

PMC-EF2a

(20102)

**U.S. DEPARTMENT OF ENERGY  
EERE PROJECT MANAGEMENT CENTER  
NEPA DETERMINATION**



**RECIPIENT:**Arkansas Department of Economic Development - Arkansas Energy Office

**STATE:** AR

**PROJECT TITLE :** EECBG - Energy Efficient Programs for Small Cities and Counties: 50 kW Wind Turbine to Power City of Burdette Facilities

<b>Funding Opportunity Announcement Number</b>	<b>Procurement Instrument Number</b>	<b>NEPA Control Number</b>	<b>CID Number</b>
	DE-EE0000833		0

**Based on my review of the information concerning the proposed action, as NEPA Compliance Officer (authorized under DOE Order 451.1A), I have made the following determination:**

**CX, EA, EIS APPENDIX AND NUMBER:**

Description:

**B5.1** Actions to conserve energy, demonstrate potential energy conservation, and promote energy-efficiency that do not increase the indoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, designers), organizations (such as utilities), and state and local governments. Covered actions include, but are not limited to: programmed lowering of thermostat settings, placement of timers on hot water heaters, installation of solar hot water systems, installation of efficient lighting, improvements in generator efficiency and appliance efficiency ratings, development of energy-efficient manufacturing or industrial practices, and small-scale conservation and renewable energy research and development and pilot projects. The actions could involve building renovations or new structures in commercial, residential, agricultural, or industrial sectors. These actions do not include rulemakings, standard-settings, or proposed DOE legislation.

**Rational for determination:**

The City of Burdette is proposing to use \$430,814 in EECBG funding to install a 50kW Endurance wind turbine. The wind turbine will provide energy for the Burdette Wastewater Treatment Facility and will also be tied into the grid.

Potential environmental impacts from the proposed project and associated actions include:

- **Water Quality** – The town has a small wetland one mile north of the site called Bayou. The proposed project will not impact the wetland. Soil removed during construction will be replaced within one week. Grass will be replaced to restore the site to its original condition after turbine commissioning. The site is flat pasture land, there is not expected to be erosion or sedimentation during construction. The proposed project is not expected to have adverse effects to water quality.
- **Ground Disturbance** – Ground disturbance during construction of the turbine will consist of the concrete pad for the turbine (657 sq. ft.) and trenching for connection to the grid (700 sq. ft.) for a total of 1,357 sq. ft. The turbine will be connected directly to the electric grid via 3-phase instantaneous power using an induction generator balanced at 60 Hz. All ground disturbance resulting from the proposed project will occur on land that is used for agricultural grazing. North of the proposed site is the town of Burdette with a population of 131 people.
- **Visual Resources** – The proposed project is for one (1) Endurance E-Series 50 kW turbine on a 140-foot monopole tower with 29.5-foot blades totaling a height of 169.5 feet at blade tip. The wind turbine aesthetics are expected to fit in as consistent with the agricultural character of the area. The closest residence in Burdette is 1,025 feet from the base of the tower. The Burdette City Council discussed the project at several public meetings, including on March 25, 2010, with no objections raised, and voted unanimously in favor of the project. Adverse visual effects are not expected as a result of the proposed project.
- **Threatened and Endangered Species** – The USFWS Arkansas Ecological Services Field Office was consulted regarding the proposed wind turbine. USFWS has responded with the determination that there will be no significant impacts to threatened and endangered species or critical habitat as a result of the proposed project.
- **Cultural Resources** – No impacts to cultural resources are expected. Review by the Arkansas Department of Natural and Cultural Heritage is required as part of the grant approval process.
- **Noise Impacts** – The proposed wind turbine will have noise levels between 43.8 and 47 decibels at a distance of 172 feet from the base of the tower. The closest residence in Burdette is 1,025 feet from the base of the tower. This decibel level is slightly louder than a quiet library and less than that of typical home decibel-levels.

- Permits – FAA consultation is not required as the total turbine height will be below 200ft and the location of the turbine will be 6 miles from the nearest runway. Any required construction permits will be obtained from the Mississippi County government office.

After a thorough review of the information submitted for the proposed project, it has been determined that the actions involved will not have a significant impact to human health and /or the environment; therefore it is hereby Categorically Excluded B5.1 "actions to conserve energy," from further NEPA review.

**NEPA PROVISION**

Insert the following language in the award:

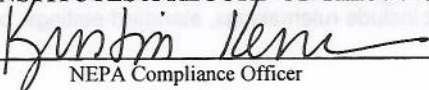
You are required to:

Prior to the expenditure of Federal funds to implement any of the above activities, the City of Burdette has the affirmative responsibility to ensure they are in compliance with Sec. 106 of the National Historic Preservation Act (NHPA), consistent with DOE's 2009 letter of delegation of authority regarding the NHPA. If applicable, the sub-recipient must contact the State Historic Preservation Officer.

Note to Specialist :

EF-2A completed by Logan Sholar.

**SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.**

NEPA Compliance Officer Signature:  Date: 9/30/2010  
 NEPA Compliance Officer

**FIELD OFFICE MANAGER DETERMINATION**

Field Office Manager review required

**NCO REQUESTS THE FIELD OFFICE MANAGER REVIEW FOR THE FOLLOWING REASON:**

- Proposed action fits within a categorical exclusion but involves a high profile or controversial issue that warrants Field Office Manager's attention.
- Proposed action falls within an EA or EIS category and therefore requires Field Office Manager's review and determination.

**BASED ON MY REVIEW I CONCUR WITH THE DETERMINATION OF THE NCO :**

Field Office Manager's Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
 Field Office Manager