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Publication | 13.02.2006

Carbon capture and sequestration

For several years now, the EU has been supporting the development of technologies that are designed to enable the CO2 emissions from power stations to be captured and stored, to enable the continuation of the fossil fuel economy, in particular the coal sector. The Commission has suggested that Carbon Capture and Storage (CCS) will be a priority for the 7th FP. However, **it is currently not clear if and how fast CCS could be commercial available**.

Research for CCS should go ahead, the question is how much private industry can provide and what would be the role of public funding. As coal and oil industries are mature industries with large turnovers and huge profits (25 billion dollars earning for Shell in 2005 and 14 billion dollars for Chevron) research must come from these sectors. Public research, if any, should only be focused in helping defining the environmental and other criteria under which CCS would be truly sustainable.

There are a number of major concerns and barriers to the widespread introduction of CCS that will need to be overcome prior to its widespread introduction:

- **Environmental Risks:** The storage of CO2 must be guaranteed for at minimum hundreds of years, to delay the release of CO2 and thus reduce the immediate impact of climate change. There must be a zero risk of release of the vast quantities of CO2 that would need to be stored. The danger of accidental or deliberate breaching of CO2 storage facilities and the irreversible consequences of the release of CO2 will make the engineering and security barriers hugely and potentially prohibitively expensive.

- **Timetable**: There is an **urgent need to address the problem of climate change.** Therefore significant investment into technologies that may or may not be viable and economic some decades from now, at the expense of technologies that are closer to viability cannot be justified. Furthermore, if there is a belief that carbon storage is a viable option some decades from now, it will give justification to the continued operation and expansion of the coal and other fossil electricity generators, even before carbon storage is viable. This will therefore, at least in the next decades when action must be taken, result in an increase of C02 emissions.

- **Overall efficiency:** capturing and pumping CO2 through hundreds of kilometres to a suitable storage (sequestration) requires a lot of energy! **The best assessment today is that 8 to 12% of the total efficiency of a coal power plant is lost by capture and storage**. Therefore the gains obtained in the most modern coal power plants through innovation (40 to 45% efficiency) are absorbed.

- Creating a Sustainable Energy Sector: Carbon storage may be a technology that is viable, but it is impossible that it will be practical in all geographical, geological, political and economic conditions.

The public funding of the development of CCS technologies will take away valuable resources from technologies that do create a global sustainable energy sectors, i.e. energy efficiency and renewable energies.

As a consequence, **for the Greens, significant public funding, and in particular through the EU 7th FP should not be made available**.

IPCC report on CCS (pdf)

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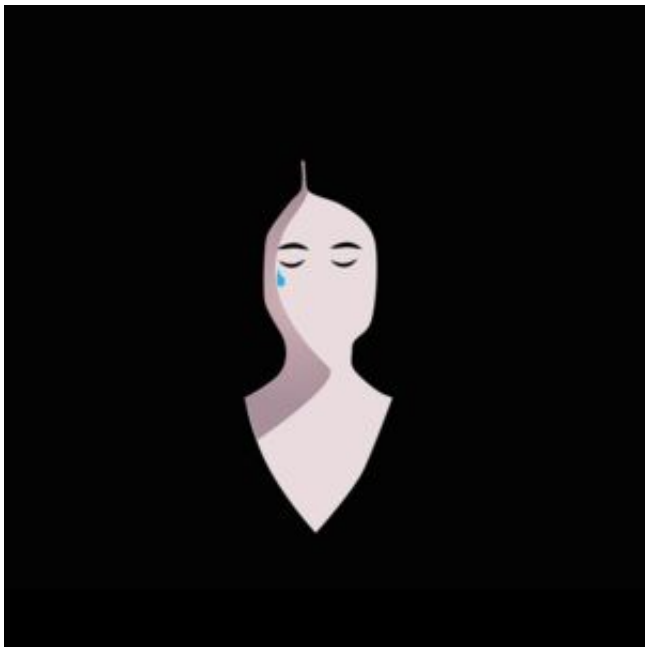

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