the ENERGY lab

PROJECT FACTS

Carbon Sequestration

Wyoming Carbon Capture and Sequestration Technology Institute; Workforce Training, Technology Transfer, and Information Clearinghouse

Background

A need exists to explore further research on technologies that capture and store carbon dioxide (CO_2). Carbon capture and storage (CCS) technologies offer great potential for reducing CO_2 emissions and, in turn, mitigating global climate change without adversely influencing energy use or hindering economic growth.

Deploying these technologies in commercial-scale applications will require a drastically expanded workforce trained in CCS specialties, including geologists, engineers, scientists, and technicians. Training to enhance the existing CCS workforce and to develop new professionals can be accomplished through focused educational initiatives in the CCS technology area. Key educational topics include simulation and risk assessment; monitoring, verification, and accounting (MVA); geology-related analytical tools; methods to interpret geophysical models; methods for designing and completing CO_2 injection wells; and methods for conducting public outreach activities in areas where CCS projects may occur.

The U.S. Department of Energy's (DOE) National Energy Technology Laboratory (NETL) has selected seven projects to receive more than $8.4 million in funding to develop regional sequestration technology training centers in the United States. The majority of this funding is provided by the American Recovery and Reinvestment Act (ARRA) of 2009. The seven projects will facilitate the transfer of knowledge and skills required for development, operation, and monitoring of commercial CCS projects. Training activities will focus on the applied engineering and science of CCS for site developers, geologists, scientists, engineers, and technicians to provide a technology transfer platform for CO_2 sequestration activities. The awarded projects will produce a workforce with the skills and competencies in geology, geophysics, geomechanics, geochemistry, and reservoir engineering needed to successfully implement and deploy CCS technologies.

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PARTNERS

None

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U.S. DEPARTMENT OF ENERGY

PROJECT DURATION

Start Date
11/16/2009

End Date
11/15/2012

COST

Total Project Value
$1,895,786

DOE/Non-DOE Share
$994,910/$900,876

Government funding for this project is provided in whole or in part through the American Recovery and Reinvestment Act.

Project Description

NETL, in partnership with the University of Wyoming and the Wyoming CCS Technology Institute (WCTI), will develop a regional sequestration technology training center for Wyoming and the greater Rocky Mountain region that will establish regional training programs to facilitate national and global development and deployment of CCS technology. The WCTI will accomplish this by providing several types of CCS educational training programs, promoting transfer of regional CCS technology expertise, providing the public, CCS industry and other interested parties with a variety of professional services, and working with all stakeholders to advance CCS from demonstration through commercial deployment. These programs will include professional workshops, short-courses focused on specific research and technical topics, online courses, webinars/e-symposia, and communication through newsletters, email tech alerts, and a comprehensive website.

Goals/Objectives

The primary goal of this project is to establish the WCTI at the University of Wyoming in the School of Energy Resources to provide education and training activities to a future generation of engineering and scientific professionals that will enable them to successfully develop and deploy CCS technologies.

The University of Wyoming will accomplish the project objectives over a three-year period. Specific project objectives include:

- Establishing the Wyoming CCS Technology Institute in the School of Energy Resources at the University of Wyoming.
- Deploying the communication infrastructure, including web site, blogs, print publications, and information outlets necessary to support the WCTI.
- Developing and delivering CCS workforce training short courses.
- Organizing, creating, and presenting regional CCS technology transfer workshops.

Benefits

The overall project benefit is a trained workforce that can successfully develop and deploy carbon storage projects.

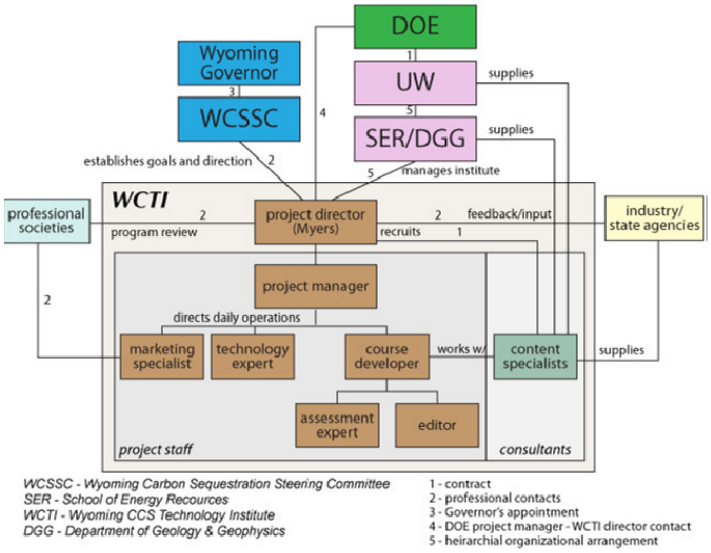

Figure 1 - Wyoming CCS Technology Institute Organizational Structure