

PMC-EF2a

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



(2.04.02)

RECIPIENT: Missouri DNR, Division of Energy

STATE: MO

PROJECT TITLE : Sustainable Enterprises - Waste Heat Recovery

Funding Opportunity Announcement Number	Procurement Instrument Number	NEPA Control Number	CID Number
DE-FOA-000052	EE0000131	GFO-0000131-026	EE131

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:

B5.14 Combined heat and power or cogeneration systems

Conversion to, replacement of, or modification of combined heat and power or cogeneration systems (the sequential or simultaneous production of multiple forms of energy, such as thermal and electrical energy, in a single integrated system) at existing facilities, provided that the conversion, replacement, or modification would not have the potential to cause a significant increase in the quantity or rate of air emissions and would not have the potential to cause significant impacts to water resources.

B5.1 Actions to conserve energy or water

(a) Actions to conserve energy or water, demonstrate potential energy or water conservation, and promote energy efficiency that would not have the potential to cause significant changes in the indoor or outdoor concentrations of potentially harmful substances. These actions may involve financial and technical assistance to individuals (such as builders, owners, consultants, manufacturers, and designers), organizations (such as utilities), and governments (such as state, local, and tribal). Covered actions include, but are not limited to weatherization (such as insulation and replacing windows and doors); programmed lowering of thermostat settings; placement of timers on hot water heaters; installation or replacement of energy efficient lighting, low-flow plumbing fixtures (such as faucets, toilets, and showerheads), heating, ventilation, and air conditioning systems, and appliances; installation of drip-irrigation systems; improvements in generator efficiency and appliance efficiency ratings; efficiency improvements for vehicles and transportation (such as fleet changeout); power storage (such as flywheels and batteries, generally less than 10 megawatt equivalent); transportation management systems (such as traffic signal control systems, car navigation, speed cameras, and automatic plate number recognition); development of energy-efficient manufacturing, industrial, or building practices; and small-scale energy efficiency and conservation research and development and small-scale pilot projects. Covered actions include building renovations or new structures, provided that they occur in a previously disturbed or developed area. Covered actions could involve commercial, residential, agricultural, academic, institutional, or industrial sectors. Covered actions do not include rulemakings, standard-settings, or proposed DOE legislation, except for those actions listed in B5.1(b) of this appendix. (b) Covered actions include rulemakings that establish energy conservation standards for consumer products and industrial equipment, provided that the actions would not: (1) have the potential to cause a significant change in manufacturing infrastructure (such as construction of new manufacturing plants with considerable associated ground disturbance); (2) involve significant unresolved conflicts concerning alternative uses of available resources (such as rare or limited raw materials); (3) have the potential to result in a significant increase in the disposal of materials posing significant risks to human health and the environment (such as RCRA hazardous wastes); or (4) have the potential to cause a significant increase in energy consumption in a state or region.

Rational for determination:

The Department of Energy (DOE) allocated American Recovery and Reinvestment Act of 2009 State Energy Program (SEP) funds to Missouri via a formula grant. Missouri's Department of Natural Resources, Division of Energy (DNR) administers the SEP funds for the State of Missouri. DNR selected Metropolitan Energy Center and Sustainable Enterprises (Sustainable Enterprises) to receive \$42,968 in SEP funding. Sustainable Enterprises proposes to implement a waste heat recovery project at its meat processing plant located at 5305 Hwy. H, Pleasant Hope, MO 65725 (proposed project).

The proposed project involves the purchase and installation of a heat exchanger to capture heat from the plant's refrigeration process. It is estimated that implementation of the proposed project would recover approximately 15% of the heat that is typically lost to the atmosphere – the recovered heat would be used to heat hot water for the processing plant. The heat exchanger would consist of 2 water storage tanks, which would be connected to a compressor and pump. The proposed project will not require modifications in the facility's footprint, utilities, or permits. The facility is approximately 4 years old and because the proposed project does not require building modifications – it falls within an exemption as defined in Missouri's Programmatic Agreement regarding Section 106 reviews. DOE has determined the proposed project will Not Effect any endangered or threatened species.

The proposed project is consistent with DOE's categorical exclusion B5.1, "actions to conserve energy" because it

develops energy efficient building practices by capturing and utilizing lost heat. The proposed project is consistent with DOE's categorical exclusion B5.14, "conversion to a combined heat and power system" by capturing lost heat and using it to heat the hot water needed for the processing plant. Therefore, DOE has determined the proposed project is categorically excluded from further NEPA review under B5.1 and B5.14.

NEPA PROVISION

DOE has made a final NEPA determination for this award

Insert the following language in the award:

If you intend to make changes to the scope or objective of your project you are required to contact the Project Officer identified in Block 11 of the Notice of Financial Assistance Award before proceeding. You must receive notification of approval from the DOE Contracting Officer prior to commencing with work beyond that currently approved.

Note to Specialist :

ARRA SEP funding - \$42,968
EF2a completed by Melissa Rossiter

SIGNATURE OF THIS MEMORANDUM CONSTITUTES A RECORD OF THIS DECISION.

NEPA Compliance Officer Signature: *Kristin Keel* Date: 11/15/2011
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