



Environment



Feds: Storing Carbon Dioxide Underground Can Work

By Andrea Thompson, LiveScience Staff Writer posted: 26 June 2007 12:04 pm ET

Coal seams deep below the ground could be used to store carbon dioxide released by human activities, government scientists have found.

The process could have side-effects, some good and some bad.

When carbon dioxide is pumped into the coal, it may also displace the methane the coal contains, which could be used by industry.

Storing carbon dioxide in coal seams is just one potential method of carbon sequestration being explored by scientists. Researchers are also looking into pumping the greenhouse gas into oil wells to extract the last few drops of oil or in brine aquifers.

Once injected into these deep underground formations, the carbon could potentially be stored indefinitely.

Researchers with the U.S. Department of Energy's National Energy Technology Laboratory have built a lab that mimics the pressures, temperatures and other stresses that deep coal seams are subjected to, in order to conduct realistic experiments of carbon dioxide injection. The idea is to inject the carbon into seams that are not useful for coal mining. The new study adds weight to another recent study suggesting that the process could work.

The team also looked at possible side-effects of carbon sequestration in coal mines. They found that some toxic metals trapped in the coal were released and could contaminate the water used in the process.

"Changes in water chemistry and the potential for mobilizing toxic trace elements from coal beds are potentially important factors to be considered when evaluating deep, unmineable coal seams for CO2 sequestration, though it is also possible that, considering the depth of the injection, that such effects might be harmless," the researchers said in a prepared statement.

They estimate that worldwide, there is the storage capacity for almost 3 trillion tonnes (or 3,000 trillion kilograms) of carbon dioxide.

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