ExxonMobil's long-term experience in CCS components

For more than 30 years, ExxonMobil engineers and scientists have researched, developed and applied technologies that could play a role in making CCS viable in commercial applications. For example, our patented Controlled Freeze Zone technology is a single-step process that could more efficiently separate CO_2 and other impurities from a natural gas stream. It has the potential to make CCS more affordable.

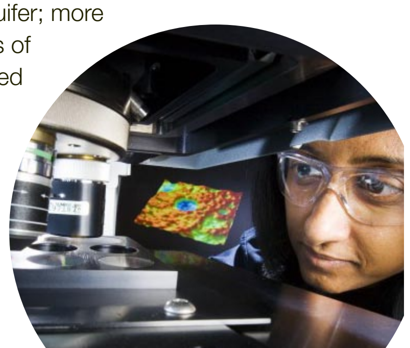
ExxonMobil has utilized advanced technology and extensive quality-control procedures to ensure facility integrity when designing and developing world-class gas treatment plants, pipelines and injection projects.

We have a history of proven results in a production process called Enhanced Oil Recovery (EOR), which involves injecting CO_2 into a reservoir to extract "trapped" oil and gas that could not otherwise be produced. In the United States alone, more than 11 trillion cubic feet of CO_2 have already been used in EOR projects.

This technological expertise in the three main components of CCS is currently being put to use in a number of initiatives designed to help ExxonMobil better understand the unique challenges that must be overcome for CCS to be implemented commercially.

For example, ExxonMobil is working with partners on a number of CCS-related research projects, such as improved capture technology; reservoir flow modeling; geologic storage and integrity modeling; and assessing well seal integrity and storage capacity of oil and gas reservoirs, aquifers and coal beds for potential storage use.

In 2008, ExxonMobil captured nearly 4 million metric tons of CO_2 at LaBarge, Wyoming that was marketed for EOR and other industrial uses – more captured CO_2 than any other similar project in the world. In addition, ExxonMobil is involved in a CCS project in the North Sea in which CO_2 is separated from natural gas produced by offshore wells and reinjected into a saline aquifer; more than 10 million metric tons of CO_2 have been safely stored underground as part of the project. These real-world activities are especially useful in understanding the steps necessary to move CCS forward.



Case study: Gaining confidence in CCS through EOR

ExxonMobil's experience in using CO_2 for Enhanced Oil Recovery (EOR) – a process that maximizes production of oil from mature fields – provides a source of knowledge important to the advancement of CCS.

EOR begins with CO_2 that is produced from natural sources or captured at a nearby power plant or other industrial facility. The CO_2 is compressed and injected into an oil reservoir, where it acts like "thinner," pushing oil to nearby production wells. The most successful example of CO_2-based EOR is in the Permian Basin of west Texas, where significant investment by ExxonMobil and others has resulted in the recovery of an additional 1 billion barrels of oil production. Approximately 25 percent of today's production in the Permian Basin is generated by CO_2 enhanced oil recovery.

The implementation of a wide range of EOR technologies in geographically diverse locations has given ExxonMobil an unparalleled depth of knowledge relating to CO_2 storage. ExxonMobil has more than 30 years of global experience in established methodologies for designing wells and well locations for CO_2 storage and the mechanisms for ensuring their integrity.

ExxonMobil engineers and scientists now are researching the storage and injection requirements of diverse types of storage sites, using proprietary technologies to determine the long-term viability of various geologic formations. The capacity of deep saline aquifers, for example, is significantly larger than current oil and gas reservoirs and coal beds.

Through its investment in EOR projects today, ExxonMobil will continue to gain knowledge of safe CO_2 storage techniques – the cornerstone of a commercially viable, successful CCS program.

For more information on CCS and ExxonMobil's commitment to ongoing research and development of the technologies involved, visit **exxonmobil.com**.

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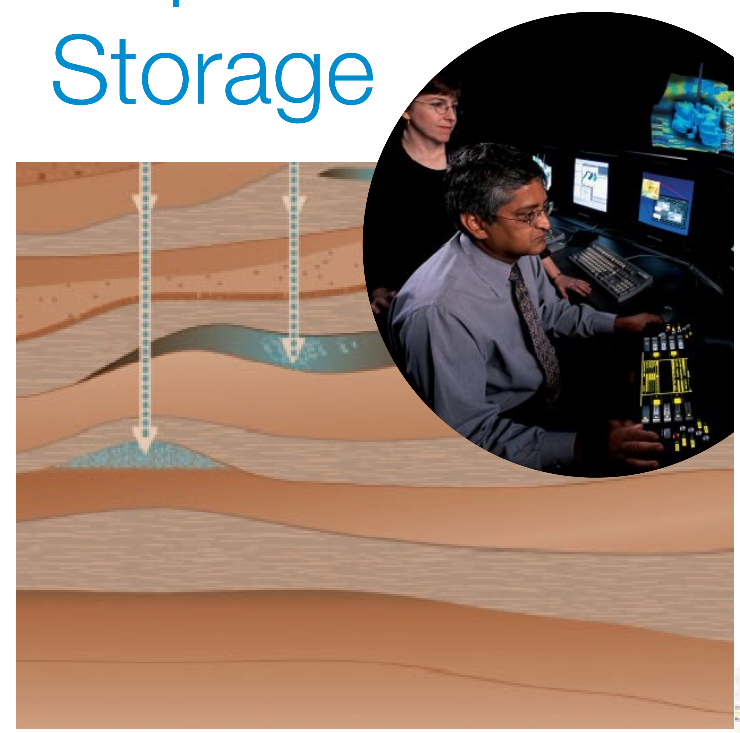
Exxon Mobil Corporation
5959 Las Colinas Blvd. • Irving, TX 75039-2298

The Promise of Carbon Capture and Storage



Integration and advancement of proven technologies – one option toward managing greenhouse gas emissions.

ExxonMobil
Taking on the world's toughest energy challenges.™

The promise of CCS

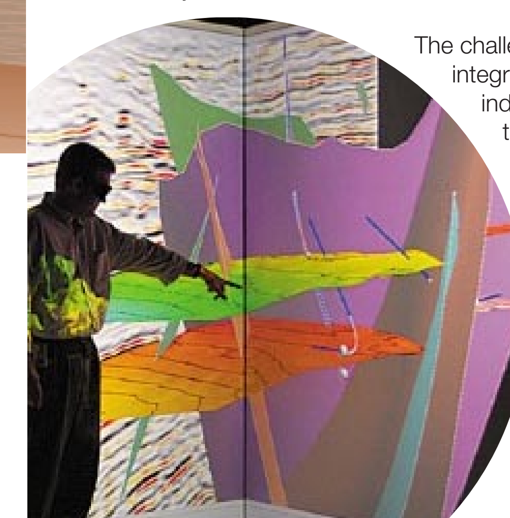
With a deep base of technical knowledge and a commitment to improving environmental performance, ExxonMobil is active in the evaluation and adoption of Carbon Capture and Storage (CCS) around the world. ExxonMobil is taking action to mitigate greenhouse gas emissions today and to support the development of advanced energy technologies with the potential to reduce future emissions significantly.

CCS is a promising technology that could play a major role in the management of worldwide greenhouse gas emissions (GHG) released into the atmosphere – the largest of which is carbon dioxide (CO_2).

By integrating three individual technologies the oil and gas industry has used for decades – capture, transportation and storage – CCS could enable power plants and industrial facilities to achieve meaningful management of GHG, while maintaining their ability to produce much-needed energy and other products.

The Intergovernmental Panel on Climate Change estimates that these large facilities – especially power generation plants – account for as much as 60 percent of the world's total fossil fuel CO_2 emissions. CCS technology could help address these emissions by:

- Separating CO_2 from the flue gas (exhaust) from coal-fired power generation or combustion sources at other industrial facilities.
- Compressing the CO_2 to reduce its volume and transporting it via pipeline to a storage site.
- Finally, injecting the CO_2 into underground geologic formations, such as saline aquifers, depleted oil or gas reservoirs, or deep coal beds, where it can be stored indefinitely.



The challenge is to integrate these individual, time-tested components into a single process for use by large-scale industrial combustion sources – and to do so in an economically viable manner.

ExxonMobil's commitment to advancing CCS technology

Achieving meaningful reductions in greenhouse gas emissions will require a wide range of solutions in the coming years. ExxonMobil believes that CCS has the potential to play an important role in managing GHG emissions, but it will require additional technological breakthroughs, fully integrated demonstration projects, regulatory and legislative support at all levels, and public acceptance.

With its long history of operational, technical and research experience in the technologies comprising CCS, ExxonMobil is uniquely positioned to lead the way in further development of this promising approach to reducing emissions.

Our involvement includes:

- Partnering with the European Commission and other companies on the CO_2ReMoVe project that is evaluating a range of technologies to monitor the injection and storage of CO_2 from gas streams in fields around the world.
- Collaborative research at the International Energy Agency, Massachusetts Institute of Technology, Georgia Tech, University of Texas and University of Wyoming.
- Participation in U.S. Department of Energy Regional Sequestration Partnerships.
- Intensive internal research and development of CCS-related technologies and participation in demonstration projects.
- Co-founder of the Global Climate and Energy Project (GCEP) at Stanford University, a long-term research program designed to accelerate development of a range of commercially viable energy technologies that can lower GHG emissions on a global scale.

Infrastructure for widespread deployment

Storing 1 billion tons per year of CO_2 is roughly equal to the United States' annual consumption of natural gas. Consider the natural gas pipeline grid as an example of necessary infrastructure: more than 210 natural gas pipeline systems; 302,000 miles of transmission pipelines; and more than 1,400 compressor stations that maintain pressure on the pipeline network and assure continuous forward movement of supplies, among numerous other elements.

Verifying the integration and performance of capture, transportation and storage technologies in large-scale CCS applications is a vital step toward deployment of CCS systems.

The scale, significant investment and required new infrastructure cannot be overlooked. They also remain barriers to widespread deployment of CCS. The concept includes potentially duplicating the oil and gas industry's infrastructure – which has been built over 100 years – in a third of the time. In addition, the increased energy demand will result in competition (energy industry vs. CCS) for the same skilled workforce. CCS is also not likely to be economically justified without some predictable means for placing a value on emitted carbon or a clear regulatory and legal framework.

CCS has the potential to reduce global CO_2 emissions. Emission reduction is an issue that warrants action, since if left unchecked, global emissions are expected to continue to rise. But CCS is not the perfect answer.

step 1 Capturing CO_2

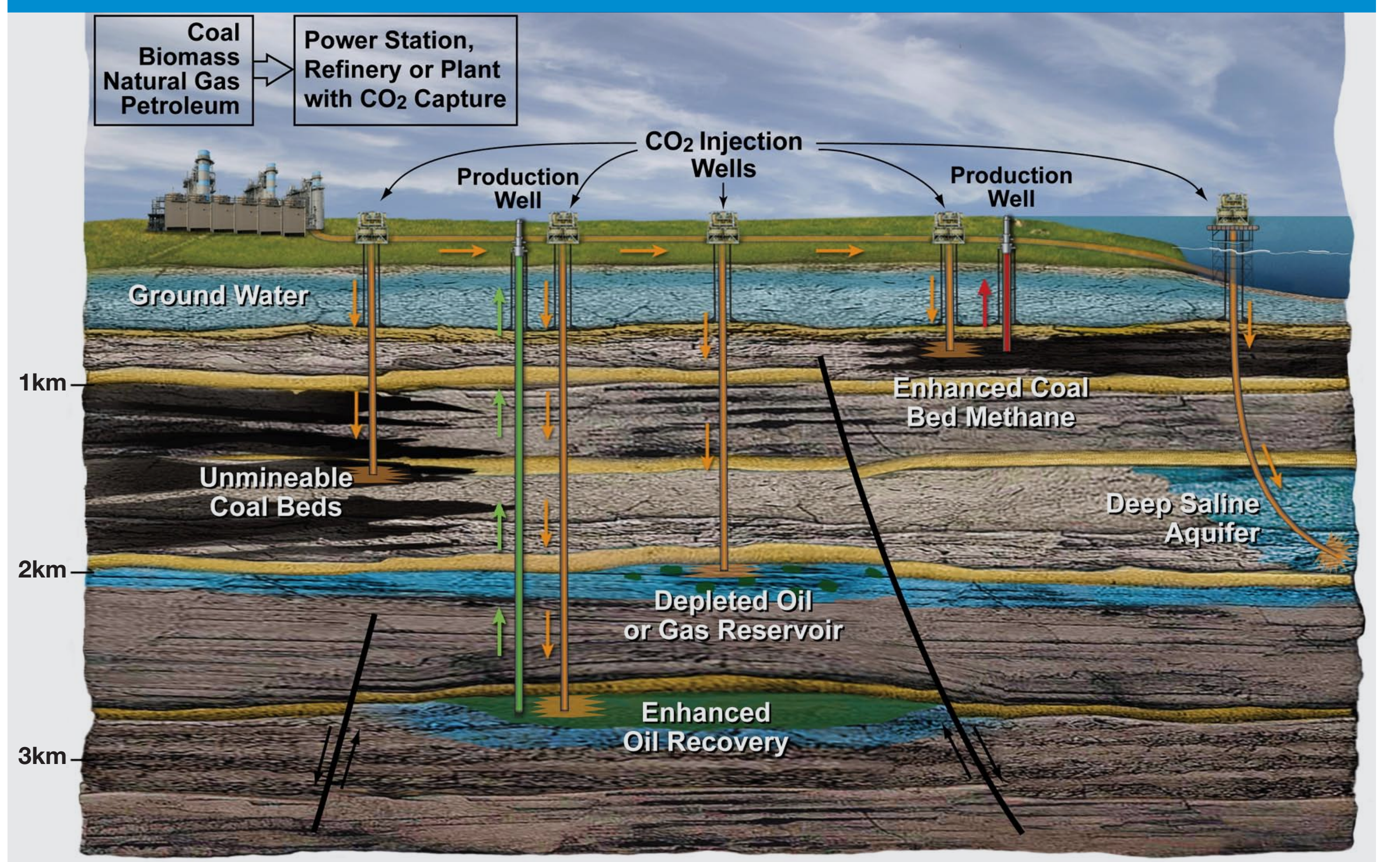
The first step in the CCS process is capturing, or separating, the CO_2 from the fuel source used at power generation plants or industrial manufacturing facilities. Capture is the most costly and energy-intensive step of the CCS process.

ExxonMobil has extensive experience in separating CO_2 from hydrocarbons through its natural gas processing facilities, which remove impurities from the gas before it is shipped via pipeline.

Most current capture technologies use a solvent to remove CO_2 from the gas stream, but ExxonMobil's Controlled Freeze Zone technology, currently undergoing commercial-scale demonstration, is based on the freezing and re-melting of CO_2 in a modified distillation column. Controlled Freeze Zone technology reduces the cost and complexity of separating CO_2 from natural gas and could have significant benefits for CCS systems, in part because there are no limits on CO_2 concentration, and the CO_2 is discharged under pressure, ready for re-injection.

One key to successful implementation of CCS on a commercial scale is developing cost-effective solutions for capturing CO_2 from coal-fired power generation plants. This is an area where a great deal of research is under way.

Subsurface Storage Options for CO_2



step 2 The transportation process

The second step is transporting the captured CO_2 to the storage site – underground geologic formations such as depleted oil or gas reservoirs.

ExxonMobil Pipeline Company operates or has an interest in 18,000 miles (29,000 kilometers) of pipeline in the United States, using the most advanced technology and extensive quality-control procedures to ensure the safety of its lines. The company's integrity management program includes a wide range of testing and monitoring techniques – from hydrotesting to tools that travel through the pipeline to inspect for flaws or ongoing corrosion control. In addition to these inspection and maintenance measures, the company's Operations Control Center monitors pipeline operations on a 24-hour basis.

ExxonMobil is currently involved in a number of research projects designed to test the integrity of steel and other materials when exposed to CO_2.

step 3 Injection and storage

The third and final component of CCS is injecting CO_2 into underground reservoirs for storage. ExxonMobil is well versed in this area, due to the company's long history of using water, natural gas and CO_2 injection for EOR and sound resource management.

The company's field-tested program of injection well integrity management includes mechanical testing, corrosion control programs and computer controlled systems.

ExxonMobil has extensive technological expertise in monitoring and ensuring the integrity of our fields. Our involvement in CO_2 injection projects in the North Sea and LaBarge, Wyoming, gives the company first-hand knowledge and experience in this stage of the CCS process.