



**CARBON
SEQUESTRATION
LEADERSHIP FORUM

STRATEGIC PLAN**



Overview

Carbon Dioxide Capture and Storage (also known as carbon sequestration or CCS) represents one of a suite of measures for addressing the serious and long term challenge of climate change in the context of sustainable development.

The successful deployment of CCS requires a strategy to address:

- **Development of the technology** at competitive costs and acceptable environmental performance;
- The adoption of enabling **policy frameworks** - legal and regulatory in member countries.
- **Building capacity** in potential user countries;
- Gaining public acceptance.
- To achieve these goals the CSLF will ensure the involvement of stakeholders and promote collaboration with other international organisations.
- Successfully addressing these issues can be facilitated by an integrated framework for ongoing **international collaboration both at government and stakeholder level.**

The purpose of the CSLF is to facilitate the development of improved cost-effective technologies for the separation and capture of carbon dioxide for its transport and long-term safe storage; to make these technologies broadly available internationally; and to identify and address wider issues relating to carbon capture and storage. This could include promoting the appropriate technical, political, and regulatory environments for the development of such technology.

As the CSLF seeks to realise the potential of the technology over the coming decades, there is a need to put a longer term vision and strategy for the Forum in place. The CSLF Strategic Plan (2006-2013) aims to set out agreed long term priorities areas for the CSLF with an outcomes focussed Action Plan (2006-2009) outlining work to be undertaken by members to progress CCS internationally.

The Strategic Plan aims to ensure the existing partnership is working effectively to deliver its objectives and resulting benefits for member countries to progress CCS. In order for the Forum to achieve these goals and remain an effective body to progress CCS issues internationally, the Action Plan indicates key outputs and milestones to realise tangible results.

Long Term Goal

To have the foundation in place by 2013 for the wide adoption of Carbon Capture and Storage. The CSLF will seek to realise the promise of carbon capture and storage over the coming decades, making it commercially competitive and environmentally safe, through:

1. Identifying the potential for **CCS technology**, development and deployment opportunities¹. Also consider the role of the CSLF in terms of the opportunities presented by the gaps in the technology roadmap.
2. Promoting the deployment of full scale demonstration and pilot projects.
3. Supporting the development of relevant legal and policy frameworks.
4. Identifying potential barriers to and opportunities for investment and funding, in order to facilitate CCS projects.
5. Collaborating on **capacity building** with member **developing countries** to enable the widespread research, development and deployment of the technologies². A key area for consideration is technology transfer.
6. Addressing the barriers to **public awareness and acceptance** of CCS³, taking into account, safety, liability and environmental impact / assessment issues.

To achieve these goals the CSLF will ensure:

The **involvement of stakeholders** in all aspects of the CSLF work program, including identification of research needs, collaborative research programs, development of legislative and regulatory frameworks, capacity building and public awareness and acceptance of CCS.

Collaboration with other international organisations to enhance CSLF activities and assist in achieving this goal, for example, the United Nations Framework Convention on Climate Change (UNFCCC), the International Energy Agency (IEA), the Asia-Pacific Partnership on Clean Development and Climate and the World Bank amongst others. Identify potential areas for multilateral collaborations and work with industry and with national and international research programs and partnerships to explore the potential of CCS technologies, including with developing countries⁴.

¹ Agreed at Washington in June 2003 to develop a robust, comprehensive, global carbon sequestration technology roadmap. The CSLF Technology Roadmap was subsequently developed and supported by Ministers by Ministers in Melbourne in September 2003 with gaps identified and taskforces created.

² It was agreed at Washington in June 2003 that it is the Policy Group's responsibility and function to address actively involving developing countries within the Forum, establishing technology transfer mechanisms, including considering financing demonstration projects, addressing priority of sequestration compared to other issues, and evaluating intellectual property issues specific to developing countries. As agreement in Melbourne in September 2004 was not reached on the issue of capacity building in developing countries, the CSLF Secretariat was tasked with creating a framework to allow work to progress.

³ Agreed at Washington in June 2003 that it is the Policy Group's responsibility and function to address shaping the public perception of carbon sequestration through outreach and awareness programs involving a diverse group of stakeholders (i.e. industry, environmental groups, local communities, academia, local governments and regulatory agencies); and determining how stakeholder participation will be implemented.

⁴ Ministers in Melbourne agreed that legal work would continue to be progressed primarily through the IEA and will be monitored by the Policy Group

Key Outputs⁵ (Indicative priority order and timing)⁶

Key Areas of Consideration

The CSLF will develop an action plan for 2006-2009 with an aim to accelerate the development and commercialization of CCS technology. The following are major areas of work, which will be specifically monitored and where appropriate steered by the Policy Group:

Strategy	Key Outputs	Responsibility
1. CCS Technology Development and Deployment	Research and development 1. Key definitions for CCS identified and disseminated (2007) 2. Technology roadmap developed for each of the identified technical work areas, including links between them and member country roadmaps. (2006 - 09) 3. Identification of key obstacles to achieve improved technological capability. (2006-07)	Technical Group (TG)
	Collaborative projects 1. Collaborative research, development, and demonstration (RD&D) projects that reflect members' priorities. (2006 and continuing) 2. Guidelines for collaborations and reporting of results. (2006) 3. Collaborative RD&D projects reviewed annually. (2006 and continuing) 4. Each country to provide information on its short term opportunities for international collaboration and coordination identified (e.g. EOR or removal of CO2 from natural gas) (2006-07) 5. Each country to provide information on its full scale demonstration project opportunities for international collaboration and coordination. 6. Recommendations for risk assessment standards and procedures.	TG
	Technical support for policy development 1. Key definitions for CCS identified and disseminated (2006-07) 2. Recommendations for standard methodologies to establish baselines against which CCS projects can be assessed. (2006-07) 3. Recommendations for guidelines for monitoring, measurement and verification systems taking into account the work of other international organisations. (2006-07) 4. Capacity estimation methodologies developed. (2007-2009)	TG

⁵ Key outputs and performance measures are listed as proposals which will need to be projected and validated by taskforces.

⁶ The existing, incipient new bodies (e.g. taskforces, groups) that are/will be working to deliver these outputs are given in bold.

Strategy	Key Outputs	Responsibility
2. Policy and Legal Framework	1. Recommendations for strategies and instruments to address identified research needs (2006-07)	Policy Group (PG)
	2. Support the development of relevant legal and policy frameworks. (2006-07)	PG
	3. Identify potential issues relating to the treatment of intellectual property issues for CCS. (2007-08) - consideration of IEA CCS intellectual property outcomes (2006-07)	PG
	4. Exchange information and where appropriate provide support in the discussions on the potential role of CCS as a technology under the Clean Development Mechanism.(2006-09)	PG
3. Capacity Building	1. Involvement of developing countries in CSLF projects (2006-07)	PG
	2. A set of information, training and educational resources that all members can utilise (2007-08)	
	3. Experience from CSLF projects and CCS-related institution building identified and shared with developing countries (2007-08) - Developing countries included in full scale or lighthouse projects (2006 – 09)	
	4. Contribute to the development of knowledge, skills, expertise and institutions that developing countries need to understand and implement CCS (2007-09)	
4. Public Awareness & Acceptability	1. Member countries develop educational material, establish baseline information, use outreach briefings and workshops and form multi-stakeholder groups (2006-2009)	PG
	2. Develop and promote the CSLF website (2006)	PG
	3. Public outreach experts identified to develop CSLF approach (2006)	PG
	4. Collaboration with all sectors of the international research community, including industry, academia, government and non-government organizations and stakeholders for input to Policy and Technical groups (2006-07). - Develop and monitor global compendium of CCS projects and activities	PG
5. Involve Stakeholders	1. Consideration of stakeholder engagement strategy and processes by the Policy Group on the basis of proposals by stakeholders. (2006)	PG
	2. Stakeholders attend relevant meetings and provide input to development of the resulting work programs (2006 and ongoing)	PG
6. Collaboration with Other International Organisations	1. Co-operation to help achieve the CSLF goal, e.g. with the United Nations Framework Convention on Climate Change (UNFCCC), the International Energy Agency (IEA), the Asia-Pacific Partnership on Clean Development and Climate, the World Bank, World Energy Council (WEC), World Coal Institute (WCI) and the International Petroleum Institute amongst others. (2006)	PG
	2. Partnerships with compatible organisations, e.g. IEA, APEC, UN bodies, research organisations (2006)	PG



OPERATIONAL UPDATE: June 2003 – September 2004

ISSUES DISCUSSED JUNE 2003	WASHINGTON OUTCOMES JUNE 2003	ITALY MEETING JANUARY 2004	MELBOURNE AGREEMENT SEPTEMBER 2004
Charter	Charter agreed and signed by 15 inaugural members	France joined	Germany Joined
Terms Of Reference	Agreed Secretariat to develop ToR	Delegates discussed the Draft Terms of Reference and Procedures developed by the Secretariat. These had been circulated in September 2003. Secretariat noted all comments and a revised Terms of Reference and Procedures were produced by a Committee chaired by Australia on the 2nd day of the meetings. This revised version of the ToR was agreed to by the Policy Group and would come into effect 45 days following, if no objections were received.	Terms of Reference Agreed
Policy Issues	Organizing the Policy Group, including setting up two Committees: a Stakeholders Task Force and a Legal, Regulatory and Financing Committees. The Legal, Regulatory and Financing Committee will prepare an inventory of global activities related to these topics.	A presentation on the CSLF Group Action Plan that was developed by the Secretariat was given. This action plan had five components: Regulatory and legal activities; Financial issues; Stakeholder involvement; Public awareness and outreach; and Project Endorsement. The Secretariat was tasked to prepare issue papers on: <ul style="list-style-type: none"> • Public outreach; • Financing sequestration projects; • Sequestration and carbon trading; • Sequestration in developing countries; and • Economic modelling. 	Agreed that Canada would co-ordinate a communications group to develop a repository of public communications information to develop best practices Financing Initiatives Taskforce was developed to look at options for support for CCS projects in developing countries (chaired by India)
Legal issues	Policy Group responsibility and function to address national and international legal issues,(including environmental regulations, London Convention, intellectual property provisions, trans-boundary issues) whether existing or proposed, to determine any barriers, legal mechanisms or opportunities for international cooperation	John Ryan of Australia, presented the draft discussion paper prepared by the Task Force. This discussion paper was prepared following the International Sequestration Regulatory Workshop, held in Brisbane, Australia on 7 November 2003. Three substantive issues were covered: regulation, legal and financial. Regulatory issues addressed the development of principles that could assist countries in developing their domestic regulatory regimes and focused on a gap analysis. International issues were addressed in the legal section. The financial issues covered included financial and economic costs and economic modeling.	Agreement reached on report & taskforce folded. It agreed that legal work would continue to be progressed primarily through the IEA and will be monitored by the Policy Group. The issue of economic modelling was discussed in Melbourne and although it was agreed further work is required this issue was held over for discussion in Sept 2005.
Financing Initiatives	Policy Group responsibility and function to address how to attract financing, create incentives and mitigate the risks for carbon sequestration projects, including addressing issues related to CO ₂ emissions trading, storage, liability, reliability and health / safety issues		
Stakeholder Involvement	Policy Group responsibility and function to address shaping the public perception of carbon sequestration through outreach and awareness programs involving a diverse group of stakeholders (i.e. industry, environmental groups, local communities, academia, local governments and regulatory agencies); and determining how stakeholder participation will be implemented.	The Policy Group discussed the Draft Guidelines for Involvement of Stakeholders. Delegates agreed that stakeholder involvement was critical and should be an integral part of the process. Many issues, however, were raised with respect to the Draft Guidelines and a working group to be led by Italy be appointed to address the issue. The working group will identify the best path and how to best utilize stakeholder involvement and input.	Agreed to the development of stakeholder registry by the Secretariat. Agreed CSLF Secretariat would progress stakeholder workshops to be held prior to CSLF meetings
Developing Country Involvement	Policy Group responsibility and function to address actively involving developing countries within the Forum, establishing technology transfer mechanisms, including considering financing demonstration projects, addressing priority of sequestration compared to other issues, and evaluating intellectual property issues specific to developing countries.		As agreement was not reached on the issue of capacity building in developing countries, the CSLF Secretariat was tasked with creating a framework to allow work to progress
Technology Roadmap	Development of a robust, comprehensive, global carbon sequestration technology roadmap Australia will share road mapping methodology and results	Technology Roadmap was still being developed and invited Policy Group comments on a work in progress. This roadmap will identify gaps that need to be closed by the CSLF with complementary national and regional efforts. Work will continue on the and a work product will be presented to the Policy in September.	Roadmap supported by Ministers, gaps identified and taskforces created.
CSLF Projects	<ul style="list-style-type: none"> - Technical effectiveness - Capacity to effectively model, monitor, and verify - Environmental safety and health - Sustainability - Assessment of impact on community and biological diversity - Technical requirements for demonstration projects in Emerging Market Economies are similar to those in developed countries - Host countries with different technology needs 	Project Recommendation Guidelines as recommended by the Technical Group were discussed. The guidelines were agreed. A number of projects were proposed which will be considered by Ministers for endorsement.	Ten Proposed Collaborative Projects were accepted by Ministers Agreed that the EU would develop a Project Identification and Review Panel (PIRP).

OPERATIONAL UPDATE: September 2004 – September 2006

ISSUES DISCUSSED SEPT 2004	MELBOURNE OUTCOMES SEPTEMBER 2004	BERLIN MEETING SEPTEMBER 2005	INDIA MEETING APRIL 2006
Charter	17 members	4 new members agreed – Denmark, Korea, the Netherlands, Saudi Arabia	
Terms of Reference	Terms of Reference Agreed	-	
LRF Taskforce	Agreement reached on report & taskforce folded	-	
	Legal - agreed that legal work would continue to be progressed primarily through the IEA and will be monitored by the Policy Group	Legal - agreed that legal work would continue to be progressed primarily through the IEA and will be monitored by the Policy Group. Noted IEA Legal Issues Subcommittee formed under IEA WFFF	
	Regulatory - agreement reached on regulatory issues report	-	
	Economic modelling - the issue was discussed in Melbourne and although it was agreed further work is required this issue was held over for discussion in Sept 2005	-	
Policy Action Plan	Financing Initiatives Taskforce was developed to look at options for support for CCS projects in developing countries (chaired by India)	To be discussed in India (April 06). Taskforce to coordinate activities with Capacity Building Taskforce	
	Intellectual Property - agreement reached to hold the issue over until Policy Agenda free	-	
	Capacity building - As agreement was not reached on the issue of capacity building in developing countries, the CSLF Secretariat was tasked with creating a framework to allow work to progress	New taskforce developed to assess specific capacity need, develop action plans and discuss methods to secure funding	
Public Outreach	Agreed that Canada would co-ordinate a communications group to develop a repository of public communications information to develop best practices	Consensus reached that public acceptance is key to CCS. Report prepared by Taskforce accepted by Policy Group. Agreed Secretariat would investigate how to implement report's recommendations	
Stakeholder Engagement	Concept paper on stakeholder engagement agreed.	-	
	Registry Agreed to the development of stakeholder registry	Registry Guidelines agreed by Policy Group	
	Stakeholder Workshops Agreed CSLF Secretariat would progress stakeholder workshops to be held prior to CSLF meetings	Agreed stakeholders will be invited to attend CSLF meetings and participate on taskforces where required. CSLF agreed to the need for more openness. Report from stakeholders to become standing item on CSLF agendas	
CSLF Technology Roadmap	Roadmap supported by Ministers, gaps identified and taskforces created.	-	
	Capture & Transport Taskforce created to produce discussion paper regarding gaps in CO ₂ capture and transport.	Paper endorsed with further work agreed	
	Monitoring & Verification Taskforce created to produce discussion paper regarding gaps in CO ₂ monitoring and verification of storage.	Paper endorsed with further work agreed	
	Storage Capacity Estimation Taskforce created to develop report on storage capacity estimation.	Phase I Paper approved, Phase II of taskforce work agreed	
	Opportunity Assessment Taskforce created on Opportunity Assessment – issue held over	-	
CSLF Collaborative Projects	Ten Proposed Collaborative Projects were accepted by Ministers.	8 projects proposed for CSLF endorsement. 7 projects approved in Berlin	
	PIRP Agreed that the EU would develop a Project Identification and Review Panel (PIRP).	Renamed PIRT in Berlin. ToR of PIRT accepted with amendment as to composition of the taskforce	



CSLF Charter

The undersigned national governmental entities (collectively the “Members”) set forth the following Terms of Reference for the Carbon Sequestration Leadership Forum (CSLF), a framework for international cooperation in research and development for the separation, capture, transportation and storage of carbon dioxide. The CSLF will seek to realize the promise of carbon capture and storage over the coming decades, making it commercially competitive and environmentally safe.

1. Purpose of the CSLF

To facilitate the development of improved cost-effective technologies for the separation and capture of carbon dioxide for its transport and long-term safe storage; to make these technologies broadly available internationally; and to identify and address wider issues relating to carbon capture and storage. This could include promoting the appropriate technical, political, and regulatory environments for the development of such technology.

2. Function of the CSLF

The CSLF will seek to:

- 2.1 Identify key obstacles to achieving improved technological capacity
- 2.2 Identify potential areas of multilateral collaborations on carbon separation, capture, transport and storage technologies
- 2.3 Foster collaborative research, development, and demonstration (RD&D) projects reflecting Members’ priorities
- 2.4 Identify potential issues relating to the treatment of intellectual property
- 2.5 Establish guidelines for the collaborations and reporting of their results
- 2.6 Assess regularly the progress of collaborative R&D projects and make recommendations on the direction of such projects
- 2.7 Establish and regularly assess an inventory of the potential areas of needed research
- 2.8 Organize collaboration with all sectors of the international research community, including industry, academia, government and non-government organizations; the CSLF is also intended to complement ongoing international cooperation in this area
- 2.9 Develop strategies to address issues of public perception
- 2.10 Conduct such other activities to advance achievement of the CSLF’s purpose as the Members may determine

3. Organization of the CSLF

- 3.1 A Policy Group and a Technical Group will be formed. Unless otherwise determined by consensus of the Members, each Member will make up to two appointments to the Policy Group and up to two appointments to the Technical Group. Other individuals may attend the Policy Group and Technical Group meetings as deemed necessary by the appointed representatives.
- 3.2 The Policy Group will govern the overall framework and policies of the CSLF, periodically review the program of collaborative projects, and provide direction to the Secretariat. The Group should meet at least once a year, at times and places to be determined by its appointed representatives. All decisions of the Group will be made by consensus of the Members.
- 3.3 The Technical Group will report to the Policy Group. The Technical Group will meet as often as necessary to review the progress of collaborative projects, identify promising directions for the research, and make recommendations to the Policy Group on needed actions.
- 3.4 The CSLF will meet at such times and places as determined by the Policy Group.

- 3.5 The principal coordinator of the CSLF's communications and activities will be the CSLF Secretariat. The Secretariat will:
- (1) organize the meetings of the CSLF and its sub-groups;
 - (2) arrange special activities such as teleconferences and workshops;
 - (3) receive and forward new membership requests to the Policy Group;
 - (4) coordinate communications with regard to CSLF activities and their status;
 - (5) act as a clearing house of information for the CSLF;
 - (6) maintain procedures for key functions that are approved by the Policy Group; and
 - (7) perform such other tasks as the Policy Group directs. The focus of the Secretariat will be administrative. The Secretariat will not act on matters of substance except as specifically instructed by the Policy Group.
- 3.6 The Secretariat may, as required, use the services of personnel employed by the Members and made available to the Secretariat. Unless otherwise agreed, such personnel will be remunerated by their respective employers and will remain subject to their employers' conditions of employment.
- 3.7 The U.S. Department of Energy will act as the CSLF Secretariat unless otherwise decided by consensus of the Members.
- 3.8 Each Member will individually determine the nature of its participation in the CSLF activities.

4. Membership

- 4.1 This Charter, which is administrative in nature, does not create any legally binding obligations between or among its Members. Each Member will conduct the activities contemplated by this Charter in accordance with the laws under which it operates and the international instruments to which it is a party.
- 4.2 The CSLF is open to other national governmental entities and its membership will be decided by the Policy Group.
- 4.3 Technical and other experts from within and without CSLF Member organizations may participate in R&D projects conducted under the auspices of the CSLF. These projects may be initiated either by the Policy Group or the Technical Group.

5. Funding

Unless otherwise determined by the Members, any costs arising from the activities contemplated by this Charter will be borne by the Member that incurs them. Each Member's participation in CSLF activities is subject to the availability of funds, personnel and other resources.

6. Open Research and Intellectual Property

- 6.1 To the extent practicable, the R&D fostered by the CSLF should be open and non-proprietary.
- 6.2 The protection and allocation of intellectual property, and the treatment of proprietary information, generated in R&D collaborations under CSLF auspices will be defined by implementing arrangements.

7. Commencement, Extension, Modification, Withdrawal, and Termination

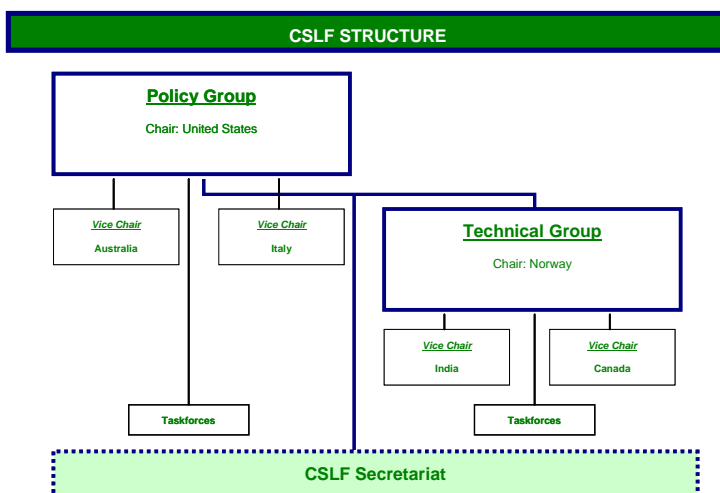
- 7.1 Commencement and Modification
- 7.1.1 This Charter will commence on June 25, 2003 and will continue for 10 years unless extended or terminated.
- 7.1.2 This Charter may be modified in writing at any time by unanimous consent of all Members.
- 7.2 Extension, Withdrawal and Termination
- 7.2.1 By written arrangement, the Members may extend this Charter for additional periods.
- 7.2.2 A Member may withdraw from membership in the CSLF by giving written notice to the other Members 90 days prior to its anticipated withdrawal. The Members may, by unanimous consent, terminate this Charter by written arrangement at any time.



CSLF Structure

The activities of the CSLF are conducted by a Policy Group, which governs the overall framework and policies of the CSLF, and a Technical Group, which reviews the progress of collaborative projects and makes recommendations to the Policy Group on any needed actions. Collaborative projects may be recognised by the CSLF as authorized by the Policy Group on the recommendation of the Technical Group.

Taskforces reporting to either the Policy Group or the Technical Group to progress specific issues will be created and collapsed as determined by the Policy Group.



Policy Group

The Policy Group is responsible for carrying out the following functions of the CSLF:

- Identify key legal, regulatory, financial, public perception, institutional-related or other issues associated with the achievement of improved technological capacity.
- Identify potential issues relating to the treatment of intellectual property.
- Establish guidelines for the collaborations and reporting of results.
- Assess regularly the progress of collaborative projects and, following reports from the Technical Group, make recommendations on the direction of such projects.
- Ensure that CSLF activities complement ongoing international cooperation in this area.
- Consider approaches to address issues associated with the above functions.

The Chair and Vice Chairs of the Policy Group and the Chair of the Technical Group will prepare agendas, identify issues, monitor progress and consider proposals for policy/technical group taskforces. In undertaking this task they will involve other members or stakeholders.

Ad hoc Taskforces

- Policy and Technical Groups may set up ad hoc taskforces with a limited duration, to help achieve particular outputs.

Technical Group

Technical Group is responsible for carrying out the following functions of the CSLF:

- Identify key technical, economic, environmental and other issues related to the achievement of improved technological capacity.
- Identify potential areas of multilateral collaboration on carbon capture, transport and storage technologies.
- Foster collaborative research, development, and demonstration (RD&D) projects reflecting Members' priorities.
- Assess regularly the progress of collaborative projects and make recommendations to the Policy Group on the direction of such projects.
- Establish and regularly assess an inventory of the potential areas of needed research.
- Facilitate technical collaboration with all sectors of the international research community, academia, industry, government and non-governmental organizations.
- Consider approaches to address issues associated with the above functions.

The **Project Interaction and Review Team (PIRT)** undertakes its work as described in its terms of reference to help the CSLF achieve its goals.