

Publications
News Release

Release Date: February 27, 2009

DOE Partner Begins Injecting 50,000 Tons of Carbon Dioxide in Michigan Basin Project Expected to Advance National Carbon Sequestration Program, Create Jobs

Washington, DC—Building on an initial injection project of 10,000 metric tons of carbon dioxide (CO₂) into a Michigan geologic formation, a U.S. Department of Energy (DOE) team of regional partners has begun injecting 50,000 additional tons into the formation, which is believed capable of storing hundreds of years worth of CO₂, a greenhouse gas that contributes to climate change.

DOE's Midwest Regional Carbon Sequestration Partnership (MRCSP), led by Battelle of Columbus, Ohio, began injecting the CO₂ this week in the Michigan Basin near Gaylord, Mich., in a deep saline formation, the Silurian-age Bass Island dolomite. The MRCSP is one of seven partnerships in DOE's Carbon Sequestration Partnership Program, which was created to assess optimal CO₂ storage approaches in each region of the country. The program is managed for DOE's Office of Fossil Energy by the National Energy Technology Laboratory (NETL).

"This injection test, one of three performed by our Midwest partner, will significantly increase our understanding of CO₂ storage technologies and practices in a real-world setting," said Victor Der, Principal Deputy Assistant Secretary for Fossil Energy. "This project will not only provide important information about promising sequestration techniques but it will also go a long way toward creating jobs in the energy sector."

When the current project is completed, the total 60,000 metric ton injection at the Michigan site will mark the largest deep saline reservoir injection in the United States to date and will allow scientists to more fully evaluate how CO₂ moves through the basin's geologic formation. Injections are expected to take place at an average rate of 250 tons per hour up to a maximum rate of 600 tons. The 6-month project and related activities of the MRCSP are expected to create more than 230 jobs and 2,900 total project job years. The latter figure represents the number of full-time jobs per year times the number of years that the jobs are supported.

During the Michigan basin injection process, the Midwest team will provide additional insight to the knowledge gained from the initial test in 2008. The team will record geochemical changes to the system, as well as the distribution of the CO₂ along the wellbore. A larger volume of CO₂ injected over a longer period of time will also provide scientists with additional insight into temperature and pressure responses in the geologic formation, as well as any seasonal changes to the system.

Since the test is taking place within an existing oil and gas field, continuing enhanced oil recovery operations — which are being conducted by well owner, Core Energy LLC — makes

this area ideal for the injection test. The area already contains much of the needed infrastructure, such as CO₂ compressors, injection systems, existing wells, and pipelines, including an 8-mile-long transport pipeline.

The CO₂ being injected comes from a natural gas processing plant owned by DTE Energy, located near Gaylord, where the CO₂ will be transported via the 8-mile pipeline to the well. The depth of the injection (3,500 feet) is significantly below the 1,000-foot level of drinking water sources and does not pose any danger to them.

DOE launched the Carbon Sequestration Partnership Program in 2003 to develop and validate technologies to store and monitor CO₂ in various geologic formations around the country as part of a national strategy to combat global climate change.

The MRCSP team includes more than 30 partners from state and federal organizations, leading universities, state geological surveys, nongovernmental organizations, and private companies in the eight-state region of Indiana, Kentucky, Maryland, Michigan, New York, Ohio, Pennsylvania, and West Virginia. In addition to Battelle, Core Energy, and DTE, other participants include the Michigan Geological Repository for Research and Education at Western Michigan University, Stanford University Geophysics Department, Schlumberger, and the Michigan Department of Environmental Quality's Office of Geological Survey.

Contact:

- Mike Jacobs, FE Office of Communications, 202-586-0507