



National Enhanced Oil Recovery Initiative

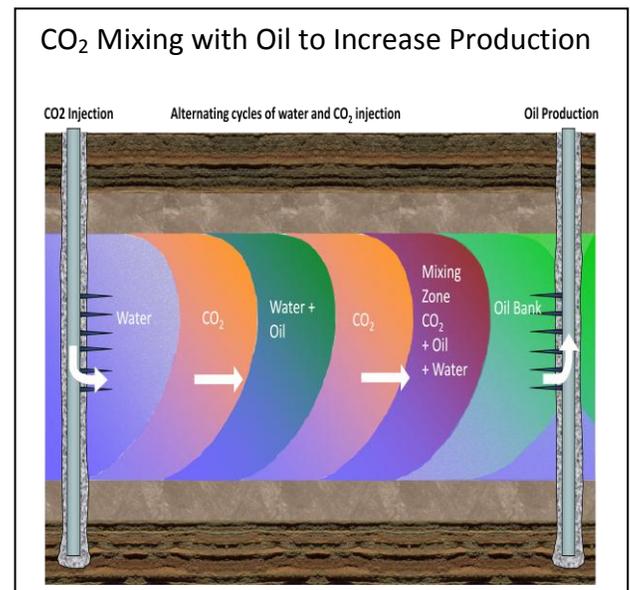
The National Enhanced Oil Recovery Initiative brings together diverse public and private leaders to increase U.S. domestic oil production, energy security, and reduce emissions by capturing carbon dioxide (CO₂) from power plants and industrial facilities¹ and safely storing it in oil fields.

Launched in July 2011, the National Enhanced Oil Recovery Initiative's purpose is to develop policy recommendations to increase U.S. domestic oil production from existing oil fields through enhanced oil recovery (EOR) and to store CO₂ captured from power plants and industrial facilities. The private sector, government and NGO leaders participating in this initiative aim to enhance U.S. energy security, promote job and economic growth, and reduce CO₂ emissions.

How does CO₂-EOR work? CO₂-EOR works most commonly by injecting CO₂ into already developed oil fields where it mixes with and "releases" additional oil from the formation, thereby freeing it to move to production wells. CO₂ is separated from the produced oil in above-ground equipment and re-injected in a closed-loop system many times over the life of an EOR operation.

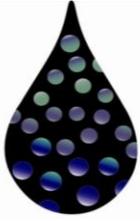
Overview

A commercial technology established in North America in 1972, CO₂-EOR could more than double economically recoverable U.S. oil reserves.²



Increasing EOR production by using captured CO₂ is a compelling and largely unheralded example of American private sector innovation that supports several urgent national priorities:

- Increase U.S. oil production from already developed fields with reduced risk and impact compared to conventional oil production;
- Strengthen America's national security by reducing our dependence on unstable and/or hostile regimes for our oil supply;
- Create new, high-paying American jobs, and retain and attract private sector investment in our economy;



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- Reduce trade deficits by keeping petroleum expenditures at home and at work in the U.S. economy;
- Achieve significant net carbon reductions by expanding opportunities for oil, natural gas, coal, ethanol and other industries to invest in commercially proven technologies to lower the CO₂-intensity of their products.

Challenge: the U.S. needs to capture more CO₂ to increase domestic oil production. CO₂-EOR projects use CO₂ to access and mobilize oil that otherwise would not be produced using conventional technologies. One study states that with an increase in CO₂ supply and by applying existing best practices, CO₂-EOR has the potential to add as much as 61 billion barrels of oil to U.S. domestic oil production.³

CO₂ capture projects and pipeline infrastructure are needed to meet this demand. Significant amounts of CO₂ captured and transported from power plants and industrial sources are urgently needed to boost U.S. oil production through CO₂-EOR.⁴

Support for CO₂-EOR is critical to achievement of energy security, economic, and environmental benefits. The development of CO₂ capture projects, build-out of CO₂ pipeline infrastructure and improvements to existing oil field infrastructure is required to provide the level of CO₂ needed to expand the US CO₂-EOR industry.

This requires private investment, and federal and state policies and incentives to support additional deployment of CO₂ capture projects and infrastructure. These projects will provide jobs and economic benefits for local and state governments. At a time when federal and state officials are struggling to reduce deficits, tax revenues generated from new projects can offset the additional cost of state and federal incentives and even increase government revenue over time.

The National EOR Initiative is committed to building a pathway to a secure and low-carbon energy future through expansion of CO₂-EOR. At its launch, the Initiative received bipartisan support from several members of Congress who are monitoring the Initiative's progress and will receive final recommendations for legislative consideration.

EOR Initiative Timeline:

- July 2011: Launch of National EOR Initiative and inaugural meeting.
- August 2011 - January 2012: Ongoing work of industry, government and environmental leaders participating in EOR Initiative.
- February 2012: Release recommendations.

¹ Examples of industrial facilities include fertilizer production, ethanol production, cement and steel plants.

² The US EIA estimates proved reserves of 22.3 billion barrels. www.eia.gov/oil_gas/natural_gas/data_publications/crude_oil_natural_gas_reserves/cr.html

³ ARI, *Improving Domestic Energy Security and Lowering CO₂ Emissions with "Next Generation" CO₂-Enhanced Oil Recovery (CO₂-EOR)*, June 20, 2011, DOE/NETL-2011/1504.

⁴ Ibid.