Procedure file

Basic information

INI - Own-initiative procedure	2013/2079(INI)	Procedure completed
Developing and applying carbon capture and storage technology in Europe. Implementation report 2013 Subject 3.50.08 New technologies; biotechnology 3.70.02 Atmospheric pollution, motor vehicle pollution 3.70.03 Climate policy, climate change, ozone layer 3.70.13 Dangerous substances, toxic and radioactive wastes (storage, transport)		

Key players

European Parliament	Committee responsible	Rapporteur	Appointed
	ENVI Environment, Public Health and Food Safety		15/04/2013
		ALDE DAVIES Chris	
		Shadow rapporteur	
		PPE GARDINI Elisabetta	
		S&D PERELLÓ RODRÍGUEZ Andrés	
		Verts/ALE EICKHOUT Bas	
		ECR ROSBACH Anna	
	Committee for opinion	Rapporteur for opinion	Appointed
	ITRE Industry, Research and Energy (Associated committee)		05/06/2013
		ECR FORD Vicky	
European Commission	Commission DG	Commissioner	
	Energy	OETTINGER Günther	

Key events

10/06/2013	Committee referral announced in Parliament		
04/07/2013	Referral to associated committees announced in Parliament		
27/11/2013	Vote in committee		
04/12/2013	Committee report tabled for plenary	A7-0430/2013	Summary
13/01/2014	Debate in Parliament		
14/01/2014	Results of vote in Parliament		

14/01/2014	Decision by Parliament	T7-0009/2014	Summary
14/01/2014	End of procedure in Parliament		

Technical information

Procedure reference	2013/2079(INI)
Procedure type	INI - Own-initiative procedure
Procedure subtype	Implementation
Legal basis	Rules of Procedure EP 54
Stage reached in procedure	Procedure completed
Committee dossier	ENVI/7/12253

Documentation gateway

For information		COM(2013)0180	27/03/2013	EC	Summary
Committee draft report		PE516.832	06/09/2013	EP	
Amendments tabled in committee		PE521.464	09/10/2013	EP	
Committee opinion	ITRE	PE516.706	07/11/2013	EP	
Committee report tabled for plenary, single reading		A7-0430/2013	04/12/2013	EP	Summary
Text adopted by Parliament, single reading		T7-0009/2014	14/01/2014	EP	Summary

Developing and applying carbon capture and storage technology in Europe. Implementation report 2013

This Commission Communication on the Future of Carbon Capture and Storage in Europe (CCS) outlines the state of play in the area, taking into account the global context, and examines the available options to encourage the demonstration and deployment of CCS. It details the long-term arguments in favour of the integration of this technology in the EUs strategy for the transition to a low carbon economy.

Perspectives and role of CCS: the Energy Roadmap 2050, as well as global developments and reports make it evident that fossil fuels will stay in the global and European energy mix and will continue to be used in many industrial processes. According to the World Energy Outlook 2012 report by the International Energy Agency (IEA), fossil fuels represent 80% of global energy use today, while it will represent 75% in 2035. These trends are not consistent with the necessary mitigation of climate change.

In the transition to a fully low-carbon economy, the Carbon Capture and Storage (CCS) technology, insofar as it has been commercialised, is one of the key ways to reconcile the rising demand for fossil fuels, with the need to reduce greenhouse gas emissions. Globally CCS is likely to be a necessity in order to keep the average global temperature rise below 2 degrees Celsius.

CCS is at present one of the key available technologies that can help to reduce CO2 emissions in the power generation sector. In order to realise its potential, CCS needs to become a cost-competitive technology, so that it could start to be commercially deployed and thus contribute to the low-carbon transition of the European economy.

EU action and weaknesses: the EU is determined to support CCS both financially and from a regulatory perspective:

- following the European Council's decision back in 2007 to support up to 12 large-scale demonstration projects by 2015, the Commission took a number of steps to establish a common regulatory and demonstration support framework;
- the CCS Directive was adopted to provide a legal framework for CO2 capture, transport and storage, with transposition deadline set at June 2011;
- the CO2 transport network was included in Europe's Energy Infrastructure Priorities (EIP) tabled in November 2010 and in the Commission's proposal for a regulation on "Guidelines for Trans European Infrastructure";
- the European Industrial Initiative (EII) on CCS has been established as part of the Strategic Energy Technology (SET) Plan ;
- two funding instruments have been set up: the European Energy Programme for Recovery (EEPR) and the NER300 programme funded by ETS allowances to channel substantial EU funding to large scale demonstration projects.

Despite these efforts, CCS has not yet taken off in Europe. The CCS commercial scale demonstration projects in the EU are delayed and available funding is not sufficient. Further delays may ultimately result in the need of the European industry to purchase CCS technology from non EU countries in the future.

Need for action: the Commission considers that an urgent policy response to the prime challenge of stimulating investment in CCS

demonstration is required to test whether the subsequent deployment and construction of CO2 infrastructure is feasible. The first step on this path is therefore to ensure a successful commercial-scale demonstration of CCS in Europe. In the longer term, CCS is also necessary to be able to reduce emissions in industries with process emissions that cannot be avoided.

In the light of the work started on the 2030 energy and climate framework and the need for an informed debate, including the issue of the determining factors for successful CCS deployment, the Commission invites contributions on the role of CCS in Europe, particularly:

- the need to require Member States to draw up a national strategy on the deployment of CCS or to draw up a roadmap detailing how they plan to restructure their electricity generation sector towards non-carbon emitting fuels (nuclear or renewables) by 2050;
- how the ETS could be restructured so that it could also provide meaningful incentives for CCS deployment;
- how the Commission might propose other measures paving the road towards a rapid deployment by: (i) support through auctioning recycling or other funding approaches; (ii) an Emission Performance Stanbdard; and (iii) a CCS certificate system;
- a requirement to install CCS-ready equipment for all new investments (coal and potentially also gas) in order to facilitate the necessary CCS retrofit;
- how to ensure the involvement of fuel providers in the demonstration and deployment of CCS, how to remedy the main obstacles to ensuring sufficient demonstration of CCS and how can public acceptance for CCS be increased.

Based on the responses to this consultation and the full analysis of the CCS Directives transposition and implementation in the Member States, the Commission will consider the need to prepare proposals.

Developing and applying carbon capture and storage technology in Europe. Implementation report 2013

The Committee on the Environment, Public Health and Food Safety adopted the own-initiative report by Chris DAVIES (ALDE, UK) on implementation report 2013: developing and applying carbon capture and storage technology in Europe.

The Committee on the Environment, Public Health and Food Safety, exercising its prerogative as an association committee in accordance with Rule 50 of the Parliaments Rules of Procedure, was also consulted for an opinion on the report.

Carbon Capture and Storage (CCS) is a promising technology that may be the only means of achieving significant CO2 reductions from industrial sources. It is necessary to deliver almost 20 % of the CO2 reductions needed by 2050, and if CCS is not deployed, an additional 40 % in electricity investment will be needed to prevent a temperature rise in excess of 2°C.

In 2007 EU heads of government aspired to have up to 12 CCS demonstration plants in operation by 2015, but as their financial viability depended on there being a high carbon price these ambitions cannot now be realised. The EU is losing its technological lead in CCS and with only one project still being considered for NER300 funding, and European Energy Programme for Recovery projects having been terminated or suspended now has no effective policy to promote development of CCS flagship projects.

Raising ambitions: Members recognised that CCS deployment has the potential to allow the EU to meet its 2050 low?carbon aspirations at a low cost and that it is necessary in particular for decarbonising high CO2 emitting industries. They affirmed the urgent need to develop a range of full-chain CCS flagship projects so as to identify the best and economically most advantageous solutions. Given the substantial investment required, instruments in addition to the EU emissions trading system (ETS) are needed to foster research and the technical and safe application of CCS.

The Commission is called upon to :

- encourage CCS deployment not only in connection with coal and gas power generation but also in a range of industrial sectors such as chemicals, metallurgy, iron and steel, cement and refineries;
- address the issue of CCS deployment within the 2030 climate and energy framework, and should bring forward proposals for promoting the early construction of CCS flagship projects;
- adopt far?reaching measures to foster international cooperation and to promote the use of technologies for mitigating the effects of climate change.

Leading role of Member States: the report recognised that CCS deployment cannot take place without support from Member States and private investors, and that the former have an absolute and sovereign right to encourage or prevent its application. It reminded the Commission that Parliament has called for legislation to require every Member State to produce a 2050 low-carbon strategy and suggested that these national roadmaps should be updated at five-yearly intervals.

EU regulation and funding: Members called on the Commission to consider creating an EU industrial innovation investment fund to support the development of innovative climate-friendly technologies including CCS flagship projects, other innovative low-carbon technologies, and measures to reduce CO2 emissions from energy-intensive industries and their processes which could be financed from the sale of allowances from the EU ETS. This should not lead to a new demand on the EU budget.

Longer-term CCS support should be derived principally from an appropriate CO2 price signal and any interim financial support required from Member States or the EU would best be derived from the production and import of the fossil fuels mainly responsible for CO2 emissions. The Commission should facilitate debate on possible options by carrying out an analysis of systems requiring the purchase of CCS certificates proving the CO2 emissions avoided, through storage or treatment, in proportion to the CO2 embedded within the fossil fuels placed on the market.

Guidelines for Member States should be prepared with regard to the various financial and other mechanisms which they could deploy to support and incentivise CCS development, and to access support funds from within the EU budget.

The report suggested that the Commission should consider how use could be made of the EU Coal and Steel Research Fund to support CCS pre-commercial demonstration in these industrial sectors.

Transport and storage sites: Members acknowledged that significant financial savings can be made by establishing CCS clusters of industrial installations served by shared pipelines or other CO2 transport systems. They emphasised that Member States seeking the deployment of

CCS may have a direct role to play in ensuring the provision of CCS transport and determining the availability of storage infrastructure.

They supported EU measures and funding to establish a common definition of a storage sites character, identify appropriate storage locations across Europe, develop pilot projects, and prepare sites for commercial-scale storage on the territory of supportive Member States.

Storage liabilities: Members noted the concern of some potential CCS developers that the requirements and liabilities placed upon them for the geological storage of CO2 in sites approved by Member States are unquantifiable and excessive. Any accidental release of CO2 from a storage site must be prevented and the environmental integrity of the project protected. The Commission should offer guidance regarding the degree to which the details of compliance arrangements should be determined in advance through negotiation between potential operators and the competent authorities of the Member States concerned. The report suggested that the CCS Directive requirement that in the event of CO2 leakage operators must surrender allowances does not take into account the costly remedial efforts required. Members feared that this obligation puts a further obstacle in the way of CCS development and called on the Commission to propose a revision in its assessment of the CCS Directive.

Capture and storage-ready status: Members insisted that it is no longer acceptable to invest in power plants or industrial installations likely to emit large quantities of CO2 without regard to how this will be reduced in future. The Commission and the Member States to improve communication in order to raise public awareness of CCS.

The report asked the Commission to analyse and submit a report on the level of CCS which would need to be deployed by certain key dates, for example 2030, in order for CCS to make a significant contribution to 2050 emissions reduction targets.

Carbon capture and use: whilst welcoming the various initiatives to make use of CO2 in ways that reduce overall emissions into the atmosphere and create alternative products such as sustainable transport fuels, Members called in particular for the Commission to assess urgently the potential for the secure use of CO2 to enhance oil and gas recovery within the EU.

Developing and applying carbon capture and storage technology in Europe. Implementation report 2013

The European Parliament adopted by 524 votes to 141 with 25 abstentions a resolution on implementation report 2013: developing and applying carbon capture and storage technology in Europe.

Carbon Capture and Storage (CCS) might be the only means of achieving significant CO2 reductions from industrial sources, yet required investment and industrial-scale demonstration to promote innovation, secure cost reductions, and confirm its environmental safety. The International Energy Agency suggested that CCS was necessary to deliver almost 20 % of the CO_2 reductions needed by 2050, and claimed that if CCS is not deployed, an additional 40 % in electricity investment would be needed to prevent a temperature rise in excess of 2°C.

In 2007 EU heads of government aspired to have up to 12 CCS demonstration plants in operation by 2015, but as their financial viability depended on there being a high carbon price these ambitions cannot now be realised. The EU is losing its technological lead in CCS and with only one project still being considered for NER300 funding, and European Energy Programme for Recovery projects having been terminated or suspended now has no effective policy to promote development of CCS flagship projects.

Raising ambitions: Members recognised that CCS deployment has the potential to allow the EU to meet its 2050 low-carbon aspirations at least cost and that it was necessary in particular for decarbonising high CO_2 emitting industries. They believed that it might also contribute to the diversity and security of energy supplies while creating employment opportunities. Parliament affirmed the urgent need to develop a range of full-chain CCS flagship projects so as to identify the best and economically most advantageous solutions, and called on the Commission to set goals for the achievement of this objective. It called on the Commission to encourage CCS deployment not only in connection with coal and gas power generation but also in a range of industrial sectors such as chemicals, metallurgy, iron and steel, cement and refineries. Members insisted that the Commission should address the issue of CCS deployment within the 2030 climate and energy framework, and should bring forward proposals for promoting the early construction of CCS flagship projects.

Leading role of Member States: Parliament emphasised that, in the absence of a high carbon price, Member States that wish to promote deployment of CCS have the key role to play in providing a transparent revenue stream and such other financial support as may be necessary to secure the construction and operation of flagship projects, while enabling operators who face high first-mover costs to secure a return on their investment. EU regulation and funding: Members called on the Commission to consider creating an EU industrial innovation investment fund to support the development of innovative climate-friendly technologies including CCS flagship projects, other innovative low-carbon technologies, and measures to reduce CO2 emissions from energy-intensive industries and their processes which could be financed from the sale of allowances from the EU ETS. This should not lead to a new demand on the EU budget. Longer-term CCS support should be derived principally from an appropriate CO2 price signal. The Commission should facilitate debate on possible options by carrying out an analysis of systems requiring the purchase of CCS certificates proving the CO2 emissions avoided, through storage or treatment, in proportion to the CO2 embedded within the fossil fuels placed on the market. Guidelines for Member States should be prepared with regard to the various financial and other mechanisms which they could deploy to support and incentivise CCS development, and to access support funds from within the EU budget.

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site was transferred to the competent authority. It suggested that Member States that seek to promote CCS development would have to play a more entrepreneurial role and accept a greater share of the responsibilities than presently understood. It called on the Commission to revise its CCS Directive guidance documents to clarify these points. Members also suggested that the CCS Directive requirement that in the event of CO2 leakage operators must surrender allowances did not take into account the costly remedial efforts required. They feared that this obligation puts a further obstacle in the way of CCS development and called on the Commission to propose a revision in its assessment of the CCS Directive.

Capture and storage-ready status: the Commission and Member States to improve communication in order to raise public awareness of CCS. Parliament also asked the Commission to submit a report on the level of CCS which would need to be deployed by certain key dates, for example 2030, in order for CCS to make a significant contribution to 2050 emissions reduction targets.

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