

<b>REFERENCE</b>	
<b>Title:</b>	Carbon Sequestration Technology Roadmap and Program Plan 2006
<b>Date:</b>	June 2006
<b>Author:</b>	National Energy Technology Laboratory / U.S. Dept of Energy
<b>Funded by:</b>	National Energy Technology Laboratory / U.S. Dept of Energy
<b>Hard copy reference:</b>	
<b>URL:</b>	<a href="http://fossil.energy.gov/sequestration/publications/programplans/2006/2006_sequestration_roadmap.pdf">http://fossil.energy.gov/sequestration/publications/programplans/2006/2006_sequestration_roadmap.pdf</a>
<b>Date accessed:</b>	11 August 2006
<b>Web Format:</b>	pdf
<b>IEA topics covered</b>	
<b>Geographical focus:</b>	USA
<b>Brief Abstract:</b>	Developing the technology base and infrastructure to enable carbon sequestration as a greenhouse gas mitigation option. Describes current CCS technology; identifies research pathways to achieve CCS program goal; describes DOE research program.

<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>	NA

<b>ARCHITECTURE</b>	
<b>Timescales used:</b>	<ul style="list-style-type: none"> <li>• First targets: 2007</li> <li>• Pilot scale plant: 2012</li> <li>• Commercial scale plant: 2020</li> <li>• Storage: 100 years</li> </ul>
<b>Trends and drivers?</b>	
<b>- list</b>	
<b>Enablers?</b>	
<b>- list</b>	
<b>Performance measures/targets?</b>	Yes
<b>- list areas</b>	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> capture</li> <li>• Sequestration / storage</li> <li>• Monitoring, mitigation and verification</li> <li>• Breakthrough concepts</li> <li>• Non-CO<sub>2</sub> GHGs</li> <li>• Infrastructure development</li> </ul>
<b>Mapping of RD&amp;D activities?</b>	Yes
<b>Critical assessment of</b>	Yes

capabilities?	
---------------	--

<b>PROCESS</b>	
<b>Methods used:</b>	Not stated or described
- Desk study?	
- Consultation	
- Interviews?	
- Facilitated workshop(s)	
- Working groups/task force	
- Integrated Process	
<b>Stakeholders engaged:</b>	Not stated or described
University based researchers	
Other public sector researchers	
Business – technology	
Business – other	
Government - energy	
Government – SET	
Government - other	
NGOs	
<b>No of people engaged:</b>	Not known
<b>Budget (if known):</b>	
<b>Commitment to re-visit?</b>	Annual

<b>ACTIONS IDENTIFIED</b>	
<b>List of actions?</b>	Yes
<b>Actions listed according to timescale?</b>	Yes
<b>Actions prioritised?</b>	No
<b>Sequencing/dependencies identified?</b>	No
<b>Responsibility for actions identified?</b>	No
<b>Types of actions identified:</b>	
- Basic research?	
- list areas	
- Applied research?	Yes
- list areas	<ul style="list-style-type: none"> <li>• Solvent extraction: amine, glycol, methanol, aqueous ammonia</li> <li>• Membrane / liquid sorbent hybrids</li> <li>• Hydrogen / CO2 membranes</li> <li>• Metal organic frameworks</li> <li>• Hydrates</li> <li>• Enzymatic CO2 sorbents</li> <li>• Ionic liquids</li> <li>• Pulverised coal combustion</li> <li>• Circulating fluidised bed oxycombustion</li> <li>• Oxygen membrane / integrated combustor</li> <li>• New CO2 well design</li> <li>• Existing well management</li> <li>• Terrestrial sequestration</li> <li>• Ocean sequestration</li> <li>• Underground CO2 fate and transport models</li> </ul>

	<ul style="list-style-type: none"> <li>• CO2 trapping</li> <li>• Plume tracking</li> <li>• CO2 leak detection</li> <li>• Leak mitigation</li> <li>• Plant and soil management</li> </ul>
<b>- Development &amp; demonstration</b>	Yes
<b>- list areas?</b>	<ul style="list-style-type: none"> <li>• CO<sub>2</sub> capture</li> <li>• Sequestration / storage</li> <li>• Monitoring, mitigation and verification</li> <li>• Breakthrough concepts</li> <li>• Non-CO<sub>2</sub> GHGs</li> <li>• Infrastructure development</li> </ul>
<b>- Other types of action?</b>	
<b>- list other types</b>	