BRIEFING PAPER

2 JULY 2013

WWF reaction to the European Commission's *'Consultative Communication on The Future of Carbon Capture and Storage in Europe'*

The European Commission published a communication 'on the Future of Carbon Capture and Storage' on 27 March 2013. This document is WWF's reply to the public consultation that is open until 2 July 2013.

WWF's general position on CCS in the EU

1. **Energy scenarios relying significantly on CCS are inconsistent with current developments:** commercialisation of CCS remains very slow. Nevertheless, decarbonisation scenarios like those in the European Commission's 2050 roadmap frequently include large amounts of CCS. Counting on CCS to mitigate emissions without taking due account of the slow real-world pace of CCS development unrealistically increases the risk of unabated fossil fuel emissions.

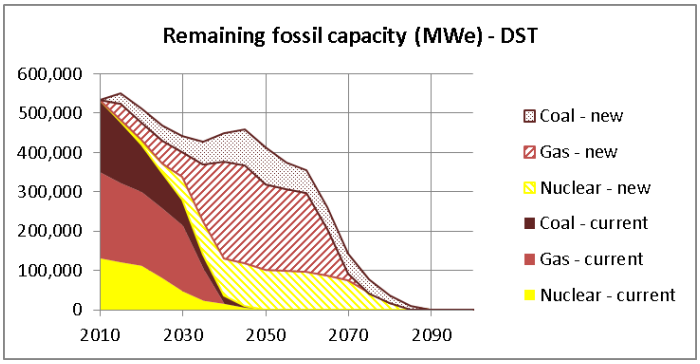

Figure 1: new fossil fuels make up a significant proportion of the Commission's Roadmap 2050 scenarios, including this 'diversified' scenario. If CCS is unavailable then either these assets are stranded, or CO_2 emissions remain high.

2. **A high-renewables pathway is more realistic, and no more costly:** WWF has a 100% renewable energy vision for 2050. This scenario relies on technologies already producing and saving terawatts of electricity every year. We advocate concentrating on the full range of efficiency, renewables, smart grid and interconnection technologies. The EC's 2050 energy roadmap scenarios all have similar costs, whilst the CCS

communication incorrectly assumes high renewables scenarios are more expensive.

3. **WWF supports demonstration of CCS for specific uses:** We support the demonstration and deployment of CCS, particularly for those industrial processes where decarbonisation may be harder to achieve. In the power sector, there may be a limited transitional role for fossil fuels prior to 2050 in certain countries; sustainable biomass power with CCS should be investigated as a way to accelerate CO_2 removal from the atmosphere.
4. **Limited storage space argues for limited CCS:** the amount of pore space practically available for storage will be far lower than the technically available amount because some sites will not be cost effective or enjoy public support. The focus should be on the limited forms of CCS just noted, rather than vast amounts of power plant emissions for fossil fuels that can be replaced by renewable energy.
5. **EU public financial support should be limited:** the NER-300 is suffering from a low carbon price, which further exacerbates a lack of enthusiasm from member states and the private sector to supply co-finance. A higher carbon price, through ETS reform, is key. But beyond this, funding from the private sector, incentivised by both the ETS and an emission performance standard, should bear the primary responsibility for development.

Reactions to specific questions in the Communication:

1) All member states should be obliged to develop **decarbonisation roadmaps** for their full economies, including the power sector, and energy intensive and process industries. This is a better approach than a CCS roadmap, as there are various routes to decarbonisation that may not include CCS.
2) CCS is unlikely to develop with the **ETS-driven CO_2 price** alone, and certainly not at the currently low price levels. Sustained and predictable high prices are needed to give investors the confidence needed to commercialise new technologies. However, it may very well be unrealistic to expect agreement on a ETS system that establish sufficiently high prices.
3) The Commission should propose plant-level **emissions performance standards** applied to both new and existing installations, with restrictions expressed in annual emissions terms that make it feasible for operators either to install CCS or limit their operating hours (e.g. for peaking and balancing). An EPS is superior to a certificate system because the former provides the greater combination of clear direction and flexibility. Furthermore, the interaction with the ETS crediting system, presented as an advantage of certificates, also has potential pitfalls: it may create perverse incentives to influence the price or quantity of ETS credits.

   Long used for other types of air pollutants, EPSs are gaining in popularity for CO_2. They have been implemented by Canada, and in the US by California, Illinois, Montana, New Mexico, Oregon and Washington. The US EPA is now proposing a national EPS. In Europe, The European Parliament supported an EPS

at the time of the NER300 scheme, an EPS is anticipated to be part of the final Electricity Market Reform in the UK, and the European Investment Bank has just proposed an EPS in its draft revised lending strategy. The clarity of direction offered by an EPS to the market, and the ability to help prevent lock-in of long-lived fossil fuel infrastructure is an important complement to other policies like the ETS.

4) **CCS-ready** is a non-term as implemented in Europe. More importantly, utilities and energy intensive industries should face emissions performance standards and carbon pricing, which together provide clear signals on needed technology and investment. The proper emissions performance standard would be set in such a way as to make unabated coal essentially unfinanceable immediately and unabated gas operating for anything other than peaking power infeasible from 2025.

5) **Fossil fuel providers** are potential beneficiaries of CCS storage technology as several have the relevant expertise and patents. An EPS that essentially requires CCS (or a switch to non-fossil alternatives) will be the primary means to mobilise the needed private finance.

6) The primary barrier to **demonstration of CCS** is that it is being pursued independent of a credible approach to reducing carbon emissions by 95% by 2050 and preventing the lock-in of (unabated) fossil fuel technology. The result is a lack of political and financial backing for decarbonisation that is detrimental to CCS along with other technologies – with the low carbon prices impact of the NER300 being a specific manifestation.

7) **Public acceptance for CCS** is low in large part because the proper framework to develop low-carbon options that may include CCS has not been put in place. CCS will rise in awareness and credibility if the perceived need for it – meaning adequate decarbonisation legislation including for the post-2020 period – is put in place, and companies receive clear requirements to decarbonise through an emissions performance standard.

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