

FEEDBACK SEMINAR DTI 15/January/03

CO₂ Capture and Storage DTI Mission to USA and Canada

Key Messages, Opportunities and Recommendations

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KEY MESSAGES

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- **Fossil fuels continue as important part of fuel mix**
 - clean use increasingly accepted as a critical issue
 - integrated strategy of CO₂ mitigation through increased efficiency and zero emission involving CO₂ capture/storage
 - complementary approach to renewable energy technologies and link to hydrogen generation/use/infrastructure

- **Both Canada and USA are linking CCT Demonstration with CO₂ Capture and Storage**
 - part of a long term strategy for Carbon Management
 - recognition of need to introduce `carbon saving` based measures to encourage take-up of new technologies
 - looking to establish demonstration plant funded internationally and sited in North America

KEY MESSAGES

- **Accepted need for high co-ordination and integration between industry/government/academia**
 - different funding bodies, both public and private
 - robust partnerships and networks
- **Accepted requirement for a protocol for CO₂ Capture and Storage**
 - strong lead in Canada
 - legal issues associated with storage a major matter
- **Existence of active public awareness schemes**
 - informed public debate
 - individual responsibility

KEY MESSAGES

- **Enhanced Oil Recovery (EOR) using CO₂ is established technology**
 - 20 years of experience in pipeline transportation
 - volumes and distances commensurate with North Sea
 - experience of CO₂ capture at large scale and with flue gas
 - establishment of long term contracts between suppliers/users

- **Financial incentives are critical in promoting EOR**
 - strong parallel between Texas in '70s and North Sea now as oil fields enter final phases of production
 - long term incentives essential
 - helps maintain security of supply and provide extra revenue

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OPPORTUNITIES

OPPORTUNITIES

- **Technology**

- Post Combustion Capture Development

- Regina University in Canada utilising new laboratory facility and associated pre-commercial test centre at Boundary Dam PS

- Oxy-Fuelling Development

- collaboration with CANMET Canadian initiatives

- Pre Combustion Capture Development

- identification of least cost route at large scale commensurate with North Sea application of CO₂-EOR : link to CENS project ideas

- Optimisation of CO₂-EOR and CO₂-ECBM

- Regina University link

- Advanced Power Generation/CO₂ Capture and Storage

- US UK Energy Research Agreement including Fossil Fuel

OPPORTUNITIES

- **International Demonstration**

- Weyburn CO₂ Monitoring and Storage Project
- US CCPI/Vision21/Clean Coal Improvement Programme
- Alberta RC/CANMET ECBM Activity
- Canadian Clean Power Coalition

- **Techno-economic/Strategic Studies**

- UK North Sea CO₂-EOR Economics Research Topics and Resources using experience of Canadian Energy Research Institute
- Involvement with Canada on development of CO₂ Capture and Storage Protocols

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RECOMMENDATIONS

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- **Establish long term strategy for carbon management**
 - embrace fossil fuel as well as other energy technologies
 - develop route maps for fossil fuels covering mitigation through increased efficiency through to low and zero emission power, including capture and sequestration of CO₂
 - CO₂ C&S/EOR/ECBM all enhance security of supply
- **Ensure greater co-ordination and integration of UK energy research, development and demonstration**
 - within and across Government Departments and programmes
 - between Government, industry and research community
 - establish high quality national energy programmes
 - gain maximum benefit from expanded role in existing and new international initiatives (EC-FP6, IEA-GHG, IEA-ZETS...)

RECOMMENDATIONS

- **Introduce correctly targeted market based measures/incentives for technology take-up**
 - consistent policy to give sufficient confidence to underpin private sector investment and RD&D
 - in-line with research and technology programmes
 - include fossil fuel and CO₂ capture and storage
- **CO₂-EOR a route to establish basis for CO₂ storage**
 - set a framework to extend life of North Sea reserves using EOR to stimulate a market for CO₂
 - maintain/up-rate pipeline infrastructure in the North Sea
 - take advantage of `window of opportunity` in next decade

RECOMMENDATIONS

- **Work up the case for demonstration of clean fossil fuel power plant demonstration**
 - engineering studies to set the context for CO₂ sequestration ready technologies
 - complementary to other international demonstration initiatives
- **Urgently address the CO₂ protocol issue**
 - legal aspects of storing sub-sea will be critical
 - join international activities being led by Canada
 - includes fossil fuel and CO₂ capture and storage
- **Establish an active public awareness campaign**
 - relationship with the Global Climate Change debate
 - put into the full sustainable future context

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**CO₂ Capture and Storage
DTI Mission to USA and Canada
27/October - 7/November/02**

**Report will be issued for end of Jan/03 and be on the
APGTF website : www.apgtf-uk.com**

THANK YOU FOR YOUR ATTENDANCE

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Department of Trade and Industry