

## ESKOM COMMENTS

### POSSIBLE IMPLICATIONS OF INCLUSION OF CCS AS CDM PROJECT ACTIVITY

The comments provided respond to the content in Table 1 of EB 50 Report, Annex 11 p. 1-5:

#### **Technical Issues, Negative:**

1) While there may not be one single list of detailed criteria for the assessment of the site characterisation in use, this may be seen as a regulatory gap rather than a technical limit. There has been substantial research, for example, the work that the Carbon Sequestration Leadership Forum, the Global Carbon Capture Storage Institute and the IEA's Greenhouse Gas Reduction Programme have undertaken which could provide the basis for such a list.

Amongst others these include:

- A Comparison between Methodologies Recommended for Estimation of CO<sub>2</sub> Storage Capacity in Geological Media
- Risk Assessment Tool on the IEA GHG programme's website including other numerous technical reports

2) The comment that "carbon capture and storage does not necessarily mean a long term emission reduction because the storage might not be permanent" is actually a concern that affects many different types of potential CDM projects. This concern should not prevent CCS being accepted under the CDM but the measurement, monitoring, verification, accounting and liability aspects simply need to be designed to mitigate the risk.

3) The comment is made that the "stored carbon is not measured but modelled" but all projects that "avoid emissions to atmosphere" rely on modelling to predict the inferred amount of carbon removed from the system. For example, with renewable energy projects, the predicted generation is modelled and even though the actual generation can be measured subsequently, this remains a proxy for the actual CO<sub>2</sub> avoided. In the similar manner as above, an appropriate measurement and verification (M&V) methodology is required.

4) "Long-term" benefit of emissions reduction needs to be defined. For example is it 1000 years?

#### **Environmental Issues, Negative:**

1) The reasons speculated as causing difficulties for the EIA can also be addressed. Lack of experience is an issue in developing countries irrespective of the project, projects with long life-spans are not uncommon and the EIA methodology (at least in South Africa) caters for uncertainty/ probability approaches.

2) International organisations may register as Interested and Affected parties (IAPs) for an EIA if they can demonstrate 'locus standi' but in fact, many international organisations already have local offices in many of the potentially relevant countries. Does South African legislation allow participation of I&APs?

#### **Methodological Issues, Negative:**

Possible objections to inclusion of CCS under CDM on methodological grounds appear to be largely based on:

1) Concern that a plume could migrate across international boundaries; however, there is an existing regulatory system that can cater for transboundary transport of pollutants.

2) Concern that the long time frame contemplated implies the need for a dynamic (and ongoing) monitoring approach – is addressed in the introductory remark on technical issue.

#### **Legal Issues, Negative:**

1) The concerns are not unique to CCS projects and mechanisms exist for addressing them. Particularly, project approval can be subject to accountability clauses for long term liability having been established. For example, National Governments still have to approve the CDM projects (via the DNA) as well as other regulatory and licensing processes.

2) This surely endangers any CCS CDM credits in 3rd world countries, where long-term political tenure cannot be guaranteed?

#### **Market Issues, Negative:**

1) It is actually a hope that CCS projects would increase the fluidity of the CDM markets and also reduce the overall cost of climate change mitigation - that is the purpose of a carbon credit market after all. CDM projects can always be expected to benefit larger emitting countries since this is where mitigation is required. If a project is not additional, it is not going to qualify under CDM and contrary to encouraging CO<sub>2</sub> breakthrough during EOR, placing a value on the CO<sub>2</sub> will encourage project developers to ensure that breakthrough is avoided.

2) In South African situation, where the storage atlas has not been released, it is presumed this then limits RSA options to Mossel Bay offshore reservoirs, or Mozambique/Namibia/Angola? If one presumes CCS/EOR will only follow after the oil resource production has been nearly exhausted, then this leaves only Mossel Bay as potential site.

#### **GENERAL COMMENTS**

- This EB50 Report paints a bleak picture for CCS CDM right now. A pilot site is essential to test all the uncertainties on a small and manageable scale.
- General issues to consider: lack of experience, risk of seepage, stored carbon is modelled not measured, possible international consequences, several injection points from several projects in different time frames, protocols for long term monitoring are not established, host country liability, changes in the institutional structure, effect on CER prices, effect on development and deployment of renewable energy and energy efficiency projects, benefit to large fossil fuel producers/ users, EOR does not need CDM benefit as could bias CDM objectives.