Carbon Capture and Storage
Legal Perspective of CCS in Europe and Germany

Dr. Mathias Hellriegel LL.M.
Berlin, Juni 2010
Agenda

- Why is there a need for a CCS Act?
- Until when do we have to implement a CCS Act?
- Which provisions should a CCS Act contain?
- What is in the current discussion?
Why is there a need for a CCS Act?

- **Current environmental law covers CCS only rudimentary**
  - National and European waste, mining and water law apply
  - If waste law applies to CO2 underground storage is prohibited
  - Under mining law CCS may be permitted when CO2 is used for enhancing oil or gas drilling ("enhanced oil/gas recovery")
  - According to water law storage of CO2 should be prohibited in aquifers but may be permitted in oil and gas fields
Why is there a need for a CCS Act?

- **Current law as basis for investments?**
  - current law is sufficient for pilot installations (Vattenfall/Schwarze Pumpe) as well as for research and development projects (CO2Sink/Ketzin)
  - however, current environmental law does not cover the specific CCS technology and is therefore only rudimentary

- **Conclusion**
  - for industrial use of CCS a specific legal framework is needed to provide legal certainty and investment security as well as to ensure a high environmental status
Until when do we have to implement a CCS Act?

01/2008 European Commission presents Draft CCS Directive


04/2009 German Government adopts Draft CCS Act
CCS-Directive passes European Council

06/2009 CCS Directive enters into force
German Draft CCS Act fails in the legislative procedure

09/2009 German Election (discontinuity of all draft acts)

06/2011 Implementation deadline for CCS Directive
Until when do we have to implement a CCS Act?
Until when do we have to implement a CCS Act?

“We will implement the CCS Directive, shortly, providing for capture, transport, and storage of CO2“
Until when do we have to implement a CCS Act?

„... the state government advocates for the gradual conversion to CO2 low power plants...

... new lignite power plants shall from 2020 on only be permitted with significantly reduced CO2 emissions ...

The coalition supports CCS research and development projects in Brandenburg.“
Until when do we have to implement a CCS Act?

„Christian Democrats and Liberals object to CO2 storage in Schleswig-Holstein. ... 

Schleswig-Holstein should be empowered to decline storage permits.“
Which provisions should a CCS Act contain?
Which provisions should a CCS Act contain?

**Capture-Readiness**
new large combustion plants (> 300 MW) must have suitable space for capture equipment and must have assessed availability and feasibility of CCS-retrofitting

**CO2 capture part** of the permission process of **power plants**, according to the Federal Immission Control Act

**Integration into the Emission Trading System**

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**Eggers Malmendier**
Rechtsanwälte
Which provisions should a CCS Act contain?
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Permission
fast track procedure following the permission process for gas pipelines according to the law on the energy industry
Which provisions should a CCS Act contain?

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[Images of capture, transport, and storage processes]
Which provisions should a CCS Act contain?
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- Nationwide analysis, assessment, and registration of potential storage sites by Federal Authorities.

- **Exploration permit**
  - for the assessment of the underground as for its suitability as storage site.
  - grants (i) exclusive right for the assessment of this sites, (ii) priority right for subsequent storage permit, and (iii) excludes conflicting uses.
  - by the state authorities according to state law.
Which provisions should a CCS Act contain?

**Permission requires:**
- „Public good“ not impaired
- No prevailing private interests
- Long time security is ensured
- No hazards for environment, life and health
- Precautionary principle

**Application requires:**
- Proof of safety
- Monitoring concept
- Closure and post-closure concept
- Proof of financial security
- Environmental Impact Assessment

by the state authorities after consultation of the European Commission
Which provisions should a CCS Act contain?

**CO2 streams:**
- Consists overwhelmingly of CO2
- Only inevitable additives
- Compatibility with storage site
- No waste added

**Capture**

**Transport**

**Storage**

**Assessment**

**Permit**

**Operation**

**Closure**

**(Dynamic) Operation Duties**
- Operator must monitor injection and storage
- Operator must immediately notify the authority and take corrective measures in case of leakage
- Authority may take corrective measures itself and recover the costs incurred
- Regular reporting and inspection duties and continuous revision and updating of all concepts
- Environmental Liability Directive applies for „local“ damage; Emissions Trading Scheme for „global“
Which provisions should a CCS Act contain?

- **Close down** as soon as permitted amount of CO2 has been injected
- Close down has to be permitted itself and is followed by the **post-closure regime**
- Closure and post-closure have to be carried out according to updated closure concepts

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**Transfer of liability**
- to the state after 30 years (EU: 20 years)
- closure plan has been fulfilled
- all evidence indicates complete containment
- financial security for aftercare
Which provisions should a CCS Act contain?

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**Fair and open access to transport networks and storage sites**
- according to objective criteria
- fair, non-discriminatory, and transparent conditions
- mandatory cooperation for efficient connection and access
- obligation to provide sufficient information

**Grounds for refusal**
- lack of capacity or lack of connection (but obligation to make the necessary enhancements)
- impossible for legal reasons
- unreasonable disadvantages for the operator
What is in the current discussion?

- When will the new government present a draft CCS Act?
- Best available technology vs. state of the scientific and technical knowledge
- Financial compensation for states/local authority storing CO2?
- CCS Act vs. CCS Demonstration Act vs. Lex Vattenfall vs. CCS Directive?
- Veto rights for states for CO2 storage?
Thank you very much!
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