



Commission for Energy Regulation

An Coimisiún um Rialáil Fuinnimh

CARBON CAPTURE AND STORAGE REGULATORY AND LONGTERM ISSUES

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OUTLINE

- Carbon Storage Directive
- Regulation of Storage
- Regulation of Transportation
- Regulation of Generation
- Conclusions

CARBON STORAGE DIRECTIVE

- ❑ Directive establishes a legal framework for environmentally safe geological storage of CO₂.
- ❑ Key Components of CCS are: Storage, Transport and Generation. Directive has mandatory requirements on regulation and monitoring of these.
- ❑ If CCS pursued, there will be a need for a number of competent authorities to enable effective implementation of the Directive. The authority with relevant expertise should be given the appropriate tasks.

REGULATION OF STORAGE

- The identification of suitable storage sites is a key first step.
- Directive sets out mandatory requirements in relation to: Exploration Permits, Selection of storage sites and Storage Permits. These to be formally established as well as implemented by the competent authority.
- Storage sites. A site may only be selected if there are no significant risks of leakage, environmental or health impacts.

- ❑ Storage Permits - are mandatory under Directive. Similar to generation licences, the permit is required to prove technical competence of the operator, security of storage, the monitoring plans and measures to prevent irregularities and details of financial security.
- ❑ Competent authority assesses applications and issues storage permits.

REGULATION OF STORAGE

- ❑ The Operator of storage site will be required to provide financial security to take account of changes to assessed risks and make financial contribution to cover monitoring costs for at least 30 years.
- ❑ Regulatory regime will have to be established to manage the mechanism

REGULATION OF STORAGE

- Directive requires Monitoring.
- Operator has to monitor injection facilities, the storage complex and, where appropriate, the surrounding environment.
- The monitoring plan has to be submitted to and approved by the competent authority.
- Site Inspections - routine inspections are required at least once a year and reports made available publically.
- Competent Authority will need to formally implement the monitoring requirements.

REGULATION OF TRANSPORTATION

- Economic Model to regulate the pipe line and its operation is likely to be similar to gas pipe lines with special emphasis on route of pipe line, transportation and leakage of CO₂. The owner and operator of the pipe line will need to be established. Competent authority to regulate and monitor will be required
- Construction will need to be according to approved guidelines. The determination of suitable transportation route, and construction of pipeline could be challenging.eg planning and consents lead times

REGULATION OF TRANSPORTATION

- Third Party Access-Member States are required to take measures to ensure that potential users are able to obtain access to transport networks and to storage sites.
- Directive requires establishment of dispute settlement arrangements, including an authority independent of the parties with access to all relevant information, to enable disputes relating to access to transport networks and to storage sites to be settled.
- Cost recovery mechanism also to be determined.

Directive requires:

Member States shall ensure that operators of all combustion plants with a rated electrical output of 300 megawatts or more for which the original construction licence or, in the absence of such a procedure, the original operating licence is granted after the entry into force of Directive 2009/31/EC of the European Parliament and of the Council of 23 April 2009 on the geological storage of carbon dioxide, have assessed whether the following conditions are met:

- suitable storage sites are available,*
- transport facilities are technically and economically feasible,*
- it is technically and economically feasible to retrofit for CO₂ capture.*

- The competent authority will have to ensure that suitable space on the installation site for the equipment necessary to capture and compress CO₂ is set aside.
- The competent authority is required to determine whether the conditions are met.
- Will have to formally establish and implement these requirements in a manner that is transparent and clearly understood by applicants.

CONCLUSIONS

- Competent Authority for various aspects yet to be determined
- Directive very specific on key aspects eg: Storage and Transportation.
- Criteria and Assessment criteria are specified in Directive but will require formal implementation and administration processes to be established by the regulatory body.
- Regulatory authority will require competence in the relevant field and resources to establish and implement the requirements of the Directive.
- Once a decision to pursue CCS is made, engagement with public will be required.

CONCLUSIONS

- ❑ Where more than one competent authority is designated, Directive requires that Member States establish arrangements for the coordination of the responsibilities of the authorities.
- ❑ it is likely that the authorities already in existence will be in a position to take up some or all of the roles.
- ❑ Directive has to be transposed into national law by 25th June 2011.

CONCLUSIONS

- Key question is how will CCS be paid for?
- If the process of capturing the CO₂, transporting and storing it makes the venture uncompetitive in the market, the general electricity consumer or taxpayers will have to meet the costs.
- Who will own and operate the transport and storage facilities?
- These issues need to be addressed.