



It's the Society, Stupid!

Communicating Emergent Climate Technologies in the Internet Age

EPRG Working Paper 1606

Cambridge Working Paper in Economics 1610

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Over the past five years, carbon dioxide capture and storage (CCS) technologies has suffered a number of setbacks due to wavering government support, cost pressures and local public opposition. At the same time, the Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) reiterated the importance of CCS in achieving ambitious international climate change goals and the international community has actually increased its stated ambitions, as witnessed by the recent Paris Agreement, which signals the need to aim for 1.5°C temperature rise, which many analyses show can only be achieved with large-scale use of net negative emissions technologies, the most prominent being biomass energy with CCS (or BECCS).

A full-scale global CCS programme would change how economies, societies and energy landscapes would look. Although interest in CCS may be motivated by its cost-effectiveness, the debate about CCS could (and should) be framed in broader terms than simply 'reducing CO₂ emissions' (cost effectively). CCS can alternately be considered a technology, a set of technologies or in broader terms an arrangement involving a certain kind of society. Yet the job of communicating the debate about whether or how to get there appears to have only just begun. Given the stakes involved and the scale of the task to facilitate a genuine and well-informed public debate on the future of CCS, serious gaps still exist in terms of themes, languages, material for target audiences, teaching materials and new media. In particular, we find a near-exclusive emphasis on communicating the *technical feasibility* of CCS,

specifically the processes of capturing and storing CO₂. This focus on engineering processes is necessary but clearly not sufficient since CCS is situated within a wider debate about uncertainties, priorities, policy choices, alternative technologies and societal values. If enlightened debate and sound decisions about CCS are to be made, then this part of the equation needs to be communicated more effectively and systematically.

We present data from a comprehensive survey of websites compiled to assess the state of global CCS communications. Our key empirical finding is that existing communications are techno-centric in their framing, overlooking economic, political and institutional aspects of CCS as a societal arrangement. We also find an overrepresentation of traditionally less trusted actors from business and government (resulting in a pro-CCS bias), rather than by independent academic researchers or NGOs.

Still being debated more than deployed, according to most analysts, CCS remains critical to any serious effort to meet ambitious climate targets. But these emergent technologies have to convince not only in terms of technical efficacy but also in terms of appropriateness (in relation to a wider social context) and most fundamentally in terms of what they even are as technologies. Communicating an emergent technology means not just transmitting knowledge of something pre-existing but constituting the technology in social terms. In practical terms this means that areas where more work is needed include: societal 'fit', issues of cost, comparison with other energy and climate technologies, legal frameworks and the concerns of key constituencies that CCS would need to address. These more critical stakeholders include environmentalists, lay-opinion shapers interested in the economic and legal aspects of CCS, and educational institutions involved in educating future generations of citizens, decision-makers, and scientists and engineers.

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Financial Support

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February 2016

Commonwealth Scientific and Industrial Research Organisation
(CSIRO)

www.eprg.group.cam.ac.uk