

years of commercial operation, beginning with a one-year CCT Program demonstration period. The proposed project would cost \$414 million, of which DOE's share would be approximately \$60 million, or 15 percent.

The proposed project includes the design, construction, and operation of BGL gasification technology and associated facilities to provide a fuel source for the two planned turbines. Under the Proposed Action, the turbines would be fired using the syngas product generated by the gasification technology. The Proposed Action would demonstrate the following innovative technologies: (1) Gasification of RDF pellets and coal; and (2) use of a syngas product as a clean fuel in combined cycle turbine generator sets. This project would be the first commercial scale application of this modified co-feed version of the BGL gasification technology in the United States. The facility is expected to be operational for 20 years, with the first year committed to the demonstration of these technologies.

No Action Alternative

An analysis of the No Action Alternative is included in the EIS, as required under NEPA. Under No Action Alternative 1, DOE would not provide \$60 million in cost-shared funding for the project and no plant would be constructed as a result. DOE believes that this scenario is unlikely to occur but it is presented in the EIS because it serves as an analytical baseline for comparison of the environmental effects of the project.

Under No Action Alternative 2, DOE would not provide \$60 million cost-shared funding for the project; however, KPE would construct a natural gas-fired combined cycle plant, the power island portion of the overall project without the gasification component, at the proposed project location. This alternative includes all associated facilities required for the operation of the power island, including administrative offices, on-site utilities, steam-generating units, required air emissions control equipment, and wastewater treatment equipment. All water for the plant would be supplied from existing EKPC intake structures at the J.K. Smith Site. The EKPC transmission line would also be required to support this action.

Major Environmental Impacts and Mitigation Measures

No Action Alternative 1 would not result in any adverse environmental impacts because no construction or

change in activities would occur. Under No Action Alternative 1, however, beneficial socioeconomic impacts (jobs and revenue) would not be created and needs for electric power capacity in the region would not be supplied. This alternative would not meet CCT Program goals.

This section summarizes the expected environmental impacts of the Proposed Action and No Action Alternative 2 on potentially affected environmental resource areas and discusses mitigation measures. The resource areas include: land use, socioeconomic, cultural resources, aesthetic and scenic resources, geology, air quality, water resources and water quality, ecological resources, noise, traffic and transportation, occupational and public health and safety, and waste management.

Land Use

No Action Alternative 2 would disturb approximately 5 to 8 hectares (12 to 20 acres) of previously disturbed land for project construction activities. The foundation of the power island would occupy approximately 4.8 hectares (12 acres). All land use impacts from No Action Alternative 2 would also occur under the Proposed Action. In addition, the Proposed Action would disturb a maximum of 2.8 hectares (7 acres) of previously disturbed land for storage and rail car loading and unloading facilities. No effects are expected on surrounding land uses or local land use plans and policies under either alternative.

Socioeconomics

No Action Alternative 2 would employ an average of 120 workers, with a maximum of 200, during construction. This would indirectly lead to the creation of another 138 to 230 jobs depending on the duration of peak construction levels. The facility operation would require 24 employees for the 20-year life cycle of the plant; an additional 54 jobs would be created indirectly as a result.

The Proposed Action would employ an average of 600 workers, with a maximum of 1,000 during construction. This would indirectly lead to the creation of another 690 to 1,150 jobs depending on the duration of peak construction levels. The 20-year demonstration and operation period would require 120 employees; an additional 270 jobs would be created indirectly as a result. Property values for land tracts in the viewshed of the gasifier units may decrease.

Cultural Resources

The J.K. Smith Site has been previously disturbed and cultural resources were identified and excavated during the initial development of the discontinued J.K. Smith Power Station in the early 1980s. The Kentucky State Historic Preservation Office (SHPO) has confirmed that the Section 106 Review process was completed for the Kentucky Pioneer IGCC Demonstration Project's Area of Potential Effect in December of 1980. The terms of the Memorandum of Agreement drawn up in conjunction with the Advisory Council on Historic Preservation for the J.K. Smith Station have been met under the Kentucky Pioneer IGCC Demonstration Project and no further identification, evaluation, mitigation, and consultation activities are required. In accordance with 36 CFR 800.4(d), the SHPO finds that there is no effect on historic properties from No Action Alternative 2 or the Proposed Action.

Deeply buried archaeological resources, including human remains, could be discovered during construction activities. To minimize the potential adverse effects to unanticipated discoveries during construction, basic information will be provided to workers involved in ground disturbing activities regarding the recognition of archaeological resources and Native American cultural items and the procedures to be followed upon discovery. The construction contractor will be required to assure that discovery procedures are implemented in all applicable cases.

Aesthetic and Scenic Resources

The combined-cycle units that would be constructed under No Action Alternative 2 and the Proposed Action would not be visible from outside the site area and would have no visible plumes associated with them. The gasifier facility stacks installed under the Proposed Action would be approximately 65 meters (213 feet) tall and would be visible from as far away as Winchester, located 13.3 kilometers (8.3 miles) northwest of the project site. Fugitive dust emissions may temporarily affect visibility during construction at the site and would be mitigated with standard dust control measures. The visibility of the plumes associated with the Proposed Action would be dependent on weather and wind pattern; however, they would likely be visible from up to 12.8 kilometers (8 miles) from the facility location.