

coal technologies that provide the United States with clean, reliable, and affordable energy. Through cooperative agreements established pursuant to the CCPI program, DOE would accelerate deployment of innovative technologies to meet near-term energy and environmental goals, reduce technological risks to the business community to an acceptable level, and provide private sector incentives required for continued activity in innovative research and development.

Proposed Action

The proposed action is for DOE to provide, through a 5-year cooperative agreement with Western Greenbrier Co-Gen LLC (WGC), financial assistance for a proposed demonstration project to co-produce heat and electric power in a new generating station at Rainelle, Greenbrier County, West Virginia. The new generating station would be designed for long-term commercial operation (at least 20 years) following completion of the cooperative agreement with DOE and would cost approximately \$215 million. DOE's share would be approximately \$107.5 million (50 percent).

WGC is proposing to design, construct, and operate an 85 MW (megawatt) atmospheric-pressure, circulating fluidized-bed boiler (ACFB) facility that would generate electricity and steam by burning approximately 1,800 tons per day of waste coal as the primary fuel. A coal-fired rotary kiln would be coupled with the power plant and would calcine coal ash and limestone into a cementitious material for use with wood wastes in the on-site manufacture of structural bricks and blocks (Woodbrik™).

The proposed facility would be the first commercial application within the United States of a fluidized bed combustor that would have a compact inverted cyclone design. This design would give the boiler system a 40 percent smaller footprint than a conventional boiler system of similar capacity, and would reduce structural steel requirements and construction costs by up to 60 percent. Additionally, the proposed brick making facility would be the first commercial demonstration of the Woodbrik™ process in the United States.

In addition to electricity and Woodbrik™ products, the proposed plant would co-produce steam and hot water and serve as the anchor tenant for a new environmentally balanced industrial park. This "Eco-Park" would use hot water produced from the plant's turbine exhaust to provide heating for buildings, agricultural activities and

aquacultural activities. Steam would be used for various heating and industrial processes, which might include hardwood drying.

The source for the waste coal fuel for the plant would be a 4 million ton coal refuse site in Anjean, WV. If the Anjean site is not available, other nearby sites would supply the coal wastes. Any additional heating value requirements for the waste coal as a fuel would be supplied by blending with quality coal. Coal combustion ash that is not used in by-product manufacture at the proposed facility would be used to remediate acid drainage from the source coal waste piles. If successfully demonstrated, this technology could be applied to many regions of the country for reclaiming contaminated land where waste coal is currently stockpiled.

The proposed project site comprises approximately 26 acres located within or adjoining a 30-acre industrial park that is currently under development by the city of Rainelle. The site is approximately 160 kilometers (100 miles) southeast of the city of Charleston, West Virginia. The area can be reached by State Highway 60 and is less than 14 miles from I-64.

Construction of the proposed plant would be expected to require approximately 27 months, following eight months of project definition and nine months of detailed design.

Alternatives

NEPA requires that agencies discuss the reasonable alternatives to the proposed action in an EIS. The purpose of the agency action determines the range of reasonable alternatives. In this case, the Clean Coal Power Initiative was established to help implement the President's National Energy Policy (NEP) recommendation to increase investment in clean coal technology by addressing national challenges of ensuring the reliability of domestic energy supplies while simultaneously protecting the environment. The CCPI program was structured to achieve NEP goals by promoting private sector initiatives to invest in demonstrations of advanced commerce-ready technologies through the use of Federal, cost-sharing, financial assistance awards. This approach puts DOE in a much more limited role than if the Federal government were the owner and operator of the project. In the latter situation, DOE would be responsible for a comprehensive analysis of reasonable alternative locations for the project. However, when dealing with applicants for financial assistance awards under the CCPI program, the scope of alternatives is necessarily more

restricted because DOE must focus on alternative ways to accomplish its purpose that reflect both the applications before it and the functions that DOE plays in the decision process. As a grantor of financial assistance awards under a competitive open solicitation, DOE must give substantial deference to each applicant's needs in establishing a project's reasonable alternatives.

The range of reasonable options to be considered in the EIS for the WGC Demonstration Project is determined in accordance with the overall NEPA strategy. Because of DOE's limited role of providing financial assistance for the proposed Western Greenbrier Co-Production Demonstration Project, DOE currently plans to give primary emphasis to the proposed action and the no-action alternative. Under the no-action alternative, DOE would not provide partial funding for the design, construction, and operation of the proposed project. In the absence of DOE funding, the Western Greenbrier Co-Production Demonstration Project probably would not occur. If the proposed Western Greenbrier Co-Production Demonstration Project is not built, Western Greenbrier would need to consider other approaches to meet its goals, which could include the use of conventional technologies to produce electricity or using some other currently developing technology. DOE will consider other alternatives that may be suggested during the public scoping period.

Under the proposed action, project activities would include engineering and design, permitting, fabrication and construction, and testing of facilities that would demonstrate the proposed technologies. Upon completion of the demonstration phase, the facility would continue commercial operation.

Preliminary Identification of Environmental Issues

The following environmental issues have been tentatively identified for analysis in the EIS. This list was developed from analyses of the proposed technology, the scope of the proposed project, and similar projects. It is presented to facilitate public comment on the planned scope of the EIS and is neither intended to be all-inclusive nor a predetermined set of potential impacts. Additions to or deletions from this list may occur as a result of the public scoping process. Environmental issues include:

(1) Air quality impacts: potential impacts resulting from air emissions during operation of the power plant and kiln, impacts on local sensitive