

6. STATUTES, REGULATIONS, CONSULTATIONS, AND OTHER REQUIREMENTS

6.1 Statutes and Regulations

This section identifies and summarizes the major federal, state, and local laws, regulations, and requirements that may apply to the alternatives analyzed in this Environmental Impact Statement (EIS).

6.1.1 Federal Environmental Statutes and Regulations

National Environmental Policy Act of 1969 (NEPA), as amended (42 United States Code [USC] §4321 et seq.), the Council on Environmental Quality Implementing Regulations (40 Code of Federal Regulations [CFR] § 1500 et seq.) and DOE Implementing Regulations (10 CFR §1021 et seq.) This EIS is being prepared to comply with NEPA, the federal law that requires agencies of the federal government to study the possible environmental impacts of major federal actions significantly affecting the quality of the human environment.

Clean Air Act (CAA), as amended (42 USC §7401 et seq.) The CAA establishes National Ambient Air Quality Standards (NAAQS) set by the U.S. Environmental Protection Agency (EPA) for certain pervasive pollutants. The standards are set at a level designed to protect human health with a conservative margin of safety. The CAA contains emission limiting programs and permit programs to protect NAAQS and air quality. Regulations implementing the CAA are found in 40 CFR Parts 50-95. The New Source Performance Standards establish requirements for new or modified sources such as design standards, equipment standards, work practices, or operational standards. Title IV of the CAA regulates acid deposition by establishing limitations on sulfur dioxide and nitrogen oxide emissions, permitting requirements, monitoring programs, and record keeping and reporting requirements for emission sources. The National Emission Standards for Hazardous Air Pollutants program regulates emission levels of carcinogenic or mutagenic pollutants for certain sources.

Under the CAA, a new major source is required to obtain a Prevention of Significant Deterioration (PSD) Construction Permit and a Title V Operating Permit. The State of Kentucky has been delegated authority by EPA to issue these permits to assure compliance with all CAA requirements. Kentucky Pioneer Energy, LLC, (KPE), has prepared an application for a PSD Permit for the proposed project.

Clean Water Act (CWA) of 1977 as amended (33 USC §1251 et seq.) The CWA focuses on improving the quality of water resources by providing a comprehensive framework of standards, technical tools, and financial assistance to address the many causes of pollution and poor water quality, including municipal and industrial wastewater discharges, polluted runoff from urban and rural areas, and habitat destruction. Under provisions of the CWA, an applicant for a federal license or permit to conduct any activity that may result in a discharge to navigable waters must provide the federal agency with a Section 401 certification. The certification, made by the state in which the discharge originates, declares that the discharge will comply with applicable provisions of the CWA, including water quality standards requirements. Section 404 of the CWA establishes a program to regulate the discharge of dredged and fill material into waters of the United States, including wetlands. Activities in waters of the United States that are regulated under this program include fills for development, water resource projects, infrastructure development, and conversion of wetlands to uplands for farming and forestry. A federal permit is required to discharge dredged or fill material into wetlands and other waters.

Resource Conservation and Recovery Act (RCRA), as amended (42 USC §6901 et seq.) RCRA regulates the treatment, storage, and disposal of hazardous wastes. The plant is expected to generate small volumes of hazardous maintenance related waste, and would be a conditionally exempt small quantity generator under federal and state hazardous waste regulations. The plant would obtain a generator identification number and would temporarily store small volumes of wastes onsite in secure containers prior

to transport offsite to an authorized treatment, storage, recycling, or disposal facility. The plant would not treat or dispose of hazardous wastes onsite, so a state hazardous waste permit would not be required. KPE will need to determine whether vitrified frit would be a hazardous waste under RCRA by performing the Toxicity Characteristic Leaching Procedure on the first batch of frit produced by the facility.

Emergency Planning and Community Right-to-Know Act of 1986 (EPCRA) (42 USC §11001 et seq.) This statute requires that inventories of specific chemicals used or stored onsite be reported on a periodic basis. The plant would manufacture, process, or otherwise use a number of substances subject to EPCRA reporting requirements, such as some trace metals and mercury.

Occupational Safety and Health Act (OSHA) of 1970, as amended (29 USC §651 et seq.) Compliance with the OSHA would be required according to OSHA standards. Specifically, the construction and general industry rules in 29 CFR Parts 1910 and 1926 apply. Plant employees would be instructed in worker protection and safety procedures, and would be provided appropriate personal protective equipment pursuant to the plant's safety program.

National Pollutant Discharge Elimination System (NPDES) (33 USC 1342 et. seq.) This federal regulation authorized under the CWA requires sources to obtain permits to discharge effluents (pollutants) and stormwaters to surface waters. Regulations implementing the NPDES program are found in 40 CFR 122. Under this program, permit modifications are required if discharge effluents are altered. The CWA authorizes EPA to delegate permitting, administrative, and enforcement duties to state governments, while EPA retains oversight responsibilities. The State of Kentucky has been delegated NPDES authority and is thus the issuing agency for the NPDES permit. The proposed project involves discharge to surface waters and would be subject to NPDES requirements.

Compliance With Floodplain/Wetlands Environmental Review Requirements (10 CFR 1022) Executive Order 11988, Floodplain Management, directs federal agencies to establish procedures to ensure that they consider and minimize potential effects of flood hazards and floodplain management for any action undertaken. Executive Order 11990, Protection of Wetlands, requires federal agencies to avoid short- and long-term impacts to wetlands if a practical alternative exists. U.S. Department of Energy (DOE) regulation 10 CFR 1022 establishes procedures for compliance with these Executive Orders. Where there is no practical alternative to development in floodplain and wetlands, DOE is required to prepare a floodplain and wetlands assessment discussing the effects on the floodplain and wetlands, and consideration of alternatives. In addition, these regulations require DOE to design or modify its actions to minimize potential damage in floodplains or harm to wetlands and provide opportunity for public review. The proposed project site does not contain any wetlands. The only portion of the proposed project with the potential to affect the 100-year floodplain is the existing water intake. However, this structure is located in the Kentucky River itself and the required modifications would not impact the 100-year floodplain.

Endangered Species Act of 1973 (16 USC 1531 et seq.) Section 7, "Interagency Cooperation," requires any federal agency authorizing, funding, or carrying out any action to ensure that the action is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of critical habitat of such species. Consequently, the U.S. Fish and Wildlife Service (USFWS) conducts a consultation, in compliance with Subsection (a)(2) of Section 7 of the Act, with regard to the impacts of the proposed project on threatened and endangered species listed by USFWS and any critical habitat of such species in the vicinity of the project. A consultation has been conducted with the USFWS for the proposed project. Discussion of potential impacts on threatened and endangered species from the proposed project is contained in Section 5.9, Ecological Resources, of this EIS.

Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994) This Executive Order requires federal agencies to identify and address, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income

populations. Discussion of environmental justice issues for the proposed project is contained in Section 5.19, Environmental Justice, of this EIS.

National Historic Preservation Act of 1966, as amended (16 USC 470 et. seq.) This federal statute requires DOE to consult with the State Historic Preservation Officer (SHPO) prior to construction to ensure that no historical properties would be affected by the proposed project. Consultations with SHPO for the Kentucky Pioneer Integrated Gasification Combined Cycle (IGCC) Demonstration Project have determined that the Section 106 Review process is complete and, in accordance with 36 CFR 800.4(d) of the Advisory Council on Historic Preservation’s revised regulations, no effect on historic resources has been found for this project.

Federal Aviation Act (FAA) of 1958 (49 USC 1101 et. seq., as amended) Regulations implementing FAA are found in 14 CFR 77 and are enforced by the U.S. Department of Transportation, FAA. These regulations require submittal of notice identifying any structures which, because of construction or alteration, may be a hazard to air transportation. East Kentucky Power Cooperative would submit FAA Form 7460-1, Notice of Proposed Construction or Alteration, to the FAA.

Standards of Performance for New Stationary Sources (40 CFR 60) Regulations governing the combustion of refuse derived fuel (RDF) pellets, a form of municipal solid waste (MSW), are codified under 40 CFR 60. The definition of municipal waste combustor or municipal waste combustor unit at 40 CFR 60.51b includes “any setting or equipment that combusts solid, liquid, or gasified municipal solid waste . . . The boundaries of a municipal solid waste combustor includes, but is not limited to, the municipal solid waste fuel feed system.” EPA defines MSW at 40 CFR 60.51b as household, commercial/retail, and/or institutional waste, including RDF. EPA’s regulations contain a conditional exclusion for co-fired combustors. To be eligible for this conditional exclusion, the combustor unit must obtain a federally-enforceable permit limiting the amount of MSW (or RDF) in the fuel feed stream to a maximum of 30 percent of the total weight. During the Kentucky Pioneer IGCC Demonstration Project period, which is the first year of commercial operation of the facility, 50 percent of the solid fuel feed stream by weight would be comprised of RDF pellets. This exceeds the limit established for co-fired combustors, thus, the facility must be permitted as a Municipal Waste Combustor and must meet all environmental requirements established under 40 CFR 60. The air permit notes that the facility is permitted as a Municipal Waste Combustor.

6.1.2 State and Local Environmental Statutes and Regulations

Kentucky Natural Resources and Environmental Protection Cabinet, Department of Environmental Protection (Kentucky Revised Statutes [KRS] 224 and 401 Kentucky Administrative Regulations [KAR]) KRS Chapter 224 details state statutes governing environmental protection and Title 401 KAR outlines the regulations and policies of the Kentucky Natural Resources and Environmental Protection Cabinet, the state agency responsible for monitoring the environment within Kentucky. All state environmental regulations applicable to the Kentucky Pioneer IGCC Demonstration Project are contained within 401 KAR. KPE would ensure that the project complied with all regulations contained within 401 KAR. The following paragraphs detail specific permits applicable to the facility and regulations of particular relevance.

Construction/Operation Air Permit (KRS 224.10-100, 224.20-210 and 401KAR 50:038) The Kentucky Division for Air Quality is responsible for implementing federal and state air quality standards. The State of Kentucky has developed a State Implementation Plan which contains the rules and permitting requirements developed to assure maintenance of the NAAQS. All major sources must file for and obtain a construction/operating permit to fulfill both Kentucky requirements and federal PSD Construction and Title V Operating Permit requirements prior to commencing construction. The Kentucky Department of Air Quality issued the Final PSD/Title V Permit to KPE on June 7, 2001.

Kentucky Pollutant Discharge Elimination System (KPDES) Permitting Program (KRS 224.16-50 and 401 KAR 5:050-5:080) The Kentucky Division of Water administers the federal NPDES program. The KPDES program requires permits containing effluent standards for the discharge of pollution into surface waters of Kentucky. The effluent standards and prohibitions in the permits are established under 40 CFR 129 as of July 1, 1991, as published by the Office of the *Federal Register*, for toxic pollutants. KPDES stormwater permits are also required for construction projects that disturb more than 2 hectares (5 acres) of land. Compliance with the KPDES program fulfills a source's requirements under Kentucky's Operating Permits Program pursuant to 401 KAR 5:005. The proposed alternative involves the discharge of wastewater to surface waters and would be subject to KPDES requirements.

Water Withdrawal Permits; Criteria; Reports (401 KAR 4:010) A Water Withdrawal Permit is required to withdraw, divert, or transfer public water from a stream, lake, groundwater source, or other body of water. As stated in Section 5.8.3 of this EIS, EKPC would likely request that their existing withdrawal permit be amended to reflect the additional water required for the project.

Wild Rivers Utility Right-of-Way Construction Permit (KRS 146.200, 146.360, and 401 KAR 4:125, Section 11) A permit is required from the Kentucky Division of Water prior to the construction of any utility lines or pipelines within any portion of a stream area designated as a wild river (maximum of 610 meters [2,000 feet] in either direction from center of stream). Depending upon the routing of the proposed utility right-of-ways, this permit may be required for the proposed project.

Kentucky Executive Order 2001-771: Relating to the Establishment of a Moratorium on Permits for New Power Plants (June 19, 2001) This Executive Order issued by the Governor of Kentucky required Kentucky state agencies to temporarily suspend the acceptance of applications for new electric generating facilities, beginning on June 20, 2001. The Natural Resources Environmental Protection Cabinet and the state Public Service Commission were required to study the cumulative effects of new power plants as well as the impact new plants could have on existing environmental programs. The findings were reported to the Governor on December 17, 2001, and are noted in Section 5.14, Cumulative Impacts. This order does not affect any applications that have already been filed with state agencies. All applications for the Kentucky Pioneer IGCC Demonstration Project were filed prior to the establishment of the moratorium (KOG 2001). Executive Order 2002-50, issued January 11, 2002, extended the moratorium on new permits and included an amendment that the moratorium is applicable to all new electrical generating units that did not already obtain all required permits and that had not begun construction. Executive Order 2002-50 also lifts the ban on the acceptance of new applications for air, water, and waste permits initiated by Executive Order 2001-771, but establishes a ban on the issuance of those permits (KRC 2002a). Executive Order 2002-95, issued January 23, 2002, clarifies that the ban on the issuing of permits applies for all applications regardless of the date of filing and extends the moratorium on the issuing of permits to July 15, 2002 (KRC 2002b). This moratorium prevents the Kentucky Pioneer IGCC Demonstration Project from commencing construction while it is in effect.

Kentucky Solid Waste, Hazardous Waste and Waste Management Statutes and Regulations (KRS 224.01-010 [20] and [23], 224.40, and 401 KAR 30 through 40) Kentucky state statutes and regulations regarding waste management and waste related issues are detailed in KRS 224.40 and 401 KAR 30 through 40. KRS 224.01-010 (20) and (23) define recovered material and refuse-derived fuel (RDF), respectively. An interpretation of state law has been requested for the RDF used for the project because it would retain plastics and other materials defined under KRS 224.01-010 (20) as recovered material for their heating value. The Kentucky state definition of RDF, under KRS 224.01-010 (23), states that all recovered material must be extracted for recycling. The Kentucky Division of Waste Management has indicated that the RDF pellets would be considered an RDF under KRS 224.01-010 (23) if manufactured as proposed by Global Energy. Furthermore, because the RDF would be a recovered material, the proposed project would be considered a recovered material processing facility and a waste permit would not be required. (See Appendix A, page A-7).

In addition to state regulations, local environmental and zoning regulations may apply to the Kentucky Pioneer IGCC Demonstration Project. Potential Clark County requirements include rezoning, building permit, landscape and tree protection, engineering plan approval, development agreement, and solid waste disposal or management facility certificate.

6.2 Consultations

NEPA requires that, during the preparation of an EIS, DOE consult with all federal agencies with jurisdiction or special expertise in the topics being analyzed in the EIS. In addition, NEPA requires that agencies request comments from state and local agencies that are authorized to develop and enforce environmental standards. Consultations with these agencies, along with consultations with Native American groups, must be conducted regarding the potential for the proposed project to disturb sensitive resources.

The necessary consultations must occur in a timely manner and are generally required before any land disturbance can begin. Most of these consultations are related to biological, cultural, and Native American resources. Biological resource consultations generally pertain to the potential for activities to disturb sensitive species or habitats. Cultural resource consultations pertain to the potential for destruction of important cultural or archaeological sites. Native American consultations are concerned with the potential for disturbance of Native American ancestral sites or traditional practices.

DOE has conducted consultations with various agencies as required by NEPA for the Kentucky Pioneer IGCC Demonstration Project. A consultation was conducted with the USFWS, as required under Section 7 of the *Endangered Species Act* of 1973, with regard to potential impacts of the proposed project on threatened or endangered species. A PSD Permit application for air emissions has been prepared in consultation with the Kentucky Division for Air Quality for the proposed project.

A Section 106 Review process pursuant to the *National Historic Preservation Act* of 1966 has been completed for the proposed project. A previous Section 106 Review process was conducted on the project site in concurrence with the SHPO in December of 1980, as described in Section 4.4.3 of this EIS. The terms of the Memorandum of Agreement drawn up in conjunction with the Advisory Council on Historic Preservation for the old J.K. Smith Power Station project have been met by the Kentucky Pioneer IGCC Demonstration Project. A copy of the letter received from the Kentucky SHPO providing a determination of no effect on historic properties is enclosed, along with all consultation letters received, in Appendix A of this document.

