

# PROJECT FACTS

UNIVERSITY OF KENTUCKY CENTER FOR APPLIED ENERGY RESEARCH

## PARTICIPANTS

UK Center for Applied Energy Research  
&  
NewCarbon LLC  
Updated 8/16/04

## SPONSORS

U.S. Department of Energy

## PROJECT VALUE

DOE: \$74,674  
UK: \$74,938

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## CARBON MATERIALS

### TECHNICAL AND ECONOMIC ASSESSMENT OF MILD COAL EXTRACTION

This project will demonstrate that marketable coal extract pitches can be successfully produced via solvent extraction of coal at mild temperature and pressure conditions without catalysts or hydrogenation. Extract pitches will be assessed as binders and cokes for carbon anodes, feedstock for low-cost carbon fiber and as a feedstock for producing mesophase pitch, that is performance competitive and an economically attractive alternative to those currently available.

The proposed project will experimentally determine process conditions and requirements for possible pilot-plant studies of the process. A techno-economic evaluation of the process will be performed and continuously updated as more data are obtained from the experimental program. Based on the results obtained, a process flow diagram, including material and heat balances, will be prepared and used to identify process equipment requirements and plan for pilot-scale testing of the process.

### EXTRACTIVE PROCESS



Figure: Mild coal extraction process