

2015 Gasification Systems and Coal and Coal-Biomass to Liquids Workshop

The 2015 Gasification Systems and Coal and Coal-Biomass to Liquids Workshop was held in Morgantown, West Virginia, on August 10–11, 2015, hosted by the U.S. Department of Energy (DOE), National Energy Technology Laboratory (NETL). A total of 84 attendees from 21 companies, 12 universities, and 3 national laboratories and government agencies attended the workshop.

The NETL Gasification Systems and Coal and Coal-Biomass to Liquids (C&CBTL) Technology Manager, Jenny Tennant, initiated the presentations with an overview of the NETL Gasification Systems and C&CBTL programs, particularly noting the changing direction of the programs from large-scale gasification-based power production to the radically engineered modular systems (REMS) concept. REMS will emphasize smaller, modular reactors enabling co-use of biomass with coal or varying feedstocks and enabling distributed power generation and polygeneration, advanced modeling to rapidly create novel reactor configurations, some of which may use advanced technology such as microwave or plasma-based gasification; as well as leveraging advanced manufacturing to replicate reactors at low cost.

Keynote presentations of the workshop were given by Don Collins, CEO of Western Research Institute, on Wyoming coal's changing role in the marketplace, and by David Denton of the Gasification Technologies Council and RTI International, who provided global perspective on coal conversion.

Researchers representing over 20 of the active projects in the Gasification Systems and C&CBTL project portfolio gave presentations covering their R&D work, in diverse areas such as oxygen production/air separation, innovative chemical looping gasification, dry coal feeding, high-temperature syngas cleanup, and high-hydrogen syngas production. The set of projects mainly funded by the Department of Defense and managed by NETL in the area of coal-biomass-to-jet-fuel were also well represented in the presentations.

A panel on the subject of bioconversion of coal was also assembled and introduced this subject to the attendees, which figures in the Gasification Systems portfolio through a set of recently funded projects on bioconversion.

Three breakout sessions on the subjects of radical reactor concepts, bioconversion field site deployment goals and challenges, and new coal and biomass-to-liquids concepts were conducted in which participants were able to have lively, interactive discussions about these technology areas and explore new ideas to inform the future direction of the NETL R&D portfolio.

An evening poster session included 19 posters, mainly on active R&D projects for which oral presentations had not been made. This open forum provides a less formal environment and encourages and facilitates discussion amongst the presenters and attendees. All presentations and poster abstracts may be found on the [NETL website](#).