stations and can help to avoid emissions from major industrial complexes. Combined with the use of biomass in power stations it can help achieve net negative emissions, complementing renewable energy. But the priority must be to use it to deal with the problem of coal.

Coal is responsible for 24% of Europe's CO<sub>2</sub> emissions, yet these fade into insignificance compared with the quantities generated elsewhere. The USA uses coal to generate 50% of its electricity, in India the figure is 70% and in China it is 80%. Some 850 new and replacement coal fired power stations are planned in these three countries alone. With demand growing fast the International Energy Agency predicts a 70% increase in the world-wide use of coal by 2030, and this is in addition to all that will be done to promote electricity generation from renewable sources and to cut energy use.

The importance of developing the use of CCS in Europe cannot be underestimated. Deployed to its full potential it could secure a 50% reduction in our CO<sub>2</sub> emissions by 2050. The cap imposed on the power sector by the emissions trading system will play the major role in ensuring that CO<sub>2</sub> reductions take place, with the price of allowances discouraging the construction of coal-fired power plants not CCS equipped, but it is the global picture that is so important.

CCS techniques not only require an extensive infrastructure but reduce the overall efficiency of the electricity generation process by as much as 25 per cent. They inevitably increase the price of electricity generated by coal for no short term economic benefit. Their sole purpose is to prevent the release of CO<sub>2</sub> emissions into the atmosphere to help the fight against global warming. If the European Union does not set an example by encouraging rapid development of the technology there will be no hope of persuading India and China to adopt its use or to

persuade these countries that it should be a requirement of a future international agreement on tackling climate change. The enormous output of CO<sub>2</sub> from the growing number of coal-fired power stations will increase with every year of delay, and the gas will remain in the atmosphere for many, many decades to come.

Legitimate public concerns about the use of CCS technology must be addressed but must also be placed in context. Fears have been expressed that the transport and storage of inert CO<sub>2</sub> presents a danger, but it hardly compares to the transport and storage of methane that takes place across Europe as a matter of routine. This toxic, inflammable and explosive greenhouse gas is not only stored in scores of underground locations but is even piped into millions of homes - where it is set alight!

CO<sub>2</sub> capture technology is still relatively immature. New techniques must be developed and existing ones scaled up to meet the demands of a large combustion plant. Yet the indications are that these obstacles can quickly be overcome and it is encouraging that Alstom, in May 2008, became the first major manufacturer to state that CCS-equipped generating plants would be commercially available from 2015 so long as work commences shortly on the proposed demonstration projects that will help us learn-by-doing, testing technologies and reducing costs.

There are worries that CO<sub>2</sub> cannot be securely stored deep underground but that it might leak, escaping into the atmosphere to present a health danger of some kind and negating the very purpose for which it was stored in the first place. Carbon dioxide is a natural component of the air we breathe and only very intense concentrations at a particular location are ever likely to cause a problem. The IPCC envisages leakage rates of no more than 1 per cent every 1,000 years, a period four times longer than the entire history of industrial civilisation. Nonetheless, in the opinion of the Rapporteur, any leakage that can be anticipated to have a negative impact on human health or the environment is unacceptable.

Our experience of CO<sub>2</sub> storage is still limited, and it is very important that the locations of storage sites are chosen with caution and only after intensive study, but the greatest risk of leakage will occur when the injection is taking place and immediately afterwards. This should not be a problem we are passing to future generations unsolved. The Norwegian Government reports that after 10 years of injection operations at Sleipner beneath the North Sea there has not only been no leakage but no migration outside the limits predicted. With the passing of time stored CO<sub>2</sub> becomes more stable and leakages even more improbable.

The Rapporteur appreciates the advice and recommendations given by a host of companies and organisations in preparing this report. In particular he thanks the Commission for its help in preparing amendments to revise, and improve, the draft legislation. However, differences in approach remain and the Rapporteur accepts sole responsibility for his conclusions and recommendations.

Long term costs of the use of CCS systems are expected to be comparable with other electricity generating technologies once the saving in EU ETS allowances is taken into account, but first movers will pay a high price and will require some form of public support.

In March 2007 the European Council pledged its support for construction by 2015 of up to 12

large scale CCS demonstration plants. It is to be hoped that the additional funding necessary to bring these to fruition can be secured before the entry into force of this Directive.