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- Update on Project Classification
- Review of Previous CSLF Meetings
- Update on Upcoming CSLF Events



# **Update on Project Classification**

**Project Classifications** 

- 1. Active (24)
- 2. Completed (9)
- 3. Withdrawn by Sponsor (5)
- 4. Inactive (1)

### **Project Score Sheet Summary**



#### Active

- CANMET Energy Technology Centre (CETC) R&D Oxyfuel Combustion for CO<sub>2</sub> Capture
- CCS Bełchatów Project
- CCS Rotterdam
- CGS Europe Project
- CO<sub>2</sub> Capture Project Phase 3
- CO2CRC Otway Project
- CO<sub>2</sub> Field Lab Project
- CO<sub>2</sub> GeoNet
- CO<sub>2</sub> Separation from Pressurized Gas Stream
- CO<sub>2</sub> Technology Centre Mongstad Project
- Demonstration of an Oxyfuel Combustion System
- Fort Nelson Carbon Capture and Storage Project

- Geologic CO<sub>2</sub> Storage Assurance at In Salah, Algeria
- Gorgon CO<sub>2</sub> Injection Project
- IEA GHG Weyburn-Midale CO<sub>2</sub> Monitoring and Storage Project
- ITC CO<sub>2</sub> Capture with Chemical Solvents
- Lacq CO<sub>2</sub> Capture and Storage Project
- Quest CCS Project
- Regional Carbon Sequestration Partnerships
- Rotterdam Opslag en Afvang Demonstratieproject (ROAD)
- SaskPower Integrated CCS Demonstration Project at Boundary Dam Unit 3
- Zama Acid Gas EOR, CO<sub>2</sub> Sequestration, and Monitoring Project
- Zero Emission Porto Tolle Project (ZEPT)

#### **Project Score Sheet Summary**



- Alberta Enhanced Coal-Bed Methane Recovery Project
- CASTOR
- China Coalbed Methane Technology/CO<sub>2</sub>
  Sequestration Project
- CO<sub>2</sub> Capture Project Phase 2
- CO2STORE

- Dynamis
- ENCAP
- Frio Brine Pilot Project
- Ketzin Test Site Project (formerly CO<sub>2</sub> SINK)
- Regional Opportunities for CO<sub>2</sub> Capture and Storage in China

#### **Project Score Sheet Summary**



#### Withdrawn by Sponsor

- CCS Northern Netherlands Project
- CO<sub>2</sub> Storage in Limburg Coal and Sandstone Layers Project
- Heartland Area Redwater Project (HARP)

- TX Energy Carbon Management and Gasification Project
- ZeroGen Project



#### Inactive

 Feasibility Study of Geologic Sequestration of CO<sub>2</sub> in Basalt Formations of (Deccan Trap) in India Project





# **Review of Previous CSLF Meetings**

- 1. GCCSI/CSLF Technical Workshop on Project Integration (London, Nov. 2011)
- 2. CCUS Financing Roundtable (Paris, Jan. 2012)
- 3. Capacity Building Workshops (Mexico City, Mar. 2012)



London, United Kingdom November 3, 2011

- Approximately 50 Attendees
- Interactive discussions Among Participants
- Open Panel Discussions on Key Integration Themes



London, United Kingdom November 3, 2011

- Integrating a Capture Facility into a Host Plant
- Integrating the CCS Chain Adding Transport and Storage
- A Commercial and Management Perspective

#### Presentations available at:

http://cdn.globalccsinstitute.com/sites/default/files/publications/33016/gccsicslf-thematic-workshop-ccs-project-integration-final-feb-2012-v2.pdf http://www.cslforum.org/meetings/workshops/technical\_london2011.html



London, United Kingdom November 3, 2011

**Highlights of Workshop Discussions** 

- First large scale demonstration plants focus on "Making CCS Work at Scale"
- Real innovation was something for "next of a kind" projects
- Importance now is to strike proper "balance between plant operation and integration"

### c c c b c n sequestration leadership forum

## Global CCS Institute/CSLF Technical Workshop on Project Integration

London, United Kingdom November 3, 2011

#### **Highlights of Workshop Discussions**

- More work is needed:
  - Plant heat (and cooling) in the CO<sub>2</sub> capture process
  - Integration of environmental control systems (SOx, NOx, and CO<sub>2</sub> removal) to maximize efficiency
  - Improvement of options for operational flexibility in conjunction with CCS System reliability
  - Impacts of CO<sub>2</sub> compositions and impurities for CCS operations and transportation systems
  - Identify and understand the "scale-up risks" of CO<sub>2</sub> capture processes



London, United Kingdom November 3, 2011

#### **Highlights of Workshop Discussions**

- Key to success:
  - Intensive collaboration and communication (Need for the project team to "be in the same tent")
  - Identify the risks and rewards in CCUS projects from the start
  - Risk of the private sector and the role of government in derisking a project
    - Storage is on the critical path recommend that storage be secured (characterized and permitted) before commencing on a capture FEED study
    - Recommend a portfolio of storage options from the start of the project to help manage risk



London, United Kingdom November 3, 2011

**Outcome of Workshop Discussions** 

- Incorporate information into upcoming events
- Online CCS project management guide
- Focus on commercial and financial issues related to CCS project development
- Study business cases for CCS projects

# **Capacity Building Program Events Held in Mexico**

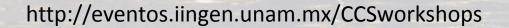


In order to promote interest in the Academic Community, two Capacity Building workshops were carried out at the end of March:

- Geological Storage of CO<sub>2</sub> from March 21 23, 2012
- CO<sub>2</sub> Capture on March 28 30, 2012

http://eventos.iingen.unam.mx/CCSworkshops

# **Mexico** CO<sub>2</sub> Storage



Geo

Agenda

program

CO Sectoria toroase to recovery e





#### **Mexico CO<sub>2</sub> Capture Workshop**





# **Upcoming CSLF Events**

- 1. Risk and Liability Workshop (Paris, July 2012)
- 2. Capacity Building (Brazil, Aug. 2012)
- 3. Capacity Building (China, Oct. 2012)
- 4. CSLF Annual Meeting (Perth, Oct. 24-26, 2012)