



Injection well drilling at test site for geologic sequestration of carbon dioxide in the study area

Advanced Energy Job Stimulus Program

A key component of Ohio's program to create new jobs and encourage economic development, the \$150 million Advanced Energy Job Stimulus Program is designed to support new technology projects on a fast track toward commercialization. As part of the \$1.57 billion job stimulus package signed into law by Governor Ted Strickland in June 2008, the goal of the program is to employ Ohio workers in the advanced energy jobs of the future.

Battelle

The Business of Innovation

Project Name:

Simulation Framework for Regional Geologic CO₂ Storage Infrastructure along Arches Province of Midwest United States

Project Location:

Columbus, Ohio (Franklin County)

Applicant Information:

Battelle is the world's largest nonprofit, independent research and development organization, providing solutions to some of the world's most pressing needs. It advances scientific discovery and application by conducting \$5.6 billion in global research and development annually. For nearly 20 years, Battelle has developed carbon management strategies and solutions to address issues relating to climate change. Its work in this area includes determining the extent of carbon dioxide emissions from individual power plants, developing economic carbon capture processes, transporting and sequestering CO₂ and providing long-term monitoring of sequestered CO₂. Battelle serves as lead agency for the nine-state Midwest Regional Carbon Sequestration Partnership, of which OAQDA's Ohio Coal Development Office (OCDO) is a member.

Project Description:

This project's goal is to use available data from existing waste injection wells, oil and gas exploration wells and geologic core analyses in western Ohio and neighboring states to develop a computer model that refines current estimates of the carbon dioxide storage capacity in the region. The work will focus on the "Arches Province" geological formation, which underlies parts of Indiana, Kentucky, Michigan and Ohio. In Ohio, the project's work will encompass the approximate region from central Ohio to the Indiana border and from Cincinnati to Toledo. The Ohio Division of Geological Survey of the Department of Natural Resources is coordinating the geologic mapping with its counterpart geological survey agencies in the three neighboring states.

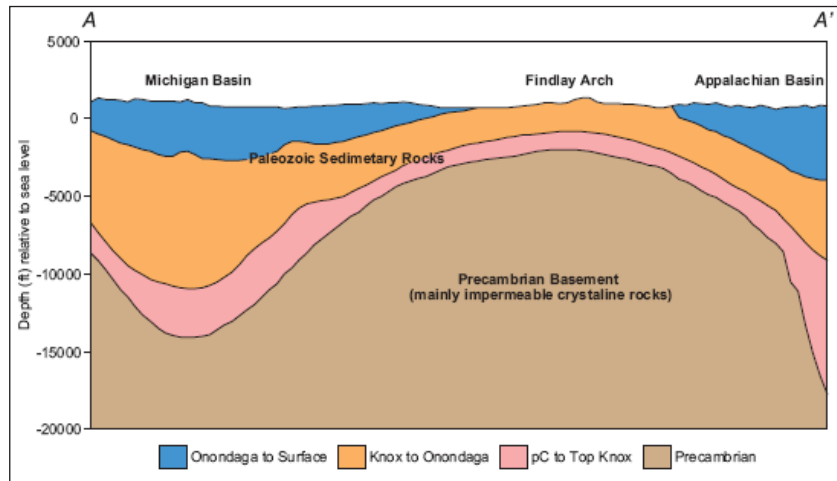
A key focus area for the project is to determine "sweet spots" for CO₂ sequestration. Project results will help determine a framework for future carbon dioxide sequestration, thereby promoting the continued use of Ohio coal. The project also will augment the state's preparedness for potential federal regulation of carbon dioxide emissions.



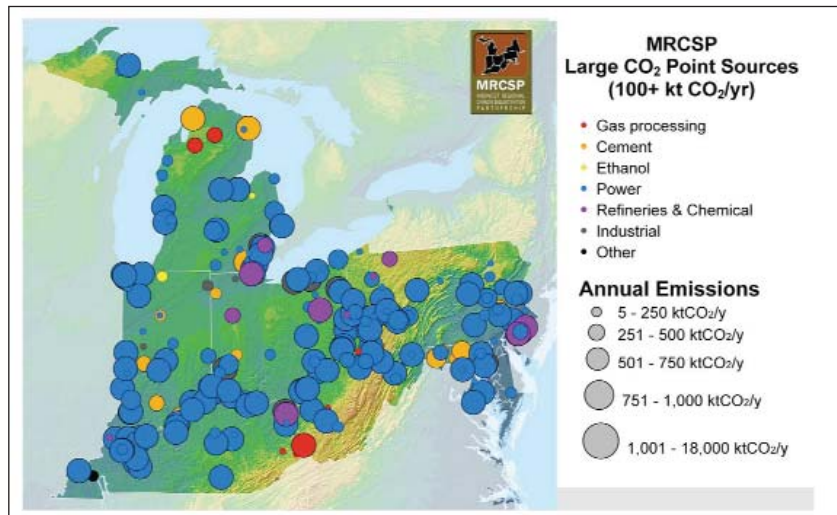
Funding Request: \$300,000
Approved Funding: \$300,000
Total Project Investment: \$2,065,064

Jobs Created: The project will create 2 to 5 jobs in Ohio during its 36-month duration.

Primary Application of Technology: Development of a framework for geologic sequestration of carbon dioxide in western Ohio and surrounding area in the Mt. Simon Sandstone formation



Generalized cross section across the Michigan and Appalachian basins that comprise much of the Arches Province



Locations of large point sources of carbon dioxide emissions from coal-based power plants and other sources in the target project area and surrounding region



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