

Some critical remarks on Carbon Capture and Storage from the point of view of environmental law

submitted in the Consultative Communication

on "The future of Carbon Capture and Storage (CCS) in Europe" (COM 2013 (180))

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Introduction

The Association Justice and Environment (J&E) is a European a European Network of Environmental Law Organisations that was founded as non-profit association in 2004. J&E aims for better legislation and implementation of environmental law on the national and European Union (EU) stage to protect the environment, people and nature. J&E does this by enhancing the enforcement of EU legislation through the use of European law and exchange of information on the national, cross-border and wider European level.

Our organization is striving to protect the environment, human health and nature by improving environmental legislation and enhancing the enforcement thereof. For many years, J&E has been studying the climate relevant legislation as well as the implementation of climate relevant EU regulation in the Member States where it is active¹.

In 2011 we also studied the critical boundary points of the CCS Directive and the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention).

In the followings - based on our findings explained in our publications mentioned, experiences gained from our cases, and researches we are currently conducting - we intend to express our standpoint regarding the Consultative Communication on "*The future of Carbon Capture and Storage (CCS) in Europe*" from two different approaches.

Carbon Capture and Storage and the principle of precaution

As the trends of using fossil fuels in energy production are not consistent with the necessary mitigation of climate change, EU Member States having a high share of coal and gas in their energy mix as well as in industrial processes should be required to adopt a clear roadmap on how to restructure the electricity generation sector towards non-carbon emitting fuels, by means of renewables by 2050.

¹ <http://justiceandenvironment.org/publications/climate-change>

In our opinion however, deployment of Carbon Capture and Storage (CCS) technologies are not undoubtedly able to serve the fight against climate change in the long term. There are number of criticism on the technology and the lack of sufficient data cause serious debates on this issue.

The precautionary principle is applicable by high levels of scientific uncertainty, and requires that, if there is a strong suspicion that a certain activity may have environmentally harmful consequences, it is better to control that activity now rather than to wait for incontrovertible scientific evidence.

As in its interpretation the Commission laid down, the precautionary principle (Article 191 of the Treaty on the Functioning of the European Union) may be invoked when the following three preliminary conditions are met², namely the **identification of potentially adverse effects, evaluation of the scientific data available** and the **extent of scientific uncertainty**. In our point of view, CCS is not proved to be able to be part of a sustainable energy system since it has been built on using depleted sources (coal, lignite, natural gas, petroleum) that should be derecognized in the energy production. Furthermore, this technology implies that we would leave the storages of carbon dioxide as likely serious problems for the future generations.

It is also important to note that - in respect of the CCS technology - the available practical and economic experiences are currently on very low level, as only ten projects have been working in the world. The model projects – as the annex of the Consultative Communication also illustrates - significantly delayed in the EU. Following these facts, it can be deduced that - from operational circumstances - we will have reliable and measured data and practical knowledge on the coal-consumption, on the efficiency, on the environmental impacts and on the real costs only in the second half of the decade.

In lack of precise, detailed technical information and economic calculations about the CCS technology, we would have to rely on estimates knowing that there are significant differences depending on the technology used and the geographical and geological appearances of a project.

That is why we would like to direct the attention of the Commission to the ambiguous scientific argumentation of CCS, and we also aim to raise doubts about the appropriateness of those projects.

The three different technological approaches of CCS are post-combustion, pre-combustion and oxygen combustion carbon capture. Being quite energy-intensive processes, all the carbon capture procedures increase the energy consumption of a conventional power plant.

In reference to the related literature³, nor the economic efficiency neither the likely environmental impacts of the CCS technologies are proved or entirely assessed.

According to the available data, 10-40% of the power produced covers the overplus energy needed⁴. The additional energy need includes obviously significant additional cost as well⁵.The most

² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52000DC0001:EN:NOT>

³ False hope - Why carbon capture and storage won't save the climate; Greenpeace, 2008 <http://www.greenpeace.org/usa/Global/usa/report/2008/5/false-hope-why-carbon-capture.pdf>

⁴ IPCC – Carbon Dioxide Capture and Storage: Technical Summary (2005), Summary for Policymakers (page 4.) *referred in* Kardos Péter: A földalatti szén-dioxid-tárolás lehetséges szerepe az éghajlatváltozás hazai mérséklésében. Energiaklub, Budapest 2011.”

comprehensive analyses count with costs of 24-90 €/t, which can make the energy production more expensive. Studies have also shown that the capture of CO₂ may cause decreasing in efficiency of the power plant and forcing them to increase their fuel consumption.⁶

Due to the fact that the current technology is non-marketable, these projects are not viable without significant state subsidies. However, substantial state intervention requires strategic decisions of the Member State. Furthermore, it is to be considered in the long run – because of excessive confidence in CCS projects slowing the progression in decarbonisation - whether supporting CCS will not result in the need of much greater efforts in reducing emissions in the future, than it would have been necessary without CCS.⁷

*CCS Directive and the Aarhus Convention*⁸

The Aarhus Convention and its implementation has been the major focus of J&E in the past few years. In addition to the issues related to the Aarhus Convention, J&E has developed further competence areas, amongst others the field of climate change law.

The Aarhus Convention has three substantive pillars; the first pillar on access to information distinguishes between individual rights for the public to request environmental information from public authorities and active information obligations of the parties to the Convention.

The second pillar on public participation entitles the public to participate in environment related decision making both with regard to certain permitting decisions and to any environmental related planning and programming procedures.

The third pillar on access to justice provides for administrative and/or judicial review procedures if the first and second pillar of the Convention was breached. Members of the public have the right to legally challenge any act and omission by private persons or public authorities that contravene national or European environmental law.

The CCS Directive includes several issues relevant to the rights provided by the Aarhus Convention. According to J&E's analysis of the CCS Directive, public access to information as one of the crucial components of the Aarhus Convention is the only (out of three) pillar, where requirements of the Convention are satisfyingly met.⁹

The analysis of J&E explained that the CCS Directive refers to access to information in its preamble and in Art 26. par (21) of the preamble states that "*Member states should make available to the public environmental information relating to geological storage of CO₂ in accordance with applicable*

⁵ A CO₂-befogással és –elhelyezéssel kapcsolatos jelenlegi nemzetközi és hazai helyzet – tanulmány (ELGI, KVVM, 2007) *referred in* Kardos Péter: A földalatti szén-dioxid-tárolás lehetséges szerepe az éghajlatváltozás hazai mérséklésében. Energiaklub, Budapest 2011.

⁶ False hope - Why carbon capture and storage won't save the climate; Greenpeace, 2008

⁷ Kardos Péter: A földalatti szén-dioxid-tárolás lehetséges szerepe az éghajlatváltozás hazai mérséklésében. Energiaklub, Budapest 2011.

⁸ <http://www.justiceandenvironment.org/files/file/2011%20CCS.pdf>

⁹ <http://www.justiceandenvironment.org/files/file/2011%20CCS%20position.pdf>

Community legislation.” Art 26 of the CCS Directive explicitly repeats indent 21 of the preamble which makes the obligation to provide environmental information available to the public mandatory.

The general provision of Art 26, which states that environmental information relates to the geological storage of CO₂, requires that the Member States shall provide broad access to information in accordance with, in particular, Directive 2003/4/EC. Thus it is no default that the CCS Directive contains only very little reference to access to information for the public.

Public participation in terms of the Aarhus Convention refers not only to permitting procedures, but also to public participation as to the preparation of plans and programmes. Taking into account the provisions of the Convention, the public should be allowed to participate in the selection of storage sites, in the drawing up of the monitoring plan, the corrective measures plan and the post-closure plan and in the inspections procedures. Regarding the results of the inspections (report) J&E suggests to have those reports publicly accessible. In any case public participation should be carried out in an early and effective manner in accordance with the objectives of the Aarhus Convention

However, the regulation in the CCS recommended that – in order to fulfil the requirements of the Convention - public participation in selection of storage sites, in drawing up of monitoring plans, corrective measure plans or post-closure plans should be mandatory. As regards the second pillar of the Aarhus Convention, J&E suggest to revise the CCS Directive.

Concerning access to justice, the CCS Directive also lacks certain measures to assure compliance with the Convention. There is no possibility foreseen to request actions from the competent authority in cases regarding failures of operators concerning monitoring measures or failures of the authorities concerning carrying out inspections in case of leakages, irregularities at facilities or non-fulfilments of obligations under post-closure plans. Access to justice proceedings as mentioned above should be established in the CCS Directive and would (in connection with corrections in the field of public participation) lead to an improvement of the Directive and (furthermore) of the transformation into EU-member state`s law.

Conclusion

J&E has the firm belief that the efforts that are aimed to implement the controversial CCS technologies should more preferably contribute to the assets that have been already tested and proven - such as increasing energy efficiency and propagation of renewable sources.

Before making the development of a national strategy to prepare for the deployment of CCS technology required in the Member States, as it was asked in the question 1.b. of the Consultative Communication we would suggest evaluating the CCS technologies from the perspective of the precautionary principle.

As regards the obligation to provide access to environmental information, the CCS Directive generally satisfies the requirements of the Aarhus Convention by means of reference to the Community legislation applicable in this context (Art 26 of the CCS Directive). However, as regards public participation and access to justice, the CSS Directive does not fulfil the relevant standards. We recommend remedying the shortcomings in the course of a possible review of the Directive.

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