Studies to Improve Plant Availability and Reduce Total Installed Cost

Performer: GE Energy
Date: 9/29/2011-9/30/2014
Cost: $4,937,219

General Electric (GE) Energy has partnered with NETL to study the feasibility of improving plant availability and reducing total installed costs in IGCC plants. The project will complete eight techno-economic studies each focused on the cost, availability criterion, or both where applicable. The scope of work will include the identification of system and component level requirements for each task and subtask; the development of designs and materials as required for technical evaluation of concepts; validation and testing of components/sub-systems; and the development of appropriate operating methodologies, simulations, and controls philosophies where applicable.

The objective of this project is to evaluate the effects to total installed cost and availability through deployment of a multi-faceted approach in (1) technology evaluation, (2) constructability, and (3) design methodology. The technologies may individually improve just availability, just cost or, in some cases, both; when grouped together, the probability of successfully meeting the objectives of increased availability with decreased costs are significantly higher. The project will also benefit a large portion of the gasification industry from IGCC to chemical applications.