Timescapes and CCS projects: Is deferring projects and policies just kicking the can down the road?

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Abstract

Carbon Capture and Storage (CCS) is considered a medium-run option for the reduction of CO₂ and dealing with climate change given the still high cost of renewable energy in combination with deceptively sufficient amounts of fossil fuel. In other words, CCS is a transition measure on the road to a complete sustainable energy regime because from the policymaker’s viewpoint, especially those in countries possessing reserves of fossil fuel, this technology is an easy means for sustainable development compared to other options. In addition, IPCC [1] reported that it is not possible to “limit likely warming to below 2°C if bioenergy, CCS, and their combination (BECCS) are limited”. Nonetheless, in recent years, several notable demonstration, RD&D and large-scale projects have been canceled or postponed, including the “moon-landing”¹ Norwegian CCS project. Although most of the postponements are usually justified tentatively by authorities, it seems many of them are in reality a decision to push the burden to the future. Considering the fact that on one hand the international community has not met the Kyoto protocol goals and on the other hand there is a crucial need for acting against climate change, the increasing trends of cancelation and postponement of the projects add more complication to the issue. These raise some questions about temporal issues. What

¹ http://blog.cleantechies.com/2010/05/03/carbon-capture-delay-norway/
is the importance of temporal factors in CCS development? If CCS is a medium-run option, then, how long will this intermediate stage take? How long a project of medium-run technology can postpone?

This study addresses the above-mentioned questions by focusing on temporal fit or the “temporal connection between institutions and the biophysical systems” [2], and timescapes or the temporal features that show how time influences the way we deal with political, social and environmental problems [3]. Practical regulations, long-term government strategies, demonstration projects and diffusion of mature technologies all work with different conceptions of time – and not just the length of time it takes to implement something. The duration, order, and tempo of events varies - each system has its own particular timescape. Sometimes systems are able to connect and work together like cogs in a machine – but not always.

The objectives of this research are to define the frame (i.e. “in what time frame? - bounded, beginning & end”), timing (i.e. “when? - synchronization and co-ordination”), tempo (i.e. “at what speed? - pace and rate of change”) and duration (i.e. “how long? - extent, temporal distance and horizon”) of policy making and implementation of large-scale CCS projects [4].

We compare the timescapes of high-level scenario and road map work and those of project-level cancellations and analyze the similarities and differences between them. The analysis is based on earlier case studies on the experiences in European countries [5] [6]. We will analyze a varied data set, including 19 semi-structured in-depth qualitative interviews which were conducted with experts in Germany, Norway and Finland, newspaper materials data on Finland and Norway, and policy documents to map the various CCS timescapes they describe, using methods of qualitative institutional analysis. We will use the analysis to put forward an argument on mismatches of timescapes and how they are used. Differing timescapes can sometimes hinder action, but can also be a source of creativity and enable success. We identify the characteristics of situations where CCS was able to use mismatched timescapes – and when problems arose.
References:


http://www.cardiff.ac.uk/sosci/futures/conf_ba_lueneberg170608.pdf
