



# CSLF Communications & Outreach

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CSLF Communications and Outreach Task Force



# Strategic Plan



**GOAL:**  
To address the barriers to  
public awareness and  
acceptance of CCS technology



## CARBON SEQUESTRATION LEADERSHIP FORUM COMMUNICATIONS & OUTREACH

### *Objectives of Communications and Outreach Plan and Activities*

The primary goals of the activities suggested are to:

- Raise CSLF visibility and communicate important CSLF-related information, including the Forum's mission and activities, and CSS technology advances, to key audiences and the media.
- Engage key stakeholders and audiences with timely information in an integrated effort that utilizes various communications tools.
- Achieve communications requirements as identified in the CSLF Strategic Plan. In this regard, a key objective is to "address the barriers to public awareness and acceptance" of CSS technology, both within member countries and internationally.

### *Key Components*

In planning, establishing, and implementing a comprehensive and effective CSLF communications strategy and program, the following key components and activities are recommended:



# Principal Objectives



Raise visibility  
of CSLF



Engage key  
audiences in a  
timely  
manner



Meet  
strategic plan  
requirements  
for C&O



Achieve  
objectives at  
low or no cost



# Key Tactics



- Public & Media
  - Proactive effort to engage the public and media on the local, regional, and international levels
- Engaging Stakeholders





# Conference & Meeting Co-Sponsorship



- CSLF relies on members to help identify meetings and conferences
- CSLF Event Endorsement Guidelines
- Event Recognition Agreement

**CARBON SEQUESTRATION LEADERSHIP FORUM**  
CSLF Event Endorsement Guidelines

The Carbon Sequestration Leadership Forum (CSLF) was formed in June 2003 to facilitate the development of improved, cost-effective carbon capture and storage (CCS) technologies; to make these technologies broadly available internationally; and to identify and address wider issues relating to carbon capture and storage. The current members of CSLF are Australia, Brazil, Canada, China, Colombia, Denmark, European Commission, France, Germany, Greece, India, Italy, Japan, Korea, Mexico, Netherlands, New Zealand, Norway, Russia, Saudi Arabia, South Africa, United Kingdom, and the United States.

Since its inception research and information stakeholders to be collaboration to be

Events wishing to are asked to submit Attachment 1 to the coordinator of the the nomination to be

**Endorsement of**

- Increased CSLF
- Expanded commitment of mutual
- An institute agreement future event
- Increased R&D avoid duplication
- Efficient resources
- Expanded codes, standards and common

**CARBON SEQUESTRATION LEADERSHIP FORUM**  
ATTACHMENT 2  
CSLF EVENT RECOGNITION AGREEMENT

The Carbon Sequestration Leadership Forum hereby endorses the **INSERT NAME OF EVENT** as an event designed and organized to facilitate the transfer of knowledge and information that is in accord with the objectives of the CSLF.

The **INSERT NAME OF EVENT** is located in **INSERT LOCATION OF EVENT** and will **INSERT OBJECTIVE OF EVENT**.

In compliance with the working principles for a CSLF Event, **INSERT NAME OF LEAD EVENT SPONSOR HERE** is the CSLF event nominator and agrees, subject to operational considerations, to comply with the requirement identified in the CSLF Event Guidelines.

The following signature attest to this certification:

Lead Event Coordinator \_\_\_\_\_ Other Partner(s) \_\_\_\_\_  
Date \_\_\_\_\_ Date \_\_\_\_\_

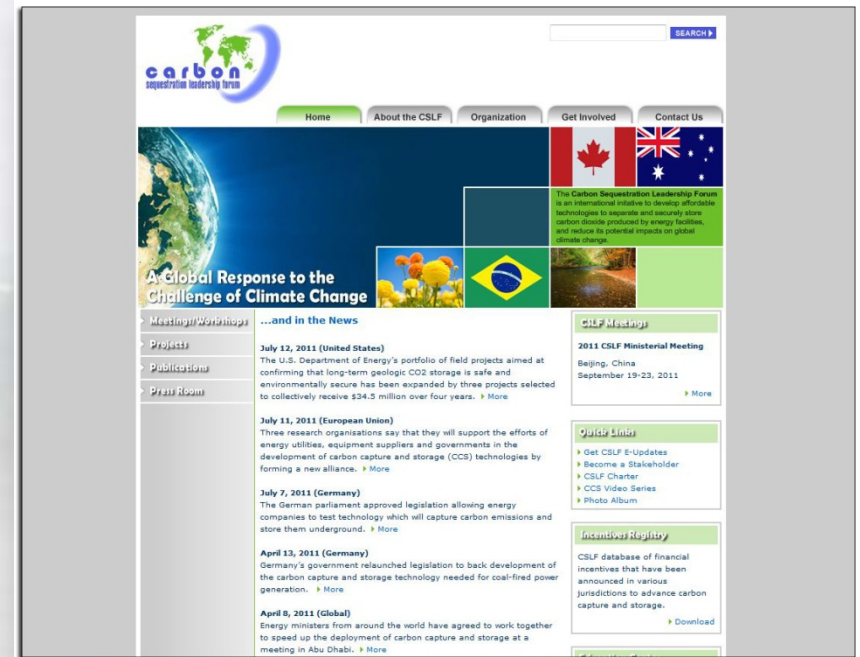
Forms available on the website



# CSLF Website



- Official source for CSLF information on the web
- Continue to improve functionality and content



[www.cslforum.org](http://www.cslforum.org)



# Tools for Members



Talking Points



CSLF Speech

**Carbon Sequestration Leadership Forum**  
[www.cslforum.org](http://www.cslforum.org)

**Focus of this Presentation**

- Importance of **worldwide response** to climate change challenge; role of such organizations as the **Carbon Sequestration Leadership Forum**
- Role of **carbon capture and storage (CCS)** in helping meet CO<sub>2</sub> reduction targets

CSLF  
Presentation



# CSLF News Clips



- Daily e-mail and web-based news service
- All things CCUS from around the world
- Began with 250 subscribers; now nearly 600, and growing

carbon sequestration leadership forum

SEARCH

Home About the CSLF Organization Get Involved Contact Us

Meetings/Workshops  
Projects  
Publications  
Press Room

CSLF NEWS is an electronic news service providing you with links to news articles from around the world related to carbon capture and storage technology. CSLF NEWS is offered by the CSLF Secretariat. If you'd like to receive CSLF NEWS, please contact us.

Carbon Sequestration Leadership Forum

**September 1, 2011  
Carbon Capture, Utilization and Storage**

**SA to invest in carbon capture technology**  
Business Day – September 1, 2011  
Zuma says South Africa will invest resources to develop carbon capture technology.

**Meet the manager in charge of a \$1.35-billion quest**  
Alberta Oil Magazine – September 1  
Silk finds himself playing his part in this global blockbuster as the project manager of the \$1.35-billion Quest project, a carbon capture and storage (CCS) scheme being proposed by Shell Canada.

**Invensys Simulation Software Online**  
Control Engineering Asia – August 31  
Invensys Operations Management has announced that the U.S. Department of Energy (DOE) has deployed a first-of-its-kind operator training simulator for an integrated gasification combined cycle (IGCC) power plant with carbon capture using innovative simulation software-based training solutions from Invensys.

**CO2 oilfield experiment has good results**  
UPI.com – August 31  
The DOE said the results reported by the University of Kansas established the feasibility of using carbon dioxide to extend the productivity of U.S. oilfields while at the same time permanently keeping the gas out of the atmosphere.

**Climate Change**

**China needs absolute CO2 cap to meet market plans: researchers**  
Reuters – September 1  
China needs to set absolute restrictions on greenhouse gas emissions if it is to fulfill its aim to set up a carbon market over the next five years, a cabinet office think tank said in a paper published on Thursday.

[View Archives](#)

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[www.cslforum.org/pressroom/newsclips.html](http://www.cslforum.org/pressroom/newsclips.html)





# Video Series



- Third-party experts
- Q&A format
- Available on website
- Shown with exhibit



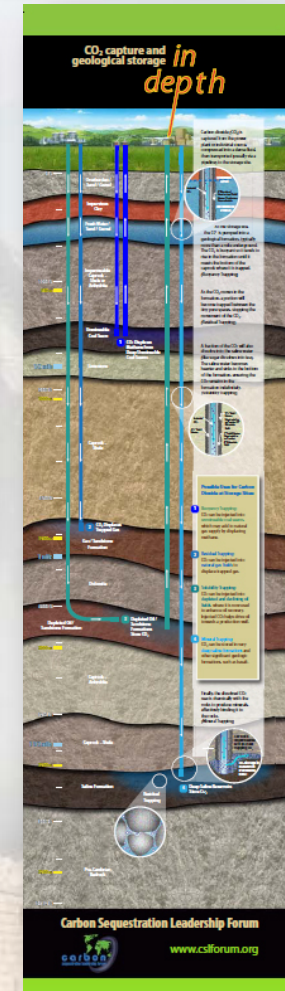
# CSLF Exhibit



- Newly redesigned
- Featured at:
  - Radio-TV News
  - Directors Conference
  - Society of Professional Journalists Meeting
  - U.S. Department of Energy Headquarters
  - Various Conferences and Meetings



10' Pop-Up Exhibit



Foldout poster of CCS processes



# Social Media



[www.twitter.com/cslfnews](http://www.twitter.com/cslfnews)

[www.facebook.com/cslfnews](http://www.facebook.com/cslfnews)

**twitter** Search Have an account? [Sign In](#)

**CSLF**  
 @CSLFNews Washington, DC  
 The Carbon Sequestration Leadership Forum (CSLF) is an international initiative to develop technologies to capture and store CO<sub>2</sub> from energy facilities.  
<http://www.cslforum.org>

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**CSLFNews** CSLF  
 Carbon Capture Speeds Up | EnergyBiz | mp/0jRHR via @AddToAny  
 2 Sep

**Bellona\_no** Bellona [CSLFNews](#)  
 First knowledge sharing report from Rotterdam CCS project. One of the most mature large-scale CCS projects in th... bit.ly/qZyUX  
 1 Sep

**fossilenergygov** DOE Fossil Energy [CSLFNews](#)  
 CO<sub>2</sub> Injection in Kansas Oilfield Could Greatly Increase Production, Permanently Store Carbon Dioxide, DOE Study Says  
[go.usa.gov/0i8](http://go.usa.gov/0i8)  
 31 Aug

**CSLFNews** CSLF  
 SA to invest in carbon capture tech; get this and more #CCS news from around the world on the CSLF News Clips web page  
[bit.ly/h0V9S08](http://bit.ly/h0V9S08)  
 1 Sep

**CSLFNews** CSLF  
 RT @httwets: Norway eyes first ministerial visit to China since Nobel row - Hindustan Times [hindustantimes.com/Norway-eyes-fl...](http://hindustantimes.com/Norway-eyes-fl...)  
 31 Aug

**CSLFNews** CSLF  
 Learn how you can be involved in the CSLF: bit.ly/wRU0ES

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 Organization · Washington, District of Columbia

**Wall**

**CSLF**  
 Check out the News Clips section of our website, where we highlight carbon capture, utilization, and storage technology news and developments from around the world. It's updated every business day.  
[Carbon Sequestration Leadership Forum](#)  
[www.cslforum.org](http://www.cslforum.org)  
 September 1 at 7:38am · Like · Comment

**CSLF**  
 Learn how you can get involved with the CSLF.  
[Carbon Sequestration Leadership Forum](#)  
[www.cslforum.org](http://www.cslforum.org)  
 National governmental entities may apply for membership to the Carbon Sequestration Leadership Forum by sending a letter of application to the CSLF Secretariat. The letter of application should be signed by the responsible Minister from the applicant country. In their application letter, prospective...  
 August 31 at 11:55am · Like · Comment

**CSLF**  
 VIDEO: Experts in the carbon capture and storage field discuss some of the most commonly asked questions about CCS.  
[Carbon Sequestration Leadership Forum](#)  
[www.cslforum.org](http://www.cslforum.org)  
 August 31 at 11:01am · Like · Comment

**CSLF**  
 The CSLF is hosting its 4th Ministerial meeting on September 19-23, 2011, in Beijing, China.  
[Carbon Sequestration Leadership Forum](#)  
[www.cslforum.org](http://www.cslforum.org)

**About**  
 Welcome to the Carbon Sequestration Leadership Forum's Facebook page. For s...  
 More

**13** like this

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# Education Discussion Forum



- Goal: Form an online community to discuss CCS education
- At Present:
  - Testing Social Squared™ software within Secretariat
  - Building initial post content
  - Establishing rules for participants and moderators
  - Developing plan to publicize the site and encourage participation

carbon sequestration leadership forum

CSLF Education Discussion Forum » Home

Home

CSLF Education Discussion Forum

CSLF Education Discussion Forum

**CCS Education** Forums

**Undergraduate Curriculums**  
Use this space to discuss undergraduate curriculums and classes related to carbon capture, utilization, and storage technology. Who's offering what?

**Graduate Curriculums**  
Use this area to discuss graduate curriculums and classes on carbon capture, utilization, and storage technology.

**Cafe** Forums

**Meet and Greet**  
Introduce yourself and get to know others in the forum.

**Tech Talk**  
Have a technology question? Post it here.

**Questions, Comments?**  
Post your suggestions and concerns about the forums here.

carbon sequestration leadership forum

CSLF Education Discussion Forum » Home

Home

CSLF Education Discussion Forum

CSLF Education Discussion Forum

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5 Results | Forum Tools

Category	Last Post	Topics	Posts
<b>CCS Education</b>			
<b>Undergraduate Curriculums</b> Use this space to discuss undergraduate curriculums and classes related to carbon capture, utilization, and storage technology. Who's offering what?		0	0
<b>Graduate Curriculums</b> Use this area to discuss graduate curriculums and classes on carbon capture, utilization, and storage technology.		0	0
<b>Cafe</b>			
<b>Meet and Greet</b> Introduce yourself and get to know others in the forum.		0	0
<b>Tech Talk</b> Have a technology question? Post it here.		0	0
<b>Questions, Comments?</b> Post your suggestions and concerns about the forums here.		0	0



# Print & Digital Materials



**Carbon Capture & Storage (CCS)** is a combination of technologies for capturing, compressing, transporting and permanently storing carbon dioxide (CO<sub>2</sub>) emissions from large, stationary fossil energy facilities.

**#1 Carbon Capture and Storage (CCS) is a combination of technologies for capturing, compressing, transporting and permanently storing carbon dioxide (CO<sub>2</sub>) emissions from large, stationary fossil energy facilities.**

CCS is one part of a wide "portfolio" strategy (including increased efficiency, greater use of nuclear and renewable energy, and other approaches) for achieving significant reductions in anthropogenic CO<sub>2</sub> emissions.

**#2 There are three basic types of technology to capture CO<sub>2</sub> from power plants: Pre-Combustion, Post-Combustion, and Oxyfuel.**

Pre-Combustion processes convert fuel into a gaseous mixture of hydrogen and carbon dioxide. The two gases are then separated and the hydrogen can be burned without producing any CO<sub>2</sub> in the exhaust gas.

Post-Combustion technology separates CO<sub>2</sub> from combustion exhaust gases in air and captures it using a liquid solvent.

Oxy-fuel uses oxygen rather than air for fuel combustion, producing exhaust gas that is mainly water vapor and CO<sub>2</sub>, which facilitates capture.

United Nations Intergovernmental Panel on Climate Change, August 2005  
Carbon Sequestration Leadership Forum

**Carbon Capture & Sequestration**  
CCS Fact Sheet

**Carbon Capture**

Carbon capture is the separation of carbon dioxide (CO<sub>2</sub>) from emissions sources — such as large power plants or industrial facilities — or from the atmosphere. The capturing of a concentrated stream of CO<sub>2</sub> makes it possible to store or reuse the gas (such as for making synthetic natural gas). Current research efforts are focused on capturing CO<sub>2</sub> from coal-fired power plants, although the technology will also be applicable to natural gas-fired power plants, industrial CO<sub>2</sub> sources, and other applications.

**How is CO<sub>2</sub> Captured?**

CO<sub>2</sub> is captured from coal either before or after it is burned to produce energy. There are three basic types of technology for capturing CO<sub>2</sub> from power plants:

- Pre-combustion: Applies mainly to conventional coal-fired power generation, but can also be used with combustion systems based on natural gas. This technology separates CO<sub>2</sub> from combustion exhaust gases in air and exhausts oxygen using a liquid solvent. This technology is relatively well known and is used in industrial settings.
- Pre-combustion: Converts fuel into a gaseous mixture of hydrogen and CO<sub>2</sub>. The two gases are then separated and the hydrogen can be burned without producing any carbon dioxide in the exhaust gas. This technology is widely used in chemical production and some power plants.
- Oxy-combustion: In this process, coal is burned to generate instead of air, resulting in exhaust containing mainly CO<sub>2</sub> and water vapor. Because it results in about 100 percent CO<sub>2</sub> streams that are readily transportable, oxy-combustion has strong potential, but is currently being researched.

**What Can You Do With the Captured Carbon?**

Generally speaking, there are three possibilities:

- The captured carbon is re-utilized on-site. This can result in a portion of the CO<sub>2</sub> being permanently stored, such as in enhanced oil recovery (EOR). In this process, captured CO<sub>2</sub> is pressure injected into formations to help push out more of the remaining oil that cannot be extracted through traditional techniques. EOR has been successfully used for at least 40 years. Oil companies currently inject about 18 billion metric tons of carbon dioxide per year into global oil reserves.
- Convert the carbon dioxide to synthetic natural gas, industrial solvents or other hydrocarbon products for use in the chemical, plastics, and other industries.
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United Nations Intergovernmental Panel on Climate Change, August 2005  
Carbon Sequestration Leadership Forum

**Member**

The CSLF is currently comprised of 25 members. Membership is open to national governments or industry of fossil fuel-rich states that have a commitment to invest resources in research, development, and demonstration activities in carbon dioxide capture and storage technologies.

**CSLF Member Countries Represent:**

- 59 percent of world population
- 71 percent of world energy production
- 77 percent of world CO<sub>2</sub> emissions
- 78 percent of world GDP

United Nations Intergovernmental Panel on Climate Change, August 2005  
Carbon Sequestration Leadership Forum

**Carbon Sequestration Leadership Forum**

*A Global Response to the Challenge of Climate Change*

Information Kit

**Carbon Capture & Sequestration**

Carbon Capture Fact Sheets

United Nations Intergovernmental Panel on Climate Change, August 2005  
Carbon Sequestration Leadership Forum

inFocus Papers

CCS Fact Sheets

CSLF Fact Sheets

Information Kit

CDs



# “inFocus” Message Papers



- Why Carbon Capture & Storage?
- CO<sub>2</sub> Capture – Does it Work?
- Is Geologic CO<sub>2</sub> Storage Safe?
- Underground CO<sub>2</sub> Storage - Myth or Reality?
- CO<sub>2</sub> Transportation – Is It Safe and Reliable?
- 10 Facts About CCS

**inFocus** Carbon Capture & Storage  
10 Facts About CCS

**#1** Carbon Capture and Storage (CCS) is a combination of technologies for capturing, compressing, transporting, and permanently storing carbon dioxide (CO<sub>2</sub>) emissions from large, stationary fossil energy facilities.

CCS is one part of a wider “portfolio” strategy (including increased efficiency, greater use of nuclear and renewable energy, and other approaches) for achieving significant reductions in atmospheric CO<sub>2</sub> emissions.

Schematic illustrating the process of carbon capture and storage (also known as sequestration). Adapted from Energy and Geosciences Institute, The University of Utah illustration.

**#2** There are three basic types of technology to capture CO<sub>2</sub> from power plants: Pre-Combustion, Post-Combustion, and Oxyfuel.

- **Pre-Combustion** processes convert fuel into a gaseous mixture of hydrogen and carbon dioxide. The two gases are then separated and the hydrogen can be burned without producing any CO<sub>2</sub> in the exhaust gas.
- **Post-Combustion** technology separates CO<sub>2</sub> from combustion exhaust gases in air and captures it using a liquid solvent.
- **Oxyfuel** uses oxygen rather than air for fuel combustion, producing exhaust gas that is mainly water vapor and CO<sub>2</sub>, which facilitates capture.

**Pre-Combustion Capture Schematic:** Fuel → Separation → H<sub>2</sub> to storage / Exhaust gas → Power

**Post-Combustion Capture Schematic:** Fuel → Separation → CO<sub>2</sub> to storage / Exhaust gas → Power

**Oxyfuel Capture Schematic:** Fuel → Separation → CO<sub>2</sub> to storage / Exhaust gas → Power

Source: Carbon Dioxide Capture and Storage (2006), United Nations Intergovernmental Panel on Climate Change, page 6.  
Carbon Sequestration Leadership Forum



# CCS Fact Sheets



- Monitoring, Verification, and Accounting
- Carbon Capture
- Carbon Sequestration and the Environment
- Carbon Storage

Carbon Capture & Sequestration  
CCS Fact Sheet

## Monitoring, Verification, and Accounting

This research focus area is aimed at providing an accurate accounting of stored carbon dioxide (CO<sub>2</sub>) and obtaining a high level of confidence that it will remain sequestered indefinitely. Much of the effort involves field tests to fully characterize geologic storage sites, validate models and prior findings, and develop measurement, monitoring, and verification instrumentation (MVA).

**MONITORING, VERIFICATION, AND ACCOUNTING RESEARCH**

MVA research seeks to obtain:

- Instruments that can precisely detect carbon dioxide in a storage reservoir and/or measure its movement and its physical and chemical state.
- The capability to interpret and analyze the results from such instruments.
- The ability to use modeling to predict how movement and/or chemical reactions of carbon in the reservoir will affect (1) the permanence of storage, (2) the environmental impacts within the reservoir, and (3) any impacts on human health.
- Best practices and procedures that can be used to respond to any detected changes in the condition of the stored carbon and thus mitigate losses of carbon and/or negative impacts on the environment and human health.

A successful effort will enable sequestration project developers to ensure human health and safety and prevent damage to the host ecosystem. The goal is to provide sufficient information and safeguards to enable developers to obtain permits for sequestration projects. MVA also seeks to support a system of emissions reduction credits that approach 100 percent of injected CO<sub>2</sub>, contributing to the economic viability of sequestration projects. Finally, MVA will provide improved information and feedback to sequestration practitioners, thus accelerating technology progress.

**MONITORING, VERIFICATION, AND ACCOUNTING EFFORTS**

MVA efforts are divided into two sub-areas:

1. **Geologic formations.** MVA systems that focus on below ground CO<sub>2</sub> draw upon a significant capability developed for fossil fuel exploration and production. Work is directed at: 1.) refining existing CO<sub>2</sub> detection technologies and developing new ones, and 2.) developing models of subsurface systems that enable processing and analysis of information from detection devices. Measurement technologies being investigated include surface-to-borehole seismic, micro-seismic, cross-well electromagnetic, and

September 2011



# Conclusion

- Outreach tools continue to grow
- Outreach budget remains flat
- Communication and outreach responsibilities extend beyond the CSLF Secretariat

Collectively, we can have a much louder voice





[www.CSLForum.org](http://www.CSLForum.org)