

Public Perception On Carbon Capture & Storage

- CO₂ has been injected into geological formation for various purposes
- The long term storage of CO₂ is however a relatively new phenomenon/concept
- Storage of CO₂ in deep geological formations that must be ideal & suitable
- Perceptions are wide and varied, ranging from initial scepticism to enthusiasm
- Applications to modern conventional plants could indeed reduce CO₂ emission to the atmosphere by approximately 80 – 90 %, relative to power plants without CCS components.
- **However!**

Energy Requirements of CCS

- Capturing and storing CO₂ requires much more energy & increases fuel needs of a coal fired plant with CCS by 25 – 40%, thus resulting in an energy penalty that increases the CO₂ PPM beyond the current 380
- These & other systems cost are estimated to increase costs of energy from a new power plant with CCS by 21-91 %.
- These estimates would apply to purpose built plants that are near a storage location
- Applying the technology to pre-existing plants or to plants that are far from storage location will definitely be more expensive.

Environmental Effects of CCS

- The environmental effects from use of CCS arise during power production, CO₂ Capture, transport and storage.
- Additional energy is required for CO₂ capture, leading to substantially more fuel being used, depending on the plant type
- According IPCC, CO₂ is drastically reduced (though never completely captured), emissions of air pollutants increase significantly, generally due to the energy penalty of capture.
- Hence , the use of CCS entails a reduction in air quality.

Environmental NGO Concerns

- Most environmental NGOs are **very sceptical** about CCS
- The fear is that CCS merely serves to prolong the world's dependency on fossil fuels & will drag money away from crucial investments in renewable energy (wind & solar)
- CCS is still largely unproven, expensive and potentially dangerous technology that serves as an excuse to continue building coal plants under the guise & promise that they are **“capture –ready”**
- **CO2 is perceived as the waste that is & thus the existing rules on burying waste at sea or underground should apply.**

Friends of the Earth

- Call for reductions in the world demand for energy generated through fossil fuels first,
- Develop a legal regulatory and liability regime to govern
- Calls for the adoption of international alternatives along CCS, including renewables, carbon free transport & improved energy efficiency

Legal Uncertainties

- There exists potential legal challenges to CCS(Kyoto & other)
- An important issue is whether CO₂ should be considered as the waste that bit is
- Property rights and liability issues in particular are likely to figure amongst the most difficult challenges
- Questions here relate to ownership of stored CO₂ and responsibility in case leakage.

Public Confidence In CCS

- Public support for CCS is very essential if the technology is ever to be rolled out on a large scale.
- The public around the world is very poorly informed & rather sceptical
- CCS is also not favoured as much as wind, wave, tidal and solar energy, but preferred to nuclear
- Public consultation in the EU in 2007 on low carbon technologies revealed significant scepticism about the potential of CCS & other technologies to fight against climate change,.

The Way Forward

- Where or which way do we go from here ?
- Adaption is not an option but the only way to go