

# Frequently Asked Questions on the Interagency Task Force on Carbon Capture and Storage

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## General Information

### What is the Interagency Task Force on Carbon Capture and Storage?

On February 3, 2010, President Obama established an Interagency Task Force on Carbon Capture and Storage, composed of 14 Executive Departments and Federal Agencies. The Task Force, co-chaired by the Department of Energy (DOE) and the Environmental Protection Agency (EPA), was charged with proposing a comprehensive and coordinated strategy to overcome the barriers to the widespread, cost-effective deployment of carbon capture and storage (CCS) within ten years, with a goal of bringing five to ten commercial demonstration projects online by 2016.

### What is carbon capture and storage (CCS)?

CCS refers to a set of technologies that can greatly reduce carbon dioxide (CO<sub>2</sub>) emissions from new and existing coal- and gas-fired power plants, industrial processes, and other stationary sources of CO<sub>2</sub>. CCS is a three-step process that includes capture and compression of CO<sub>2</sub> from power plants or industrial sources; transport of the captured CO<sub>2</sub> (usually in pipelines); and storage of that CO<sub>2</sub> in geologic formations, such as deep saline formations, oil and gas reservoirs, and unmineable coal seams. CCS could play an important role in achieving national and global greenhouse gas (GHG) reduction goals.

### Why are CCS technologies being developed?

EPA and Energy Information Administration (EIA) assessments of recent climate and energy legislative proposals show that, if available on a cost-effective basis, CCS can over time play a large role in reducing the overall cost of meeting domestic GHG emissions reduction targets. By playing a leadership role in efforts to develop and deploy CCS technologies to reduce GHG emissions, the United States can preserve the option of using affordable, abundant, domestic energy resources, help improve national security, and assist in the creation of new technologies for export.

### How did the Task Force develop their findings and recommendations?

Composed of more than 100 Federal employees, the Task Force examined challenges facing early CCS projects as well as factors that could inhibit widespread commercial deployment of CCS. In developing its findings and recommendations, the Task Force relied on published literature and individual input from more than 100 experts and stakeholders, as well as public comments submitted to the Task Force. The Task Force also held a large public meeting and several targeted stakeholder briefings.

## Status of CCS Technologies

### Do CCS technologies currently exist?

Yes. Capture of CO<sub>2</sub> from industrial gas streams has occurred since the 1930s using a variety of approaches to separate CO<sub>2</sub> from other gases. These processes have been used in the natural gas industry and to produce food and chemical-grade CO<sub>2</sub>. CO<sub>2</sub> has been transported via pipelines in the United States for nearly 40 years. Approximately 50 million tonnes of CO<sub>2</sub> are transported each year through 3,600 miles of existing CO<sub>2</sub> pipelines. Globally, there are four commercial CCS facilities sequestering captured CO<sub>2</sub> into deep geologic formations and applying a suite of technologies to monitor and verify that the CO<sub>2</sub> remains sequestered. DOE estimates that there are hundreds to thousands of years of storage potential in geologic formations in North America at the current level of emissions.

### If CCS technologies exist, why aren't they being deployed?

Widescale cost-effective deployment of CCS will occur only when driven by a policy designed to reduce GHG emissions. Ultimately, comprehensive energy and climate legislation will provide the largest incentive for CCS deployment as an option for climate change mitigation, because it will create a stable, long-term, market-based framework to channel private investment into low-carbon technologies.

### Are CCS technologies ready for use by coal plants and large industrial sources?

There are no insurmountable technological, legal, institutional, or other barriers that prevent CCS from playing a role in reducing GHG emissions. However, “scaling up” CCS technologies and integrating them with coal-based power generation poses some challenges. Key challenges identified by the Task Force include lack of a carbon price and appropriate financial incentives for new technologies, legal and regulatory uncertainties, and the need to address long-term liability and stewardship of geologic sequestration sites.

## Deploying CCS Technologies

### Is the Federal government supporting deployment of CCS technologies?

Yes. The Federal government is already pursuing a set of initiatives to speed the commercial development of safe, affordable, and broadly deployable CCS technologies in the United States, including: RD&D of CCS technologies; the development of regulations that address the safety, efficacy, and environmental soundness of injecting and storing carbon dioxide underground; and the assessment of the country's geologic capacity to store carbon dioxide. All of this work builds on the firm scientific basis that now exists for the viability of CCS technology.

### Will the President's near term goal of bringing five to ten commercial demonstration projects online by 2016 be accomplished?

Up to ten integrated CCS demonstration projects supported by DOE are intended to begin operation by 2016 in the United States. DOE is currently pursuing multiple demonstration projects

using close to \$4 billion in Federal funds, matched by more than \$7 billion in private investments, which will begin to pave the way for widespread deployment of advanced CCS technologies within a decade. These demonstrations will integrate current CCS technologies with commercial-scale power and industrial plants to prove that they can be permitted and operated safely and reliably. Various other incentives, such as tax credits and loan guarantees, are also available to many projects.

## **Additional Information**

### **Where can I get additional information on the Interagency Task Force on Carbon Capture and Storage?**

Visit EPA or DOE's website for the full report and the Presidential memorandum establishing the Task Force:

[www.epa.gov/climatechange/policy/ccs\\_task\\_force.html](http://www.epa.gov/climatechange/policy/ccs_task_force.html)

[www.fe.doe.gov/programs/sequestration/ccs\\_task\\_force.html](http://www.fe.doe.gov/programs/sequestration/ccs_task_force.html)

### **Where can I get additional information on DOE's research programs?**

Additional information on DOE's CCS R&D program can be found on the Office of Fossil Energy and the National Energy Technology Laboratory websites: [www.fossil.energy.gov](http://www.fossil.energy.gov) and [www.netl.doe.gov](http://www.netl.doe.gov).

### **Where can I get additional information on EPA's CCS efforts?**

Additional information can be found on EPA's Climate Change and Underground Injection Control websites: [www.epa.gov/climatechange/emissions/co2\\_geosequest.html](http://www.epa.gov/climatechange/emissions/co2_geosequest.html) and [www.epa.gov/safewater/uic/wells\\_sequestration.html](http://www.epa.gov/safewater/uic/wells_sequestration.html).