

2016 CO₂ Capture Technology Project Review Meeting Summary

The 2016 CO₂ Capture Technology Project Review Meeting was held in Pittsburgh, Pennsylvania, on August 8 through August 12, 2016, and was hosted by the U.S. Department of Energy's (DOE) National Energy Technology Laboratory (NETL). A total of 184 attendees from 66 companies, 15 universities, and 18 national laboratories, research institutes, and government agencies attended the meeting.

After welcoming remarks by Lynn Brickett (NETL Technology Manager, Carbon Capture Program), Angelos Kokkinos (Director, Office of Advanced Fossil Technology Systems, Office of Fossil Energy [FE], DOE) initiated the presentations with an overview of DOE's Clean Coal Program. This was followed by a panel on international perspectives on carbon capture that provided insight into carbon capture projects and technology development in Mexico, Norway, and Australia, as well as a global perspective on the status of carbon capture, which was provided by John Gale (International Energy Agency).

Researchers representing more than 50 of the active projects in the Carbon Capture project portfolio gave presentations covering their research and development (R&D) work in advanced solvents, sorbents, and membranes for post- and pre-combustion projects that range from laboratory-scale to large pilot-scale applications. A session on carbon dioxide (CO₂) reuse provided updates on two projects in this area, while sessions on oxy-combustion and chemical looping provided attendees with updates on nine NETL-funded projects within these key technology areas. A panel on NETL's Research and Innovation Center included presentations on computational screening of mixed-matrix membranes, exergy analyses, and automated flue gas permeation membrane testing.

Presentations on the subject of Systems Studies and Modeling during the first two days provided attendees with guidelines for parameter measurements in laboratory-scale research efforts and an update on CO₂ capture-related systems analysis activities. In addition, a panel on Carbon Capture Simulation for Industry Impact (CCSI²) provided an overview of CCSI² and its key capabilities, including a keynote introduction by Doug Hollett (Principal Deputy Assistant Secretary, FE, DOE).

Poster presentations included 16 posters, mainly on active R&D projects for which oral presentations had not been made. This open forum provided a less formal environment and encouraged and facilitated discussion amongst the presenters and attendees.

The wide range of topics covered over the course of the five-day meeting facilitated lively, interactive discussions about these technology areas and gave participants an opportunity to explore new ideas to inform the future direction of the NETL R&D portfolio.