

<b>REFERENCE</b>	
<b>Title:</b>	CSLF Technology Roadmap
<b>Date:</b>	2004?
<b>Author:</b>	Carbon Sequestration Leadership Forum
<b>Funded by:</b>	Carbon Sequestration Leadership Forum
<b>Hard copy reference:</b>	
<b>URL:</b>	<a href="http://www.cslforum.org/documents/CSLF_Technology_Roadmap.pdf">http://www.cslforum.org/documents/CSLF_Technology_Roadmap.pdf</a>
<b>Date accessed:</b>	15 August 2006
<b>Web Format:</b>	pdf
<b>IEA topics covered</b>	
<b>Geographical focus:</b>	None
<b>Brief Abstract:</b>	This roadmap identifies key milestones for the development of improved cost-effective technologies for the separation and capture of CO <sub>2</sub> for its transport and long-term safe storage. Implementation of national and international pilot and demonstration projects is seen as a critical component in the development of lower-cost, improved capture technologies and safe long-term storage.

<b>OUTPUTS</b>	
<b>Short Report?</b>	No
<b>Major report?</b>	Yes
<b>Visualisations?</b>	Yes
<b>Information held on dedicated software?</b>	No
<b>- which package?</b>	

<b>ARCHITECTURE</b>	
<b>Timescales used:</b>	2004 – 2008 2009 – 2013
<b>Trends and drivers?</b>	
<b>- list</b>	
<b>Enablers?</b>	
<b>- list</b>	
<b>Performance measures/targets?</b>	
<b>- list areas</b>	
<b>Mapping of RD&amp;D activities?</b>	No
<b>Critical assessment of capabilities?</b>	No

<b>PROCESS</b>	
<b>Methods used:</b>	
- Desk study?	
- Consultation	
- Interviews?	
- Facilitated workshop(s)	
- Working groups/task force	Yes
- Integrated Process	
<b>Stakeholders engaged:</b>	
University based researchers	
Other public sector researchers	
Business – technology	
Business – other	
Government - energy	
Government – SET	
Government - other	
NGOs	
<b>No of people engaged:</b>	
<b>Budget (if known):</b>	
<b>Commitment to re-visit?</b>	Yes

<b>ACTIONS IDENTIFIED</b>	
List of actions?	Yes
Actions listed according to timescale?	Yes
Actions prioritised?	
Sequencing/dependencies identified?	
Responsibility for actions identified?	
<b>Types of actions identified:</b>	
- Basic research?	
- list areas	
- Applied research?	Yes
- list areas	<p><b>Lower Costs</b></p> <ul style="list-style-type: none"> <li>• Alternative absorption solvents or materials that, relative to amines, reduce capture costs and increase energy efficiency.</li> <li>• Alternative power generation processes that have the potential to produce improved economics compared with absorption capture.</li> </ul> <p><b>Secure Reservoirs</b></p> <ul style="list-style-type: none"> <li>• Response and remediation procedures developed in advance of the possibility of CO2 pipeline accidents.</li> <li>• Best practice guidelines for storage site selection, operation and closure, including risk assessment.</li> <li>• Better understanding of CO2 storage capacity and geological and geochemical properties of saline aquifers.</li> <li>• Site-specific evaluation of possible storage</li> </ul>

	<p>reservoirs to identify damage due to hydrocarbon extraction and status of sealed boreholes.</p> <ul style="list-style-type: none"> <li>• Understanding CO<sub>2</sub>-coal interactions, especially with respect to the mechanisms of CH<sub>4</sub> displacement and permeability decreases.</li> <li>• Development of response and remediation plans on a site-specific basis prior to injection.</li> <li>• Site-specific information on CO<sub>2</sub> background concentration and seismic activity.</li> <li>• Knowledge of the environmental effects of CO<sub>2</sub> injection in the deep ocean.</li> </ul> <p><b>Measurement, Monitoring and Verification Technologies</b></p> <ul style="list-style-type: none"> <li>• Instruments capable of measuring CO<sub>2</sub> levels close to background and to distinguish between CO<sub>2</sub> from natural processes and that from storage.</li> <li>• Capability of ensuring long-term site security post-injection including verified mathematical models of storage.</li> </ul>
<b>- Development &amp; demonstration</b>	Yes
<b>- list areas?</b>	Pilot or demonstration projects 2008 – 2014
<b>- Other types of action?</b>	
<b>- list other types</b>	