

Abstract for CRADA between AK Supply, Inc. and NETL

The main goal of CRADA between AK Supply and NETL is to redesign the solid oxide fuel cell configuration for hybrid power generation systems for greater flexibility and operability. The new fuel cell design will consider incorporation of thermal energy storage into the fuel cell by modifying the material composition to increase the specific heat and/or the solid-solid phase transition and increasing the interconnect geometry (mass and volume) in the fuel cell. This developed technology will be tested using Hyper facility at NETL, Morgantown, to evaluate the performance in hybrid applications. Additionally, AK Supply and NETL will work on the development of a real-time, high temperature, intelligent micro-sensor for monitoring energy availability in the interconnect geometry. The will be used for control of stored energy release during load transients and will be tested on the NETL Hyper facility.