

EMISSIONS: Senators, think tanks form new carbon capture alliance (07/13/2011)

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The potential carbon reductions from enhanced oil recovery are vast, according to some estimates.

It could store permanently at least a billion metric tons of carbon dioxide, or about a sixth of the U.S. annual total output, within two decades, said Vello Kuuskraa, president of Advanced Resources International Inc., a consulting company. The process involves capturing CO₂ from natural sources or industrial facilities and pumping the gas underground to boost oil production that would not otherwise be recoverable.

While there is some disagreement on the numbers, the federal government has said that it expects the CO₂ flow for enhanced oil recovery projects to quadruple by 2030. Other estimates from environmentalists push the potential by 2030 to about a 12th of the annual U.S. total, said Steve Melzer, an independent oil consultant in Texas.

"The industry just needs a jump-start," said Kuuskraa.

In that regard, two nonprofits announced an initiative yesterday to speed up the deployment of enhanced oil recovery projects. Backed by several U.S. senators, the group plans to release recommendations on how policymakers at the federal and state levels can increase the amount of CO₂ grabbed from natural sources and industrial facilities for use in oil fields.

The goal is to help a technology that has a political chance at a time of tight budgets and stalled climate legislation. Because the CO₂ used in enhanced oil projects has commercial value in the oil industry, it provides an immediate financial incentive for developers, supporters of the new initiative said yesterday at an event on Capitol Hill.

The practice also has the potential to yield an estimated 35 billion to 50 billion new barrels of economically recoverable oil in the United States, or more than twice current U.S. reserves.

"It offers the chance for a win-win situation," said Sen. Kent Conrad (D-N.D.), who appeared at yesterday's event. "It would increase domestic oil production while reducing greenhouse gas emissions in a fiscally responsible manner."

Appearing with Conrad were Sen. John Hoeven (R-N.D.) and Rep. Mike Conaway (R-Texas), while Sens. John Barrasso (R-Wyo.) and Richard Lugar (R-Ind.) offered statements of support.

Formed by two nonprofits, the Pew Center on Global Climate Change and the Great Plains Institute, the initiative, consisting of some 30 federal government officials, state employees, environmental groups and industry officials, plans to meet several times before issuing recommendations in early 2012.

Some legal and economic obstacles

They will consider existing bills from Conrad and Lugar providing incentives for enhanced oil recovery. Lugar's bill introduced in June, for example, calls for tax cuts to build infrastructure to ferry CO₂ from a capture spot to an oil field.

But with Congress grappling with the federal debt, there's a question whether bills touching on enhanced oil recovery have a shot at gaining traction. So the initiative members will be examining state measures, as well.

Those could include state laws governing ownership of oil fields, which create confusion in many places, said Melzer. In some regions, an owner of a small part of an oil patch can hold up claims from companies trying to pump CO₂ underground elsewhere in the field if he or she objects to the process, he said.

States could change some of that by clarifying who owns what, and who gets paid for ownership of underground space when companies want to extract oil, said Melzer.

The biggest obstacle, though, is crossing the gap between the amount CO₂ can be sold for, and how much typical capture systems cost. Equipment is placed on facilities such as ethanol plants to grab the gas from emission streams.

That capture technology is usually about twice the cost of the value of the resulting CO₂, leaving little financial incentive for companies to invest in things such as pipeline infrastructure carrying gas, said Kuuskraa, who is not part of the initiative. Federal incentives, perhaps allowing future tax revenues from oil revenue to count toward capture systems, could help, he said.

Some green groups have criticized enhanced oil recovery as a concept that would have limited climate benefits, since it is promoting continued use of petroleum. Others have said the technology has limited use, since carbon capture and sequestration, or CCS, outside of oil fields, or in deep rock formations, will be necessary in the long term to control emissions from coal and natural gas plants.

A 2010 [paper](#)¹ prepared for the Department of Energy, for example, said that enhanced oil recovery "is not core to the development of CCS technologies."

¹ <http://web.mit.edu/mitei/docs/reports/eor-css/dooley.pdf>