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DOE Completes Large-Scale Carbon Sequestration Project Awards

Regional Partner to Demonstrate Safe and Permanent Storage of 2 Million Tons of CO₂ at Wyoming Site

WASHINGTON, DC - Completing a series of awards through its Regional Carbon Sequestration Partnership Program, the U.S. Department of Energy (DOE) today awarded \$66.9 million to the Big Sky Regional Carbon Sequestration Partnership for the Department's seventh large-scale carbon sequestration project.

Led by Montana State University-Bozeman, the Partnership will conduct a large-volume test in the Nugget Sandstone formation to demonstrate the ability of a geologic formation to safely, permanently and economically store more than two million tons of carbon dioxide (CO₂). Subject to annual appropriations from Congress, the project is estimated to cost \$130.6 million, including the partnership's cost share. Successful storage of CO₂ will help the United States use its extensive domestic fossil fuel resources without contributing to global climate change.

"DOE is extremely pleased to make the final award under Phase III of this important program," Deputy Secretary of Energy Jeffrey Kupfer said. "Along with our regional partners, we will be able to move carbon sequestration technology from the laboratory to large-scale field demonstrations and ultimately to the marketplace. By doing so, we will help our Nation meet growing energy demand and reduce greenhouse gas emissions."

The Big Sky partnership's large-volume injection test will be located at the Riley Ridge Unit on the LaBarge Platform in Southwest Wyoming. The project will demonstrate the entire CO₂ injection process—pre-injection characterization, injection process monitoring, and post-injection monitoring—and provide the foundation for the future development of CO₂ capture and storage opportunities in the region.

Big Sky plans to drill a CO₂ injection well and then inject up to one million tons per year of CO₂ into the Nugget Sandstone formation at a depth of approximately 11,000 feet. These eolian sandstone formations are present throughout the region and present the opportunity to store more than 100 years of CO₂ emissions from point sources in the region. The CO₂ for the project will be supplied by Cimarex Energy Company's planned helium and natural gas processing plant at

Riley Ridge.

Today's award to Big Sky is the seventh award in the third phase of the Regional Carbon Sequestration Partnerships program. Six other large-scale field projects are currently being developed throughout the United States by the other Regional Partnerships. This initiative, launched by DOE in 2003, forms the centerpiece of national efforts to develop the infrastructure and knowledge base needed to place carbon capture and storage technologies on the path to commercialization. The seven regional partnerships include more than 350 organizations from government, industry, and academia and extend across the United States and into Canada.

During the first phase of the program, the partnerships characterized the potential for CO₂ storage in deep oil-, gas-, coal-, and saline-bearing formations. When Phase I ended in 2005, the partnerships had identified more than 3,000 billion metric tons of potential storage capacity in promising sinks. This has the potential to represent more than 1,000 years of storage capacity from point sources in North America.

In the program's second phase, the partnerships implemented a portfolio of small-scale geologic and terrestrial sequestration projects. The purpose of these tests was to validate that different geologic formations have the injectivity, containment, and storage effectiveness needed for long-term sequestration. Phase III large-volume tests are designed to validate that the capture, transportation, injection, and long-term storage of over one million tons of carbon dioxide can be done safely, permanently, and economically.

Through the program, the United States and its partners in Canada are demonstrating to the world that North America is ready to address climate change with real technology options. The lessons learned from these projects will build a foundation for future deployment by establishing best practices for regulatory permitting, operations, monitoring, closure, and public outreach.

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