

## **IEF- Global CCS Institute Symposium**

“Challenges and the way forward in accelerating CCS development and deployment, in particular in oil and gas producing countries”

27-28 September 2009, China World Hotel, Beijing, China

### **Concluding Statement by IEF Secretariat and Global CCS Institute**

The IEF - Global CCS Institute symposium was held in Beijing, 27-28 September 2009, hosted by NDRC-ERI, with the participation of representatives from oil and gas companies, technology and service providers, research centres, financial and international institutions and representatives from producing and consuming countries, from developed and developing countries.

This symposium was held following the recommendations of the 11<sup>th</sup> IEF which concluded that “a sustainable energy future implies efficiency improvements, technological advances in both production and consumption of fossil fuels, and development of alternative low-carbon energy sources”. IEF Ministers noted that CCS is an important option to reduce GHG emissions from fossil fuels.

This symposium represents a strategic step in enhancing the producer-consumer and industry-government dialogues for the reduction of barriers to commercial scale CCS and provides messages to the upcoming IEA and CSLF ministerial meetings in October 2009, Members’ Meetings of the Global CCS Institute in Paris in November 2009, the UNFCCC meeting in Copenhagen in December 2009 as well as the 12<sup>th</sup> IEF in Mexico in March 2010.

Symposium participants discussed the current state of CCS development and deployment and the potential for CCS to be deployed in conjunction with enhanced oil recovery (EOR). They reviewed critical issues related to CCS, exchanged views on how to accelerate its deployment, and examined ways and means to enhance cooperation and partnerships between all stakeholders. They made the following statements and recommendations:

1. In a carbon-constrained world, the issue of global energy security is of utmost importance given the level of projected long-term energy demand and continuing dominance of fossil fuel in the future energy mix. The sustainability of fossil fuel production and consumption, especially with regard to environmental footprint is an issue of common concern and global importance.
2. New, coordinated and cohesive policies must be implemented and concrete actions taken to curb GHG emissions. The success of any effective global climate-change strategy will depend on strong, co-ordinated and sustained commitment from the major fossil fuel producing and consuming countries. It was acknowledged that many countries, including China, have already undertaken strong GHG reduction policies.
3. CCS is a key GHG reduction technology given its potential to achieve cuts in CO<sub>2</sub> emissions from fossil energy. The deployment of CCS in conjunction with enhanced oil recovery (EOR) is of particular interest not least because it may prove to be a catalyst and stepping stone for accelerating commercial deployment of GHG reduction technology.

CCS deployment, where do we stand?

4. The progress of CCS to date is encouraging; however, there are still a number of social, technical, economic and legal barriers to large scale CCS deployment, particularly regarding its cost, energy consumption, knowledge sharing challenges and infrastructure requirements for integrated systems. With regard to the legal

barriers, the recent example of the Australian government accepting the long term liability of CCS is an important step forward and needs following. A clear regulatory framework is needed to provide business certainty and mechanisms developed to reduce lead times in proving up appropriate storage sites.

5. A number of initiatives and activities are underway to support widespread deployment of CCS technology including CCS research and development, construction of pilot-scale CCS demonstration projects and the development of directives and regulatory frameworks. Greater commitment to full scale demonstration is needed to accelerate commercial deployment of CCS.
6. CCS stakeholders must better address public concerns and perceptions and invest more to educate and communicate with the general public in an objective way on the importance of CCS deployment to build acceptance. Members of the Global CCS Institute\* will meet in Paris this November to establish a common approach to this necessary work and to knowledge sharing. Existing pilot plants, particularly those associated with EOR, provide good starting points for communicating the feasibility and value of CCS.

Combined with enhanced oil recovery, CCS is a double win option

7. CCS technology used in conjunction with carbon dioxide/enhanced oil recovery (CO<sub>2</sub>-EOR) is a “double-win” option as it reduces GHG emissions while increasing recoverable reserves in mature oil fields, contributing to global energy security.
8. The oil and gas industry’s knowledge and experience in EOR and gas transport and storage can be leveraged to accelerate CCS deployment. Selection of adequate sites needs appropriate attention.

Enhanced cooperation and dialogue to promote CCS

9. Efforts must be made to reduce CCS costs by a significant amount to bridge the sizeable economic gap through increasing investment in applied R&D, increasing knowledge sharing and building capacity to achieve greater efficiency, breakthroughs and technological advancement and provide effective incentives to industry. There is a need for more large scale demonstration projects to gain necessary experience and international partnerships to help CCS become commercially viable.
10. Accelerating CCS deployment requires the joint and coordinated efforts of all stakeholders, to address existing barriers, to develop effective policies and measures and to propose steps for large scale implementation through international collaboration. A key factor will be to establish an effective price for carbon. This requires a strong leadership role from governments.
11. Cooperation between producing and consuming countries, developed and developing countries, within and across industry and government is a prerequisite to the acceleration of CCS deployment on a commercial scale. Development of business cases and international mechanisms for funding deployment of CCS in developing countries are key elements that should be supported in future Ministerial meetings to provide greater predictability for industry.
12. CCS should be included as soon as possible in the Clean Development Mechanism and future mechanisms, as it can accelerate CCS development and deployment and improve the economics of CCS projects thereby lowering perceived risks for investors
13. In order to have a significant impact on CO<sub>2</sub> emission abatement CCS deployment needs to be effective across the globe including major energy consumers such as the USA and China.

Finally, the participants welcomed the announcement of a second IEF-Global CCS Institute symposium to be held in Algeria in early June 2010, hosted by the Government of Algeria.

*(\*) IEF is a collaborating member of the Global CCS Institute*