

“Science journalists don’t get to witness earlier drafts of history-making because these are part of the peer-review process.” Toby Murcott, page 1054

How air capture could help to promote a Copenhagen solution

SIR — Your News Feature ‘Sucking it up’ (*Nature* **458**, 1094–1097; 2009) reports on the issue of the capture of carbon dioxide from air. This is timely, as in February this year, President Obama and the Canadian Prime Minister, Stephen Harper, agreed to work together on carbon capture and sequestration as part of an effort to build a North American environmental and energy accord. US and Canadian government funding for ‘carbon capture and storage’ (CCS) projects has ballooned during the past six months, and in May the US energy secretary, Steven Chu, announced CCS funding of \$2.4 billion, which specified for the first time “CO₂ capture from the atmosphere”.

Conventional CCS has been used successfully since 1996, but it has many critics. It has been blocked in global climate negotiations and is likely to be a contentious issue at meetings of COP15 — the conference of the United Nations Framework Convention on Climate Change, to be held in Copenhagen in December this year — which will decide on the future of the Kyoto Protocol after 2012.

Opposition to CCS, and support for the attendant ‘cleaner coal’ approach, is motivated by incentives to continue using fossil fuels, rather than making the transition to renewable sources of energy, and by the effort needed to retrofit and clean up existing fossil-fuel plants, which are responsible for more than 40% of global emissions. In new power plants, conventional CCS can at best neutralize carbon emissions.

Air capture could satisfy these critics, as well as potentially strengthening the president’s proposal. The technology is under evaluation by the American Physical Society and is rapidly gaining support in the business community. It will encourage nations to cooperate at global negotiations, including China and developing countries, because the ubiquity of air means that this technology can be used by everyone; small emitters such as Latin America and Africa will be able to decrease their atmospheric carbon beyond what they actually emit. When driven by renewable energy, air capture will help the transition to renewable energy. Incorporating air capture into the Clean Development Mechanism of the Kyoto Protocol would be a big step forwards.

Two footnotes to your News Feature are in order. First, G.C. is co-inventor and co-owner of the air-capture company Global Thermostat’s technology. Second, P.E.’s mention of how much it might cost on a global scale to reduce CO₂ is only an estimate — specific costs for the company’s technology are awaiting data from the commercial demonstration plant that is to be built in the near future.

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