

COVER SHEET

Responsible Agency: U.S. Department of Energy (DOE)

Title: Kentucky Pioneer Integrated Gasification Combined Cycle (IGCC) Demonstration Project Final Environmental Impact Statement (EIS) (DOE/EIS-0318)

Location: Clark County, Kentucky

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Abstract: The Kentucky Pioneer IGCC Demonstration Project Final EIS assesses the potential environmental impacts that would result from a proposed DOE action to provide cost-shared financial support for construction and operation of an electrical power station demonstrating use of a Clean Coal Technology in Clark County, Kentucky. Under the Proposed Action, DOE would provide financial assistance, through a Cooperative Agreement with Kentucky Pioneer Energy, LLC, for design, construction, and operation of a 540 megawatt demonstration power station comprised of two synthesis gas-fired combined cycle units in Clark County, Kentucky. The station would also be comprised of a British Gas Lurgi (BGL) gasifier to produce synthesis gas from a co-feed of coal and refuse-derived fuel pellets. The facility would be powered by the synthesis gas feed. The proposed project would consist of the following major components: (1) refuse-derived fuel pellets and coal receipt and storage facilities; (2) a gasification plant; (3) sulfur removal and recovery facilities; (4) an air separation plant; and (5) two combined cycle generation units. The IGCC facility would be built to provide needed power capacity to central and eastern Kentucky. At a minimum, 50 percent of the high-sulfur coal used would be from the Kentucky region. Two No Action Alternatives are analyzed in the Final EIS. Under No Action Alternative 1, DOE would not provide cost-shared funding for construction and operation of the proposed facility and no new facility would be built. Under No Action Alternative 2, DOE would not provide any funding and, instead of the proposed demonstration project, Kentucky Pioneer Energy, LLC, would construct and operate, a 540 megawatt natural gas-fired power station.

Evaluation of potential impacts on land use, socioeconomics, cultural resources, aesthetic and scenic resources, geology, air resources, water resources, ecological resources, noise, traffic and transportation, occupational and public health and safety, and environmental justice are included in the assessment.

Public Comments: The public comment period on the Draft EIS was held from November 16, 2001, to January 25, 2002. During the comment period, public hearings were held in Lexington and Trapp, Kentucky. The Draft EIS was made available through mailings and through requests to DOE. In preparing the Final EIS, DOE considered comments received by U.S. mail, electronic mail, fax, telephone and through written and verbal comments submitted at the public meetings.

The Final EIS contains revisions and additions in response to comments submitted after the issuance of the Draft EIS and additional technical details not available at the time of issuance of the Draft EIS. The revisions and additions made since the issuance of the Draft EIS are underscored. Appendix D, Comment Response Document, of the Final EIS contains the comments received during the public review of the Draft EIS and DOE responses to those comments.