

CARBON CAPTURE AND STORAGE PROGRAM (CCSP)

SOCIAL ACCEPTABILITY OF CCS TECHNOLOGY IN FINLAND

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INTRODUCTION

Public acceptance and acceptability have been much discussed in relation to different technologies in recent years. One reason for their being in the focus of attention is the slow progress in the commercialization of technologies e.g. due to perceived risks and thus public opposition. (see Gupta et al., 2011.)

In the frames of the Finnish climate and energy policy interest in carbon capture and storage (CCS) technology has been considered and its potential has recently been evaluated (Teir et al., 2010) but CCS is scarcely discussed in Finland. The absence of a wider societal debate could be a problem if a CCS project were to be planned in Finland.

The aim of the study is to analyse stakeholders' concerns regarding CCS technology in Finland.

SOCIAL ACCEPTABILITY

In this study acceptability refers to the willingness to consider the technology in question as a viable alternative, whereas acceptance refers to the formal decision to implement the proposal. Technology may be technically feasible but not meet the test of social acceptability. Acceptability is seen as a continuum, and thus may change over time. (Wolfe et al., 2002; Flynn, 2007.)

Three dimensions of social acceptability were distinguished in the analysis of the stakeholder interviews (Fig. 1).

STAKEHOLDER INTERVIEWS

The study is based on interviews with twelve Finnish stakeholders representing: energy industry, authorities, NGOs and a research organization.

Stakeholder is defined as an actor with a professional and/

or work-related interest in CCS. A stakeholder has a defined agenda or set of preferred policy objectives in mind when evaluating CCS. (van Alphen et al., 2007.)

RESULTS

Deployment of CCS was deemed unlikely in Finland, e.g. due to the Finnish energy production structure. The stakeholders' concerns regarding CCS technology were as follows:

Socio-political dimension

- Diminished energy efficiency due to CCS technology
- Uncertainty about climate policy in general
- Uncertainty about CCS technology
- Absence of geological storage for captured CO₂ in Finland
- Legislation, regulation and agreements concerning CCS incomplete
- Regulation should not hinder R&D of new technologies
- Morality of exporting the captured CO₂ and supporting coal fired industry
- Environmental and health risks regarding deployment of CCS mentioned, but not at the top of the list

Market dimension

- Costs especially due to transportation and diminished energy efficiency
- Investments in R&D and implementation of CCS could displace investments in other mitigation measures deemed more efficient than CCS
- Over-confidence about diminishing costs of CCS in the future

Community dimension

- Not seen as a major problem, although local impacts e.g. on economics and land use mentioned

