



Computational Capabilities to Develop Materials for Advanced Fossil Energy Power Systems



Kickoff Meeting

DE-FOA-0000260

Patricia Rawls

Gasification Division

February 23, 2011

Background/Objective

- **The objective of this activity is to competitively solicit projects in the Materials area of NETL's Advanced Research (AR) Program that will enable the next generation FE power systems.**
- **The goal of the AR Materials Program is to conduct research leading to a scientific understanding of high-performance materials compatible with hostile environments associated with advanced Fossil Energy (FE) power generation.**
- **This includes the development of the materials of construction, including processing and fabrication methods, and functional materials necessary for all FE systems.**

Purpose

The purpose of this funding opportunity announcement is to solicit projects that will develop tools that can provide a scientific understanding of high-performance materials compatible with the hostile environments associated with advanced Fossil Energy (FE) power generation technologies thereby enabling faster development and/or improved processing of these materials to meet the performance requirements. Included are structural materials, including processing and fabrication methods, and functional materials necessary for all FE systems, including materials for coal fuels technologies and for advanced power generation technologies such as coal gasification, heat engines, combustion systems (i.e advanced ultra supercritical and oxygen fired), and fuel cells.