

Carbon Dioxide Capture and Storage in Switzerland

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- Switzerland may build one or more large fossil fired power plants in the next few years
- CO₂ capture and storage is a potential route to de-carbonizing fossil fuel fired power plants
- Switzerland is not participating in any of the CO₂ capture and storage demonstration projects
- The Swiss government does not provide funding for CCS projects
- Switzerland currently has no legislation covering CCS
- Valorization of captured CO₂ would be a breakthrough

- Develop technologies for affordable CO₂ capture – low cost/energy penalty
 - The risk of scaling from pilot to demonstration to industrial remains
 - Power plant energy loss from CCS 20% for demonstration project coming on line in 2015. Target < 15%
- Establish scientific and technical basis for safe, long-term geological storage
 - Risk management and sharing
- Improve the efficiency and reliability of fossil fuel systems to offset capture penalty and added complexity

- Provide a regulatory framework
 - Storage permit
 - CO₂ stream composition
 - Monitoring and verification
 - Closure and post-closure obligations
 - Transfer of responsibility
 - Financial security and financial transfer

- Provide funding for development and industrial scale projects
 - Economic stimulus
 - Clusters are required – concentration of fossil fired power plants and heavy industry close to a storage site.
- Private equity funding available for enhanced oil recovery projects

- Need for more and better international cooperation
 - Coordination and exchange of information and experience
 - Identification of best practice

- Onshore storage acceptance
 - Public understanding
 - Collective and coordinated communication
 - Information from credible sources
 - Ruled out in the Netherlands

- Onshore CO₂ transport
 - Is this a Swiss problem or an EU problem?
 - How to create an integrated network?
 - Clusters are required

- Lack of funding and incentives
- Resistance to all types of thermal power production
- Therefore no national strategic vision of the role of CCS
- No regulatory framework for CO₂ capture, transport or storage
- How long would it take to approve a storage site – analogy with nuclear waste storage
- Long permitting procedure in Switzerland
- Swiss finish – CO₂ capture and compensation!

Thank you