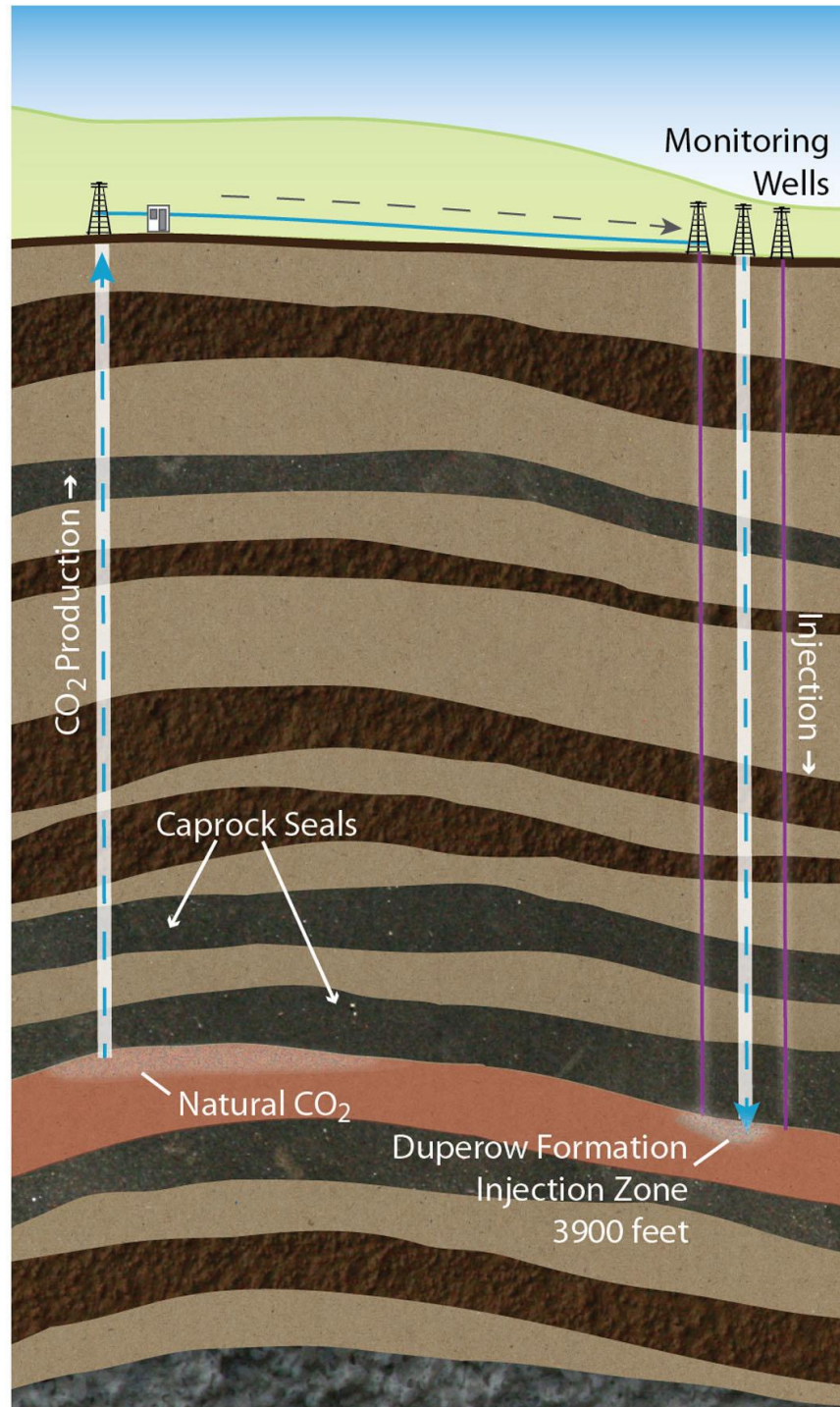


MSU moves forward with U.S. Department of Energy backed carbon dioxide storage project in northern Montana

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Montana State University finalized negotiations with the U.S. Department of Energy's Office of Fossil Energy - National Energy Technology Laboratory on Tuesday to begin work on a \$67 million, eight-year project that will involve permitting, injecting and monitoring one million tons of carbon dioxide (CO₂) into deep porous rock formations in northern Montana. MSU received the preliminary award in 2009 and has been finalizing details on site selection, logistics, and project partners for the project to proceed.

The overall goal of the project is to demonstrate that CO₂ can be stored safely and viably in regional geologic formations. It will be carried out by the [Big Sky Carbon Sequestration Partnership](#) at MSU.

Carbon storage, also known as carbon sequestration, is the capture and storage of CO₂ gas that would otherwise be emitted into the atmosphere. Carbon storage is seen as one possible strategy to help stabilize global CO₂ emissions and reduce the impacts of climate change.

"This grant award demonstrates, once again, MSU's national competitiveness in the search for energy solutions and our excellence in research and teaching," said MSU President Waded Cruzado.

Under the umbrella of the [MSU Energy Research Institute](#), the university conducts about \$15 million in energy research annually. That research is part of the university's \$109 million research enterprise, for which it is recognized by the Carnegie Foundation as one of the top 108 research universities in the country.

The Montana congressional delegation of Sens. Max Baucus and Jon Tester and Rep. Denny Rehberg recognize the importance of carbon storage to the nation's energy systems and have strongly supported federal programs and MSU research in this area.

The success of MSU's energy research also owes credit to Montana Governor Brian Schweitzer, Cruzado said. "The governor's office and the Montana congressional delegation have been very supportive of energy research at MSU and across the state."

The project site will be located at Kevin Dome (pronounced kee-vin), a geologic feature that extends 700 square miles underground and has trapped naturally occurring carbon dioxide (CO₂) for millions of years. There are barrier rock layers above the CO₂ that prevent gas or other liquids from migrating to the surface.

The CO₂ does not take up all of the space and therefore the dome has potential to store additional CO₂. The partnership will inject CO₂ into a rock layer that has not previously had CO₂. This will allow the scientists to study rocks that have been previously exposed to CO₂ and rocks that have not had previous CO₂ exposure.

"Since we are getting the CO₂ from a naturally occurring source, we can learn from nature how the CO₂ has been stored safely in rock formations for millions of years," said Lee Spangler, partnership director. "This grant will enable us to learn about the transportation, injection and monitoring of CO₂ in an engineered system."

The site is located in northern Toole County near the communities of Shelby, Kevin and Sunburst, Mont. Sunburst Mayor Gary Iverson commented "We see this project as having a very positive impact in our region. It brings international recognition and positive economic benefits for the eight years of the project as well as possible future opportunities."

Local Montana companies will be hired for the project permitting, site development, well drilling and operations work. Altamont Oil and Gas of Cutbank will be responsible for site development and operations and Bison Engineering of Billings and Helena will work with state agencies on project permitting. Project funds will also be spent on local services and fuel.

Partnership scientists and engineers will share new technology and research in sustainable energy with students and teachers. Throughout the project, the partnership plans to create learning opportunities and experiences for local Toole County students and MSU students.

At Montana State, almost three dozen faculty, staff and students will be part of the project. Staff and students at MSU will be involved with project and data management, permitting, public outreach and education, geologic studies, and monitoring.

"Having continuous open communication with stakeholders is very important for the partnership," said Lindsey Tollefson, project manager for the partnership.

Public meetings will be held throughout all stages of the project's life cycle, staff will be available to meet with individuals, and local input will be considered in decision making, she said.

Additionally, project information will be available at www.bigskyco2.org as well as through regular newsletters.

The eight year project will begin with environmental studies for permitting and collecting background data prior to building necessary infrastructure.

During the operational phase, the partnership will inject one million tons of CO₂ into the dome almost a mile underneath the earth's surface. Monitoring of the environment will be conducted throughout the life of the project until site closure.

Project operations will be designed in consultation with local farmers, ranchers and community members to ensure that work takes place during appropriate seasons and with local activities in mind. The public will be notified in advance of any project related activities taking place on the ground.

In addition to the \$67 million of federal funding, private partners are contributing another \$18 million in required matching funds for the project. Led by MSU, the Kevin Dome storage project will be a team effort that draws upon expertise from both the public and private sector. The team includes four other universities, three national laboratories and five private sector companies and has experience with carbon storage projects in Washington, Wyoming, Canada, Illinois, Texas, Louisiana, Mississippi and internationally.

Three companies, Vecta Oil and Gas, SR2020 Inc. and Schlumberger are providing the bulk of the matching funds for the project. Vecta and SR2020 are involved in the seismic survey which will be one of the first steps of the project to

ensure the geology is suitable and help determine the best locations for the wells. Schlumberger will core and log wells to provide more detailed geologic data about the subsurface.

Safety is a priority for the team. The project will exceed standard commercial practices to minimize all health, safety and environmental risks. The CO₂, geology, water, soil, air, and infrastructure will be extensively monitored by systems placed both above and below ground at the site.

All project activities will adhere to state and federal regulatory guidelines and obtain any required permits. This project will also have U.S. DOE oversight.

This project is the third phase of the Big Sky Partnership. The first phase of the program identified and characterized the carbon sources and sinks in the region and the second phase has focused on determining the best approaches for storing CO₂ in both geologic and terrestrial systems. Small scale terrestrial and geologic field tests are currently under way by the partnership.

Big Sky Carbon Sequestration Partnership (BSCSP)

Led by Montana State University, the Big Sky Carbon Sequestration Partnership (BSCSP) is one of seven partnerships involved in the US Department of Energy's Regional Carbon Sequestration Partnership program. The BSCSP relies on existing technologies from the fields of engineering, geology, chemistry, biology, geographic information systems and economics to develop novel approaches for both geologic and terrestrial carbon storage in our region. The BSCSP region encompasses Montana, Wyoming, Idaho, South Dakota, eastern Washington and Oregon. Its membership includes universities, national laboratories, private companies, state agencies and Native American tribes. More information can be found at www.bigskyco2.org.

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