Carbon Sequestration leadership forum

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TECHNICAL GROUP

SUPPLEMENTAL DOCUMENT

Assessment of the Progress on the G8/IEA/CSLF Recommendations

March 2009

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Note by the Secretariat

In 2005 the G8 issued its Gleneagles Plan of Action on Climate Change and Sustainable Development, which stated that:

> *We will work to accelerate the deployment and commercialization of Carbon Capture and Storage technology by:*
>
> *...inviting the International Energy Agency to work with the Carbon Sequestration Leadership Forum to hold a workshop on short term opportunities for carbon capture and storage, including from Enhanced Oil Recovery and removal of CO2 from natural gas production.*

In response to this request, the International Energy Agency (IEA) with the CSLF held a series of three workshops for invited experts on Carbon Capture and Storage (CCS) from around the world on the topic of near-term opportunities for CCS. The first workshop, held in San Francisco, California, USA, in August 2006, defined the issues related to those near-term opportunities. The second workshop, held in Oslo, Norway, in June 2007, assessed those issues. The third and final workshop, held in Calgary, Alberta, Canada, in November 2007, developed recommendations for accelerating the development and deployment of CCS to the G8.

This draft document is an assessment of progress in implementing these recommendations. Items involving the CSLF Technical Group are highlighted

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DRAFT*

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March 2009

CSLF - Carbon Sequestration Leadership Forum
CSLF PG - Carbon Sequestration Leadership Forum Policy Group
CSLF TG - Carbon Sequestration Leadership Forum Technical Group
IEA - International Energy Agency Secretariat
IEA TRM - International Energy Agency Technology Roadmap
IEA GHG - International Energy Agency GHG R&D Programme
IEA WPPF - International Energy Agency Working Party on Fossil Fuels
GCCSI - Global CCS Institute

No.	Recommendation	Lead Back-up	Date	Comments
	Technical			
1	Governments are encouraged to cooperate internationally to partner, financially support, and share information on large-scale integrated carbon dioxide capture and storage demonstration projects	GCCSI	15 May 2009	GCCSI to provide criteria to reviewed by IEA and CSLF
2	Governments and the private sector are encouraged to undertake and fund Research Development & Demonstration of carbon dioxide capture technologies with the objective of reducing costs and improving overall system efficiencies.	CSLF TG IEA		GCCSI may commission research, but will not undertake it

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3	Governments should urgently establish primary assessment of prospective sedimentary basins, using an appropriate CO2 Storage Capacity Estimation methodology, including source-sink matching.	IEA GHG GCCSI		Methodology from CSLF TG. IEA GHG regional programs will feed
4	Governments are encouraged to provide technical assistance, either individually or via appropriate international bodies to assist developing countries to produce mapping and capacity estimates.	CSLF TG GCCSI		Target countries are G8 "O5" and GCCSI members
5	Further work is required to understand and define the concept of "capture and storage ready" plants and its value as a viable mitigation strategy	CSLF TG	May 2009	TBD
	Legal/Regulatory			
6	Governments should develop clear and equitable systems regarding access rights to sites for the geological storage of CO2. These systems should define parties' responsibility before, during and after injection, including surface rights, mineral or hydrocarbon rights, and issues with respect to the ownership of the pore space. Such property rights should ensure the ability to safely utilize and fairly allocate storage capacity	IEA TRM		
7	Governments should clearly define the liability regime for the operational, closure and post-closure phases of a storage project. The regime should also address: - Government assumption of long term liability. - The timing of the transfer of liability to Governments for the post-closure phase. - Implications for surface and sub-surface transboundary movement of carbon dioxide.	IEA TRM		
8	Governments should develop clear licensing and permitting systems for storage projects. Such regulations should address procedures and responsibilities to ensure safe closure and provisions for post-closure monitoring, and remediation, if necessary.	IEA TRM		

No.	Recommendation	Lead Back-up	Date	Comments
9	The IEA and CSLF should continue to develop the recommendations for future legal work on CO2 storage by: - Collecting examples of regulatory streamlining and other incentives and practices which will facilitate critically needed near-term demonstration projects. - Using existing project data to develop internationally consistent guidance for CO2 storage project site identification, monitoring and long-term verification. - Continuing to share regulatory models internationally.	IEA TRM GCCSI		
10	For the demonstration projects, the appropriate level of government should use a framework, which is formulated using best practices at the time of the project. That is, projects should not be delayed because the complete regulatory framework is not in-place. Based on experience from demonstration projects, frameworks for full commercial-scale projects can then be formulated.	IEA TRM GCCSI		
11	Governments should ensure that the way in which CO2 is classified in the various laws and regulations that would govern its capture, transport and storage does not inhibit its safe use for that purpose. In particular, CO2 should not be classified as a pollutant or waste such that it cannot be injected for permanent storage.	IEA TRM		
12	Laws and regulations governing the geologic storage of CO2, for the purpose of GHG mitigation, should recognize that other substances may enter in the CO2 stream incidental to its capture at the source, and that these are likely to be injected with the CO2. Proposals to allow the injection of incidental substances, other than CO2, should be based on a thorough understanding of the potential impacts of both injecting and not injecting these substances.	IEA TRM IEA GHG		IEA GHG will provide technical assessment

No.	Recommendation	Lead Back-up	Date	Comments
13	Accelerate the deployment and acceptance of CCS by sharing of principles and experiences on site selection with the aim of improving practices and ensuring the integrity of storage sites, lowering costs and transferring knowledge through international organisations. Publicly-funded CCS projects should be required to disseminate non-proprietary information to facilitate the development and deployment of this technology (was No 16)	GCCSI	Review at Bergen 27 May 2009	***This will be a follow-up to #2*** GCCSI to coordinate with ZEP
14	Governments working with stakeholders need to develop performance-based standards for storage site safety and integrity.	CSLF TG		Scoping paper, ISO may be a step too far
15	Intellectual property used for CCS should be adequately protected while enabling it to be applied as widely as possible. To this end, the IEA should conduct case studies of successful instances of the treatment of similar intellectual property rights, which could potentially be used as models for CCS.	IEA TRM.		
	Commercial/Financial			
16	Governments should address, together with the private sector, the financial gap and risks facing early CCS projects, and to accelerate the adoption of large-scale CCS. Public-private collaborations should not endanger the benefits of creating a competitive business environment for the products and services associated with CCS, but should clearly identify risk sharing arrangements. Government to government collaboration should stimulate and support these partnerships through appropriate policy and action.	IEA WPFF	2nd half 2009	Workshop to be arranged by IEA WPFF
17	The insurance industry should be encouraged to work with governments and industry to develop insurance-based products to address the potential business liabilities associated with CCS through all its phases.			Nothing further, there are insurance based products

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18	Governments should provide long term policy certainty through the introduction of appropriate regional/national instruments to create a value for CO2, such as emissions trading and/or tax treatment; and to ensure that emissions trading systems (ETS) recognize CCS for permanent storage. Governments should collaborate to ensure that their respective CCS legislation and regulations are compatible with international fungibility of mitigation credits for CCS (was No 19)	GCCSI IEA GHG		Should be global GCCSI may do some economic modelling. WEO2009 will have CCS post 2012 policy piece
	Public Education and Awareness			
19	Governments, together with industry and other stakeholders, should commit resources to advance the understanding and education related to CCS. Communication strategies need to reflect different audiences, including the general public and project-level communities	GCCSI/ CSLF PG IEA GHG		GCSI will cover local and global issues CSLF will focus on global issues IEA GHG will develop communication network
20	CCS should be communicated in the context of GHG mitigation options to demonstrate the role that CCS can play in reducing GHG emissions in a world of growing energy and resource demand.	GCCSI/ CSLF PG IEA GHG		
	International Mechanisms			
21	To accelerate policy and regulatory development globally, G8 governments should support the dissemination of best practices and existing legislation including: - Permitting requirements for site-selection and long-term monitoring, verification and remediation. - Accounting protocols used in trading systems that are verifiable and treat CCS on a consistent basis with other mitigation measures.	IEA Regulators Network		IEA could do more documentation with additional funding
22	The World Bank and other multilateral lending institutions should be encouraged to work with developing countries to fund capacity building, such as training, mapping, identification of potential CO2 storage reservoirs and estimation of large emission sources, in those countries. Multilateral lending institutions should provide financial support to share the risk of appropriate demonstration projects, in developing countries. (was No 25)	IEA GCCSI IEA WPFF CSLF PG	3Q 2009	In combination with #4 IEA to organize "Donors" conference with World bank. CCS will be an item

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23	Governments should actively encourage the CDM Executive Board to adopt CCS as an acceptable mitigation technology.	CSLF PG GCCSI IEA		Letter of support sent from the CSLF to the UNFCCC. CSLF has applied for IGO status Ad hoc interventions on post 2012 issues
24	The IEA/CSLF will assess the implementation of these recommendations on an ongoing basis, and will provide this assessment to the G8 Leaders in 2010. This assessment will include further actions that could be taken by the G8 to further accelerate the exploitation of near-term CCS opportunities.	IEA/CSLF will provide joint report		

* Discussions are ongoing