EPPSA response to

"The Future of Carbon Capture and Storage in Europe"

July 2013

Transparency Register:
European Power Plant Suppliers Association's ID number: 18146381379-29
Avenue Adolphe Lacomblé 59/8, B-1030 Brussels

1) Should Member States that currently have a high share of coal and gas in their energy mix as well as in industrial processes, and that have not yet done so, be required to:

a) develop a clear roadmap on how to restructure their electricity generation sector towards non-carbon emitting fuels (nuclear or renewables) by 2050,

No; while roadmaps for 2050 on the Member State level would be a valuable complement to the EC's Energy Roadmap 2050, it makes no sense to focus only on non-carbon emitting fuels (nuclear or renewables). Any technology that can achieve emission reductions and pave the way towards decarbonisation should be included; thus, the focus in any proposed roadmap developments should be on low-carbon technology (nuclear, renewables, advanced fossil fuels and CCS), not 'non-carbon emitting fuels'. Leaving out fossil fuels, and in particular CCS, would only make such Member State roadmaps incompatible with the European Commission's Energy Roadmap 2050, which includes CCS; additionally, a non-carbon roadmap as opposed to a low-carbon roadmap would promote a more expensive path to decarbonisation, given that the EC 2050 acknowledges the costs of decarbonisation without CCS to be 40% higher.

b) develop a national strategy to prepare for the deployment of CCS technology.

Member States should prepare a national strategy to prepare for the deployment of CCS technology, but first put the main focus in promoting public awareness and public acceptance of CCS. Any national strategy should take into account the potentials of CCS not only for power generation but for industrial applications as well, and examine the possibilities for Carbon Capture and Use (CCU); national strategies for setting up the necessary infrastructure (e.g. transport pipelines) that CCS will require should be developed as well.

2) How should the ETS be re-structured, so that it could also provide meaningful incentives for CCS deployment? Should this be complemented by using instruments based on auctioning revenues, similar to NER300?

Any form of incentivising CCS must ensure that specific features of CCS are taken into account; for example, their non-intermittency as compared to renewable energy sources should attract additional revenues from the electricity market.

3) Should the Commission propose other means of support or consider other policy measures to pave the road towards early deployment, by:

a) support through auctioning recycling or other funding approaches

Given the prolonged economic crisis and the lack of appropriate financial incentives for CCS, auctioning recycling and other funding approaches should absolutely be considered.

b) an Emission Performance Standard

An Emission Performance Standard should not be considered, unless coupled with an appropriate mechanism that incentivises CCS; without financial incentives, an EPS system would only divert or delay investment in CCS and would likely be counterproductive, particular for early deployment.

Prior to finalisation of CCS demonstration in Europe, only fuel-specific CO_2 emission limit values should be considered, and may be introduced through the LCP BREF Review within the Industrial Emissions Directive framework. EPPSA has worked on deriving suitable fuel-specific CO_2 emission limit values associated with BAT, and would be happy to cooperate further in this matter.

The introduction of fuel-specific CO_2 emission limit values would promote the deployment of BAT, and the associated improvements in average efficiency of the EU power generation fleet would lead to lower CO_2 emissions, more efficient resource use, and would also facilitate deployment of CCS, as the energy demands of CCS are better met by BAT power plants.

c) a CCS certificate system

A CCS certificate system should not be considered, unless coupled with an appropriate mechanism that incentivises CCS; without financial incentives, a CCS certificate system would only divert or delay investment in CCS and would likely be counterproductive. However, coupled with appropriate financial incentives, a CCS certificate system could help promote more widespread deployment of CCS once early deployment has been successful.

d) another type of policy measure

As CCS entails higher costs, its deployment depends on balancing these higher costs with a higher revenue stream for operators for CCS plants, especially in the absence of a strong EU ETS signal. While this could be a feed-in tariff for CCS-equipped plants, it must not necessarily be done in this way; what should be examined is whether there exists any kind of policy measure which would be able to balance the added costs and monetise the added climate value for the operator. Different designs already exist across EU Member States for support of renewable energy sources and/or capacity remuneration schemes; these could be taken as examples to learn from when considering such a monetisation scheme, in order to maximise benefits and prevent a repeat of past mistakes.

4) Should energy utilities henceforth be required to install CCS-ready equipment for all new investments (coal and potentially also gas) in order to facilitate the necessary CCS retrofit?

Yes; building new plants that are not CO_2 capture-ready would make the necessary retrofits more difficult and more expensive (if at all possible), and thus lead to an overall larger decarbonisation bill.

5) Should fossil fuel providers contribute to CCS demonstration and deployment through specific measures that ensure additional financing?

X

6) What are the main obstacles to ensuring sufficient demonstration of CCS in the EU?

The barriers to ensuring sufficient demonstration of CCS in the EU are not technical in nature, but are financial and legal. In particular, the lack of commercial application and the lack of a revenue stream for CO_2 capture is a significant financial barrier.

Thus, the only way of making a business case for CCS in the current environment is a step-by-step approach, starting with CCU in combination with applications such as enhanced oil recovery (EOR) or power-to-gas. CCU has the combined benefit of being a revenue stream (as it involves commercial application) as well as avoiding the need for storage (and is therefore less contentious for the public); it can therefore demonstrate that carbon capture works and that it is safe, which will contribute to improving public acceptance and thereby set the stage for widespread deployment of CCS.

Indeed, the issue of public awareness and public acceptance is a critical obstacle, as without public awareness of the benefits of CCS, the necessary political will for overcoming financial and legal obstacles will simply not exist.

7) How can public acceptance for CCS be increased?

A stronger PR campaign explaining the benefits of CCS for both decarbonisation and the socioeconomic dimension is absolutely critical if CCS is to be deployed in Europe.

Past communication of both public bodies and industry about the benefits of CCS to the wider public has clearly not been successful and, in fact, can be considered a PR disaster. As negative publicity travels far faster and remains salient for far longer than positive publicity, it is very important that key position holders in the EU engage in more proactive communication on the importance and benefits of CCS as well as CCU. Above all, clear, unambiguous statements must be made to properly communicate the fact that CO_2 is not a toxic compound and thereby counteract the misleading parallels that are made far too often between long-term storage of CO_2 and long-term storage of nuclear waste.

Overall, a well-organised, open-minded, long-lasting communication strategy should be developed and initiated as soon as possible. Such a communication strategy should be based on a holistic perspective that presents not only the technology itself but above all its benefits from different viewpoints (economic, environmental, social), by showcasing the relationship between power plants and CCS technology and a secure, reliable, and independent energy supply, and the resulting benefits thereof for the climate, jobs, and overall welfare; CCS will be crucial not only for achieving decarbonisation of the EU, but for achieving it at least cost. Additionally, the potential of CCS as an export technology should not be neglected, and is another reason why demonstration programmes must be finalised as soon as possible.

These positive messages must be promoted on all levels, not just on the EU level – it must be promoted on the Member State level, as that is where incentives should be put in place; it must be

promoted on the regional level, since pipelines will not be confined to any single jurisdiction; and last but certainly not least, it must be promoted on the local level, since without approval for storage sites, CCS will not deliver its intended benefits. All of these – but in particular the local level – require time for building trust and developing a critical mass of stakeholder commitment, which further underlines the urgent need to start as soon as possible.

Last but not least, communication can only go so far, and nothing changes minds faster than clear, concrete, and undeniable facts. Thus, the finalisation of CCS demonstration projects as well as step-by-step deployment of CCU would do a lot to promote public acceptance of the technology, by proving that carbon capture works and that it is safe.