EXPLANATORY MEMORANDUM TO

THE STORAGE OF CARBON DIOXIDE (TERMINATION OF LICENCES) REGULATIONS 2011

2011 No. 1483

1. This explanatory memorandum has been prepared by the Department of Energy and Climate Change (DECC) and is laid before Parliament by Command of Her Majesty.

2. Purpose of the instrument

2.1 The instrument forms part of the United Kingdom's implementation of Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide ("the Directive"). The Government has laid licensing regulations (S.I. 2010.No 2221) which transpose into UK law most of the requirements of the Directive. Two provisions of the Directive that are still to be addressed are Article 18 and Article 20. Article 18 sets out the requirements to be met before key obligations in respect of a storage site can be transferred from the operator to the competent authority. The obligations that are transferred are obligations for any residual monitoring, corrective measures, the surrender of allowances in the event of leakages pursuant to Directive 2003/87/EC1 and preventive and remedial action pursuant to Articles 5(1) and 6(1) of Directive 2004/35/EC2 Article 20 requires a financial contribution for the post-transfer costs of at least the monitoring obligation for a period of 30 years to be provided to the authority before the transfer takes place. This instrument transposes these Articles into UK law.

3. Matters of special interest to the Joint Committee on Statutory Instruments

3.1 The Secretary of State has powers under s.31 of the Energy Act 2008 ("the 2008 Act") to make regulations about the termination of licences granted by him as licensing authority. However, under s.31 the power to make regulations about the termination of licences granted by the Scottish Ministers is conferred on the Scottish Ministers, not the Secretary of State. Therefore, these Regulations are made under under s.2(2) of the European Communities Act 1972 in relation to licences issued by the Scottish Ministers. The Scottish Ministers have been consulted on (and have approved) this approach and a draft of the Regulations.

4. Legislative Context

4.1 Part 1, Chapter 3 (Section 31), of the 2008 Act provides for the licensing authority to make regulations providing for the termination of licences issued under Section 18 for

¹ establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC

² on environmental liability with regard to the prevention and remedying of environmental damage

the purposes of carbon dioxide storage. It is intended that the terms of licences issued under Section 18 for that purpose will permit the surrender of the licence by the operator only in the period prior to the operational commencement of the injection of carbon dioxide. Once operational injection has commenced, the operator will be bound by the licence until it is terminated in accordance with the regulations which are the subject of this consultation, (or in certain circumstances after the revocation of a storage permit, if a new licence is granted).

- 4.2 In making this instrument the powers in section 31 of the Energy Act 2008 are used for the first time.
- 4.3 Under paragraph 1A of Schedule 2 to the European Communities Act 1972, a number of ambulatory references are made in these Regulations to EU instruments. In two cases these are references to provisions of the Directive that set out matters of detail, in particular the requirements for the content of a transfer report (regulations 3(3) and 9(2)(a)) and the factors to be taken into account by the authority in determining the financial contribution to be made by the operator of a storage site at the time of the transfer of responsibility (regulation 10(2)). References in regulation 11(1)(a) and (3)(b) concern the non-binding opinion that may be given by the European Commission on a decision to transfer responsibility for a storage site. The use of an ambulatory reference in this context is consistent with the approach taken in S.I. 2010/2221 and in the equivalent Scottish licensing regulations (S.S.I. 2011/24) in relation to the Secretary of State's duty to obtain the Commission's opinion before granting a storage permit. There does not appear to be a compelling need for further Parliamentary scrutiny of the implementation of future amendments to any of these provisions.
- 4.4 Regulation 14(2)(a) contains an ambulatory reference to those provisions of the Directive that describe the monitoring requirements transferred from the licence holder to the competent authority, including the technical provisions in Annex II which can be amended by comitology under Article 29 of the Directive. The Directive requires the competent authority to assume the monitoring obligations subject to such amendments and so in this case, an ambulatory reference is necessary.
- 4.5 In regulation 14(2)(c) and (d), there are references to other EU instruments to which the Directive refers. In this case, the ambulatory effect is achieved through the intermediary of a reference to domestic implementing legislation (see regulation 14(2)(c) and (d)). Parliamentary scrutiny will therefore take place when that legislation is itself replaced or amended.
- 4.6 A Transposition Note has been prepared, and is attached as an Annex to this Memorandum.

5. Territorial Extent and Application

5.1 The instrument extends to all of the United Kingdom. It applies to licences granted by the Secretary of State and by the Scottish Ministers. Under s.18 of the Energy Act 2008 (as amended by S.S.I. 2011/224), licences can be granted for storage within the offshore area comprising both the UK territorial sea, and the area extending beyond the territorial sea that has been designated as a Gas Importation and Storage Zone

("GISZ") under section 1(5) of that Act: see the Gas Storage and Importation Zone (Designation of Area) Order 2009 (SI 2009/223) and onshore Scotland. Regulations extending the Scope of the extending the relevant provisions of the Energy Act 2008 to onshore England, Wales and Northern Ireland are intended to be made soon in order that the prohibition on carbon dioxide storage without a licence extends to the entire territory of the UK.

6. European Convention on Human Rights

As the instrument is subject to negative resolution procedure and does not amend primary legislation, no statement is required.

7. Policy background

• What is being done and why

- As already noted, this instrument forms part of the United Kingdom's implementation of Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide ("the Directive").
- 7.2 The Government is committed to making the UK a leading player in carbon capture and storage (CCS). Creating an effective fit for purpose licensing regime is necessary to ensure the safe long-term storage of carbon dioxide and therefore a necessary condition for the effective deployment of CCS and achievement of the Government's energy and climate change objectives. The present Regulations are an essential in ensuring compliance with the Directive, and putting in place an important element of such alicensing regime to ensure the safe long-term storage of carbon dioxide.

8. Consultation outcome

- 8.1 A draft of these Regulations was included in an informal consultation on the proposed Storage of Carbon Dioxide (Termination of Licences) Regulations held between 8th December 2010 and 9th January 2011, which outlined various requirements to be met in line with the requirements of the Directive.
- 8.2 Ten responses were received, two from representative bodies (the Carbon Capture and Storage Association and Oil and Gas UK), from a number of oil and gas companies interested in this new activity, and from The Crown Estate. In general respondents to this consultation were supportive of the draft Regulations but requested a number of clarifications regarding transfer of liabilities which have subsequently been made in the Government Response to the consultation exercise and are reflected in the Regulations.

9. Guidance

9.1 Guidance on the regime will be made available on the DECC website.

10. Impact

- 10.1 The impact on charities or voluntary bodies is likely to be none, as projects will be taken forward by commercial operators such as the oil and gas industry and other large industrial players. The impact on those operators will be positive, as they will benefit from an established licensing regime in compliance with the Directive.
- 10.2 The impact on the public sector is negligible as DECC will be the regulatory authority and will accommodate this new area of work within its current resource head room.
- 10.3 An Impact Assessment can be viewed at:

11. Regulating small business

11.1 The legislation applies to CO2 storage activities however carried out.

12. Monitoring & review

12.1 In line with the new sun-setting guidance, DECC have inserted a duty to review clause in the Storage of Carbon Dioxide (Termination of Licences) Regulations. The review date will be in 2016. Additionally, DECC will review the effectiveness of the licensing regulations after some experience of CCS projects. The review will not extend to an assessment of the Regulations as they apply to licences granted by the Scottish Ministers.

13. Contact

Ricki Kiff at the Department of Energy and Climate Change. Tel: 0300 068 6042 or email: ricki.kiff@decc.gsi.gov.uk can answer any queries regarding the instrument.

<u>DIRECTIVE 2009/31/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL ON THE GEOLOGICAL STORAGE OF CARBON DIOXIDE</u>

TRANSPOSITION NOTE

FOR THE STORAGE OF CARBON (TERMINATION OF LICENCES) REGULATIONS 2011

Statement on over-implementation: These Regulations do no more than is necessary to implement the relevant requirements of the Directive, subject to the minor elements of "gold-plating" noted below.

Responsibility for implementation: These Regulations implement the Directive in respect of the matters for which the Secretary of State or Scottish Ministers are the licensing authority.

Article	Result to be achieved	Implementation by the Storage of Carbon dioxide (Termination of Licences) Regulations 2011 ³	Comments ⁴
18	Transfer of Responsibility		
18.1	Transfer (on request from the operator or the initiative of the competent authority) of specified legal obligations in relation to monitoring and corrective measures, surrender of allowances and preventive and remedial action, if conditions are met.	Regulations 4(1), 5(1), 7, 8, 11(2)(a), 12(2), 14(2) and (3).	
18.2	Operator to submit to the competent authority a transfer report documenting that these conditions have been met and demonstrating: - conformity of the actual behaviour of the injected CO2 with modelled behaviour; - the absence of any detectable leakage; - the storage site is evolving towards a situation of long term stability.	Regulations 3(3), 4(2)(b) and 5(2)(a).	
18.3	Competent authority to prepare	Regulation 9(2)	

³ In this Note, referred to as "the Regulations" and "the Act" respectively. References to a *regulation* or *Schedule* are to provisions of the Regulations, and references to a *section* are to sections of the Act.

⁴ In particular, any element of over-implementation ("gold-plating") is highlighted in this column.

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18.8	where there has been fault on the part of the operator (including deficient data, concealment of relevant information, negligence, wilful decit or failure to exercise due diligence). Where a storage site has been closed by decision of the competent authority after the withdrawal of a storage permit under Article 11(3), transfer of responsbility is deemed to take place if and when all available evidence indicates that the storaed CO ₂ will be completely and permanently contained and after the site has been sealed and the injection facilities have been removed.	Regulation 12 Regulation 14	
20	Financial Mechanism		
20.1	Member States to ensure that the operator makes a financial contribution available to the competent authority before the transfer of responsibility.	Regulations 8(c), 10	
20.2	Commission may adopt guidelines for the estimation of costs.		No transposition necessary.

Scrutiny history

EM 5835/08 of 23 January 2008 was considered in (Commons) European Scrutiny Committee on 5 March 2008 and referred for debate in Europe Committee. The Commons cleared the EM on 2 June 2008. The EM was cleared by the Lords on 19 November 2008 after referral to sub-committee and requests for further information.

Title:

The Storage of Carbon Dioxide (Termination of Licences) Regulations 2011

Lead department or agency:

DECC

Other departments or agencies:

Impact Assessment (IA)

IA No: DECC0034

Date: 14/04/2011

Stage: Final

Source of intervention: EU

Type of measure: Secondary legislation

Contact for enquiries:

Ricki Kiff 0300 068 6042

Summary: Intervention and Options

What is the problem under consideration? Why is government intervention necessary?

The Energy Act 2008 provides for a regulatory regime for carbon dioxide storage in the UK offshore area and the Government has now laid the licensing regulations that transpose into UK law the many of the requirements of Directive 2009/31/EC on the geological storage of carbon dioxide. Two provisions of the Directive are still to be addressed. These are Article 18 and Article 20. Article 18 sets out the requirements to be met before the Licensee can be released from the Licence and the state takes responsibility for the site. Article 20 requires a financial contribution for the monitoring obligations for a period of 30 years to be provided to DECC before the transfer takes place.

What are the policy objectives and the intended effects?

The proposed Regulation transposes the requirements of Article 18 and 20 of the Directive and provides a power for the Secretary of State to terminate licences issued under section 18 of the Energy Act 2008.

This completes the licensing regime needed to ensure the safe and economic storage offshore of carbon dioxide. This will help deliver the UK's climate change commitments.

What policy options have been considered, including any "alternatives to regulation". Please justify the preferred option below.

Option 1: do nothing

Failure to transpose the remaining regulations of Directive 2009/31/EC into UK law would open the UK to infraction proceedings for not implementing the EU Directive on geological storage of carbon dioxide.

Option 2: preferred option

Transpose Article 18 and Article 20 of Directive 2009/31/EC into UK law

Will the policy be reviewed? It will be reviewed What is the basis for this review? duty to review	If applicable, set review date 2015 If applicable, set sunset clause date
Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?	No

Ministerial Sign-off For final stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that, (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) the benefits justify the costs.

N/A

Summary: Analysis and Evidence

Description:

Costs:

0.0

Benefits:

Transpose Article 18 and Article 20 of Directive 2009/31/EC into UK law

Price Base PV Base Time Period Low: High: Best Estimate: -£0.002												
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Direct impact on business (Equivalent Annual) fm): In scope of OIOO? Measure classified as						CO ₂ stored is	In scope of OIOC		fied as			

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Net:

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Enforcement, Implementation and Wider Impacts

What is the geographic coverage of the policy/option?	Great Bri	itain				
From what date will the policy be implemented?	2011					
Which organisation(s) will enforce the policy?		DECC/S	DECC/Scottish Ministers			
What is the annual change in enforcement cost (£m)?		0				
Does enforcement comply with Hampton principles?		Yes				
Does implementation go beyond minimum EU requirem	No	No				
What is the CO ₂ equivalent change in greenhouse gas (Million tonnes CO ₂ equivalent)	Traded:			raded:		
Does the proposal have an impact on competition?		No				
What proportion (%) of Total PV costs/benefits is directl primary legislation, if applicable?	Costs:		Ben	efits:		
Annual cost (£m) per organisation (excl. Transition) (Constant Price)	Small	Med	dium	Large		
Are any of these organisations exempt?	No	No		No		

Specific Impact Tests: Checklist

Set out in the table below where information on any SITs undertaken as part of the analysis of the policy options can be found in the evidence base. For guidance on how to complete each test, double-click on the link for the guidance provided by the relevant department.

Please note this checklist is not intended to list each and every statutory consideration that departments should take into account when deciding which policy option to follow. It is the responsibility of departments to make sure that their duties are complied with.

Does your policy option/proposal have an impact on?	Impact	Page ref within IA
Statutory equality duties ¹	No	
Statutory Equality Duties Impact Test guidance		
Economic impacts		
Competition Competition Assessment Impact Test guidance	No	
Small firms Small Firms Impact Test guidance	No	
Environmental impacts		
Greenhouse gas assessment Greenhouse Gas Assessment Impact Test guidance	No	
Wider environmental issues Wider Environmental Issues Impact Test guidance	No	
Social impacts		
Health and well-being Health and Well-being Impact Test guidance	No	
Human rights Human Rights Impact Test guidance	No	
Justice system Justice Impact Test guidance	No	
Rural proofing Rural Proofing Impact Test guidance	No	
Sustainable development	No	
Sustainable Development Impact Test guidance		

¹ Race, disability and gender Impact assessments are statutory requirements for relevant policies. Equality statutory requirements will be expanded 2011, once the Equality Bill comes into force. Statutory equality duties part of the Equality Bill apply to GB only. The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

Evidence Base (for summary sheets) – Notes

Use this space to set out the relevant references, evidence, analysis and detailed narrative from which you have generated your policy options or proposal. Please fill in **References** section.

References

Include the links to relevant legislation and publications, such as public impact assessments of earlier stages (e.g. Consultation, Final, Enactment) and those of the matching IN or OUTs measures.

No.	Legislation or publication
1	Informal unpublished Consultation Document to key stakeholders. Approach agreed by Better Regulation Executive.
2	EU Directive Geological Storage of Carbon Dioxide http://eur-lex.europa.eu/LexUriServ.do?uri=OJ:L:2009:140:0114:0135:EN:PDF
3	
4	

⁺ Add another row

Evidence Base

Ensure that the information in this section provides clear evidence of the information provided in the summary pages of this form (recommended maximum of 30 pages). Complete the **Annual profile of monetised costs and benefits** (transition and recurring) below over the life of the preferred policy (use the spreadsheet attached if the period is longer than 10 years).

The spreadsheet also contains an emission changes table that you will need to fill in if your measure has an impact on greenhouse gas emissions.

Annual profile of monetised costs and benefits* - (£m) constant prices

	Y ₀	Y ₁	Y ₂	Y ₃	Y ₄	Y ₅	Y ₆	Y ₇	Y ₈	Y ₉
Transition costs										
Annual recurring cost										
Total annual costs										
Transition benefits										
Annual recurring benefits										
Total annual benefits										

^{*} For non-monetised benefits please see summary pages and main evidence base section



Evidence Base (for summary sheets)

Problem under consideration

The Energy Act 2008 provides for a regulatory regime for carbon dioxide storage in the UK offshore area and the Government has now laid the licensing regulations that transpose into UK law the many of the requirements of Directive 2009/31/EC on the geological storage of carbon dioxide. Two provisions of the Directive are still to be addressed. These are Article 18 and Article 20. Article 18 sets out the requirements to be met before the Licensee can be released from the Licence and the state takes responsibility for the site. Article 20 requires a financial contribution for the monitoring obligations for a period of 30 years to be provided to DECC before the transfer takes place.

Rationale for intervention

Required by EU Directive and to complete the licensing regime for offshore storage of CO₂.

Policy objective

The proposed Regulation transposes the requirements of Article 18 and 20 of the Directive and provides a power for the Secretary of State to terminate licences issued under section 18 of the Energy Act 2008.

This completes the licensing regime needed to ensure the safe and economic storage offshore of carbon dioxide. This will help deliver the UK's climate change commitments.

Description of options considered (including do nothing)

Option 1: do nothing

Failure to transpose Article 18 and Article 20 of Directive 2009/31/EC into UK law would open the UK to infraction proceedings for not implementing the EU Directive on geological storage of carbon dioxide. Thus, Option 1 is not discussed any further in this Impact Assessment.

Option 2: preferred option

Transpose Article 18 and Article 20 of Directive 2009/31/EC into UK law

Option 2

Costs

Article 18 requires the owner of the Licensee to prepare a Transfer Report before they can be released from the licence. The information that needs to be contained in the report will be known to the business from their activities undertaken in order to meet the requirements of the licence, therefore the only burden on business will be the preparation of the report.

This cost can be estimated from the cost of a manager, an engineer, a lawyer and an accountant working full time, for one week to prepare the report, which contains information that the Licensee would be expected to have in their possession. The cost is estimated to be approximately £3,500 (calculated using Annual Survey of Hours and Earnings, 2009). The termination of the licence will only occur once injection of CO_2 has ceased and enough time has elapsed so the CO_2 is deemed stable in the storage site, referred to as the post closure phase. Given that the first CCS demonstration plant is planned to start operation in 2014, and the post closure phase is indicatively given as 20 years in the EU Directive, it is possible that the first termination may not occur until 2050, if the injection of CO_2 into the storage site were to cease a few years after funding for the first demonstration project came to an end. The present value of this cost would be approximately £1,050 (base year 2009).

If demonstration projects 2-4 were to be on newly built power plants (either coal or gas), with an assumed operating life of 40 years, and each had its own storage sites, the licences may be terminated around 2080. The collective cost to business for the three transfer reports is estimated to be approximately £10,500. The present value of this cost is approximately £1,300 (base year 2009).

It is not possible at this point to estimate when other storage site licences will be terminated or the number of them. This will all depend on when CCS is deployed commercially, at what rate the CCS industry will develop and whether CCS power plants will share storage sites.

A financial contribution for the monitoring obligations for a 30 year period following the termination of the licence needs to be provided by the Licensee under Article 20. If is assumed that the payment is correctly estimated to cover the costs of monitoring and minor maintenance (because the licence will only be terminated when it is believed that the site has reached a stage where only monitoring and minor maintenance is required), which the business would have had to carry out under obligations of the licence anyway, there is no additional cost or benefit. This also assumes that there is no difference in expertise or efficiency between a business or government carrying the maintenance work.

Benefits

The benefits for the main affected groups (i.e. the licence holders) of the mechanism for the termination of a Licence is that (except in some special circumstances) it brings a conclusion to the licensees' responsibility for the site as the state takes over responsibility for key liabilities and obligations. If the licence were not terminated, the licensee would have to carry out these monitoring obligations indefinitely.

However, the operator of the storage site must provide a financial contribution to the competent authority before the transfer takes place, to be used to meet the authority's ongoing costs, such as costs in respect of monitoring obligations of the site for a 30 year period. Termination of the licence will enable the operator to commute this open-ended liability to a single payment.

The only way this arrangement would have a benefit to a business, in the form of a cost saving, is if the sum paid to the government was less than the cost that built up over the following 30 years, perhaps work on the storage site unexpectedly becomes more than minor maintenance. It is not possible at this stage to say whether this is likely or not, and if it did happen, the level of the cost saving to the Licensee.

Risks and assumptions

The risk is that the costs to government of monitoring and minor maintenance for 30 years following the termination of the licence will exceed the financial contribution paid by the Licensee. It is not possible at this stage to say whether this is likely or not, and if it did happen, the level of the cost saving to the Licensee.

The assumptions are that it would take a manager and an engineer one week, working full time to produce the Transfer report required under Article 18.

There is no difference in expertise or efficiency between a business or government carrying the maintenance work on the storage site once the CO₂ stored is deemed to be in a stable state.

Summary and preferred option with description of implementation plan

Option 2, which entails transposing Article 18 and Article 20 of Directive 2009/31/EC into UK law is the preferred option. This policy option carries small costs to business.

Option 1, the do nothing option would open the UK to infraction proceedings for not implementing the EU Directive on geological storage of carbon dioxide.

Annexes

Annex 1 should be used to set out the Post Implementation Review Plan as detailed below. Further annexes may be added where the Specific Impact Tests yield information relevant to an overall understanding of policy options.

Annex 1: Post Implementation Review (PIR) Plan

A PIR should be undertaken, usually three to five years after implementation of the policy, but exceptionally a longer period may be more appropriate. *If the policy is subject to a sunset clause, the review should be carried out sufficiently early that any renewal or amendment to legislation can be enacted before the expiry date.* A PIR should examine the extent to which the implemented regulations have achieved their objectives, assess their costs and benefits and identify whether they are having any unintended consequences. Please set out the PIR Plan as detailed below. If there is no plan to do a PIR please provide reasons below.

Basis of the review: [The basis of the review could be statutory (forming part of the legislation), i.e. a sunset clause or a duty to review, or there could be a political commitment to review (PIR)];

Review will be undertaken in association with the review clause of the Regulation, this will be five

years from the coming into effect of the Regulation.

Review objective: [Is it intended as a proportionate check that regulation is operating as expected to tackle the problem of concern?; or as a wider exploration of the policy approach taken?; or as a link from policy objective to outcome?]

This review will be undertaken in light of a wider review in 2015 by the EU Commission of the effectiveness of the CCS Directive and the need to implement any recommendations.

Review approach and rationale: [e.g. describe here the review approach (in-depth evaluation, scope review of monitoring data, scan of stakeholder views, etc.) and the rationale that made choosing such an approach]

The review will include examination of the recommendations of the Commission's review and scan of stakeholder views. This approach is to be taken as little data on the effectiveness of the Regulation will have been collected by 2016 as no Storage licence that will have entered into its operation phase would have been terminated under the Regulations provisions that early.

Baseline: [The current (baseline) position against which the change introduced by the legislation can be measured] None as carbon dioxide storage is a new technology with new untested legislation at this time.

Success criteria: [Criteria showing achievement of the policy objectives as set out in the final impact assessment; criteria for modifying or replacing the policy if it does not achieve its objectives]

If Commission review makes recommendations on the implementation of Articles 18 and 20 of the Directive, and or stakeholder input requests sensible change, then the Regulation will be amended or redrafted.

Monitoring information arrangements: [Provide further details of the planned/existing arrangements in place that will allow a systematic collection systematic collection of monitoring information for future policy review]

Licences issued, and terminated, are to be maintained on a public register as required by Regulation

9 of The Storage of Carbon Dioxide (Licensing etc) Regulation 2010. Additionally the licensing Section of DECC will maintain registered file of each licence and its history

Reasons for not planning a review: [If there is no plan to do a PIR please provide reasons here] N/A

Add annexes here.