

**National Environmental Policy Act (NEPA) Compliance
Cover Sheet**

Proposed Action:

The U.S. Department of Energy (DOE) proposes to provide cost-shared financial support, through a cooperative agreement with Otter Tail Power Company, for retrofit of an existing electrostatic precipitator at Otter Tail's Big Stone Power Plant with an advanced hybrid particulate collector (AHPC) for reducing particulate emissions. The Big Stone Power Plant, near Big Stone City, South Dakota, is a 450-megawatt coal-fired power station that currently uses an electrostatic precipitator to capture particulate emissions. The AHPC proposed for installation within the housing of the existing electrostatic precipitator would increase particulate collection efficiency to at least 99.99% over the entire range of particle sizes, which would reduce particulate emissions to a level well below particulate control standards. DOE would provide approximately 49% of the estimated \$13.4 million cost of the project, which would comprise a 3-year effort under DOE support. Following completion of the technology demonstration under the agreement with DOE, Otter Tail Power Company would be expected to continue operation of the AHPC system for controlling emissions at the Big Stone Power Plant.

Type of Statement: Final Environmental Assessment

Lead Agency: U.S. Department of Energy; National Energy Technology Laboratory

DOE Contacts:	<u>Project Information:</u> John Rockey NEPA Document Manager U.S. Department of Energy National Energy Technology Laboratory P.O. Box 880 Morgantown, WV 26507-0880 304-285-4711; 304-285-4403 (fax) john.rockey@netl.doe.gov (e-mail)	<u>NEPA Information:</u> Lloyd Lorenzi NEPA Compliance Officer U.S. Department of Energy National Energy Technology Laboratory P.O. Box 10940 Pittsburgh, PA 15236-0940 412-386-6159; 412-386-4604 (fax) lorenzi@netl.doe.gov (e-mail)
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Abstract:

DOE's objective in participating in the cooperative agreement is to support demonstration of technology potentially capable of substantially reducing particulate emissions, particularly emissions of fine particulate, from coal-fired power plants. The AHPC project was selected from a competitive solicitation (DE-PS26-01NT41104) developed to respond to a National policy (the "Power Plant Improvement Initiative") for demonstrating technologies capable of maintaining the viability of coal as a stable domestic resource for electric power generation.

The environmental analysis identified that the most notable changes to result from the proposed action would occur in the following areas: air emissions, construction impacts, and solid waste disposal. No adverse environmental effects were identified in analyzing the potential consequences of these changes.

Public Participation:

DOE encourages public participation in the NEPA process. A Draft Environmental Assessment (EA) was released for public review and comment on May 17, 2002; copies of the Draft EA were also distributed to cognizant Federal and State agencies. During the comment period, which formally closed on June 7, 2002, only the Minnesota Pollution Control Agency provided feedback, supporting the proposed project but emphasizing the importance of considering additional environmental characterization studies and of achieving improved SO₂ and NO_x removal (now or in the future). No substantive changes to the Draft EA and no new or expanded environmental analyses were required as a result of public participation.