

Outreach, Training, Policy, and Regulation: STORE

Project Description

The Alliance for Sequestration Training, Outreach, Research and Education (STORE) was established through an initial grant from the U.S. Department of Energy’s (DOE) National Energy Technology Laboratory (NETL) to promote understanding of CO₂ sequestration science and engineering technology. Current and future goals are to create a skilled workforce for the carbon capture and storage (CCS) industry and to foster the public understanding required to enhance U.S. energy security and leadership in climate change mitigation technology.



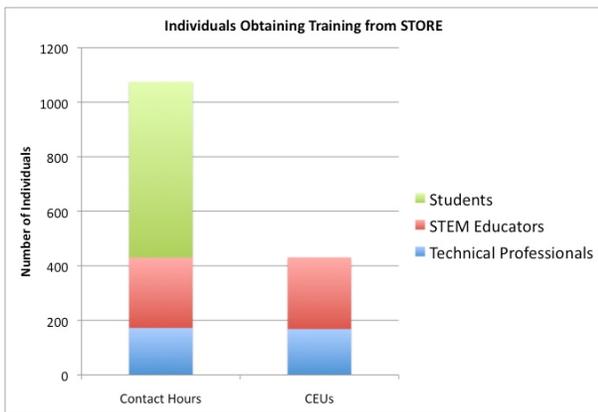
STORE has focused on four primary objectives aligned with the needs of the emerging CCS industry:

- ◆ Sequestration workforce training
- ◆ Public outreach
- ◆ Research and technology transfer
- ◆ Workforce pipeline education

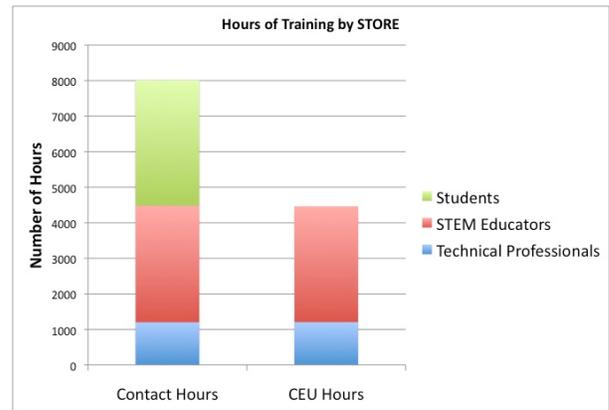
Accomplishments

Accomplishments for STORE have been measured in formal contact hours through continuing education units (CEUs) or coursework hours. STORE has hosted and partnered in over 50 events worldwide since its inception.

- ◆ Total formal training and education contact: 8,005 hours with 1,075 students, STEM educators, and technical professionals (geologists, engineers, and regulators).



- ◆ CEU contact: 4,463 hours (446 CEUs) with 431 technical professionals and STEM educators.



- ◆ University coursework contact: 3,542 classroom hours with 644 undergraduate and graduate university students.

Impacts

Effective transfer of knowledge and technology to the workforce has the potential to yield

- ◆ Reduced operational costs.
- ◆ Improved industry efficiency and increased CO₂ storage.

- ◆ Accelerated implementation of CO₂ projects.
- ◆ Enhanced environmental compliance for the CCS industry.

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Events and Programs

STORE has provided a wide range of events and programs. Some examples are

- ◆ Outreach at the United Nations Framework Convention on Climate Change
- ◆ Workshops for CCS regulators
- ◆ Short courses for professional societies
- ◆ Hosting the International Energy Agency Greenhouse Gas R&D Programme's (IEAGHG) International CCS Summer School
- ◆ K–12 teacher workshops on CCS
- ◆ Middle school science, technology, engineering, and mathematics (STEM) workshops on CCS
- ◆ Public open houses on carbon storage
- ◆ Organizing and hosting international professional meetings
- ◆ Field trips to carbon storage sites (Cranfield and West Hastings oil fields)



STORE workshop at the Gulf Coast Association of Geological Societies.

Selected Citations

Olson, H. C., Bryant, S. L., Olson, J. E., and Williams, I., 2013, CO₂ injection for geological storage: a series of activities for training professionals and educating students in geological carbon storage: Energy Procedia, v. 37, p. 7257–7264.

Olson, H. C., Olson, J., Bryant, Steve, Lake, L. W., Bommer, P., Romanak, Katherine, Hovorka, S. D., Smyth, R. C., and Williams, I., 2013, Meeting the grand challenge for future carbon management engineers and scientists: stimulating workforce capacity through teacher professional development: Energy Procedia, v. 37, p. 7265–7272.



STORE field trip for K–12 teachers.

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